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**RESEARCH PROPOSAL
QUARTERLY STATUS REPORT**



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**RESEARCH PROPOSAL
QUARTERLY STATUS REPORT**

JULY 1988

**PREPARED BY:
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TECHNICAL DOCUMENTS SECTION
AFOSR/XOTD
BOLLING AFB, DC 20332-6448
(202) 767-4912 or AUTOVON 297-4912**

INTRODUCTION

This Research Proposal Status Report is published quarterly as of March, June, September, and December of each year. It lists all the research proposals received by the Air Force Office of Scientific Research (AFOSR) in the six month period prior to the date of this report. Normally, decisions and actions are made within six months after receiving a research proposal. The action taken (i.e. Initiated, Declined, or Withdrawn) will be listed in this Report. The report is divided into two parts: Part I is the Institution Index which lists the proposals received, alphabetically by Institution. Part II is the AFOSR Directorate Index in which the proposals received are listed alphabetically by Directorate and alphabetically by AFOSR Program Manager within the Directorate. Any questions regarding this report, please contact Ms. Debra Tyrrell at (202) 767-4912 or Autovon 297-4912.

PURPOSE

The purpose of the quarterly report is to inform other Government sponsoring agencies of the proposals received by the AFOSR and the action taken on these proposals. Users of the report should read and clearly understand that:

Declined proposals should not necessarily be considered as scientifically unacceptable since many declinations result from a lack of funds or from special programmatic emphases.

AFOSR MISSION

The Air Force Office of Scientific Research (AFOSR) is the single manager of the Air Force Defense Research Sciences Program (Program Element 61102F) and the primary Air Force agency for the extramural support of fundamental scientific research. The AFOSR is organized under the Director of Laboratories, Air Force Systems Command.

AFOSR awards grants and contracts for research in areas of science relevant to the needs of the Air Force. Research is selected for support from unsolicited proposals originating from scientists investigating problems, involving the search for new knowledge and the expansion of scientific principles. Selection is on the basis of scientific potential for improving Air Force operational capabilities, originality, significance to science, the qualification of the principal investigators, and the reasonableness of the proposed budget.

KEY TO READING THE DATA

- TITLE** - The title of the research proposal
- INSTITUTION** - The organization, i.e., College/University, Company, etc., at which the research will be conducted.
- INVESTIGATOR** - The Principal Investigators proposing the research.
- TYPE** - N indicates a new research effort.
- R indicates a continuation of an ongoing research effort.
- MONTHS** - The duration of the research proposal.
- RECEIVED** - The month and year in which the AFOSR received the proposal.
- AMOUNT** - The funds requested of the AFOSR for support of the research proposal.
- STATUS** - A = ACCEPTED indicates that the review has been completed and the proposal recommended for funding.
- D = DECLINED indicates the proposal has been reviewed but will not be funded by the AFOSR.
- BLANK SPACE = indicates the proposal is being reviewed.
- W = WITHDRAWN indicates that the proposal submitted was removed from further consideration at the proposers request.
- PROGRAM MANAGER** - The AFOSR scientific staff member assigned the responsibility for the technical evaluation of the proposal.
- PROPOSAL #** - An AFOSR Directorate assigned control number to uniquely identify the research proposal.
- INITIATED** - The proposal has been recommended to the AFOSR Directorate of Contracts for the amount and duration.
- START DATE** - The recommended date for commencement of the research.
- TOTAL AMOUNT** - The estimated number of dollars recommended for support of the research effort; the actual amount is subject to negotiation.

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PART I

| INSTITUTION | LAST NAME | INVESTIGATOR | FIRST NAME | MIDDLE | PROPOSAL | STATUS | PH NAME |
|---|----------------------------------|--------------|------------------------------|-------------|---|-------------|--|
| ATL TECHNOLOGIES INC ACADEMY OF NATURAL SCIENCES ADVANCED COMPOSITE ENGINEERING, INC. | CONNOR | | JOHN | A | 88-NL-234 | | BERRY |
| | RIEDEL | | GERMARDT | F | 88-NL-227 | D | CERVENY |
| | SUN | | C | T | 88-NA-162 | | HARITOS MARITOS |
| ADVANCED DECISION SYSTEMS ADVANCED FUEL RESEARCH INC. | GERARD | | PATRIE | A | 88-ME-063 | | ROSESTEIN |
| | SERIO | | MICHAEL | R | 88-NM-288 | | CROWLEY |
| | SOLOMON | | PETER | R | 88-NA-120 | | TISHKOFF |
| ADVANCED MATERIALS CORPORATION ADVANCED MATERIALS TECHNOLOGY ADVANCED TECHNOLOGY ENGINEERING COMS. ADVANCED TECHNOLOGY LABORATORIES | SANKAR | | S | G | 88-MA-118 | | TISHKOFF |
| | KIM | | Y | B | 88-MA-140 | | TISHKOFF |
| | VENKATESAN JENNINGS | | MAHADEVA JACK | S R | 88-ME-192 88-ME-106 88-NA-155 88-NA-216 | A | WEINSTOCK MCMICHAEL CROWLEY |
| AEROCOM INC AERODYNE RESEARCH INC | MUHL JR. | | JOSEPH | D | 88-ME-217 | | CROWLEY |
| | HOOGER | | STEPHEN | F | 88-NA-210 | | CROWLEY |
| | PUTNAM STINESPRING BACHALO | | ROGER CHARTER WILLIAM | S D | 88-NA-219 88-NA-221 88-NM-220 | | CROWLEY CROWLEY CROWLEY |
| AEROMETRICS INC AEROSPACE COMPANY AEROSPACE MEDICAL DIVISION | FLANN | | DAVID | S | 88-NA-157 | | MCMICHAEL |
| | CANTU | | CRUZ | S | 88-ME-088 | | MALLOY |
| | CULLEN | | LARRY | S | 88-NA-109 | | MCMICHAEL |
| AEROTECH SYSTEMS CORPORATION AIR FORCE GEOPHYSICS LABORATORY | PRASAD | | J. | S | 88-MA-111 | | BIRKAM |
| | WEINMANN | | MICHAEL | A | 88-ME-292 | | MILLER |
| | MILLER | | W. | A | 88-NL-047 | | DISMUKES |
| AIR FORCE INSTITUTE OF TECHNOLOGY | LINDERMAN | | RICHARD | W | 88-MP-079 | | RADOOSKI |
| | MILLS | | JAMES | P | 88-MP-116 | | RADOOSKI |
| | PALAZOTTO | | ANTHONY | N | 88-ME-034 | | SCHLOSSBER |
| AIR FORCE OFFICE OF SCIENTIFIC RESEARCH AIR FORCE WEAPONS LAB | ROM | | MON | B | 88-ME-155 | | MALLOY |
| | WOLAVER | | LYNN | B | 88-MP-037 | | SMITH |
| | YORK | | BETTY | J | 88-XO-005 | | EDMUND |
| AIRBORNE RESEARCH ASSOCIATES ALAN S. PIKE ALBION COLLEGE AMERICAN METEOROLOGICAL SOCIETY AMERICAN PSYCHOLOGICAL ASSOCIATION INC AMERICAN RESEARCH CORP OF VIRGINIA ANALATOM INC ANALYTICAL METHODS INC | BURNETTE | | MORAD | J | 88-XO-008 | | EDMUND |
| | HARMESON | | TIM | S | 88-XO-010 | | YORK |
| | RIENKE | | ROBERT | J | 88-NM-188 | | CROWLEY |
| AIRBORNE RESEARCH ASSOCIATES ALAN S. PIKE ALBION COLLEGE AMERICAN METEOROLOGICAL SOCIETY AMERICAN PSYCHOLOGICAL ASSOCIATION INC AMERICAN RESEARCH CORP OF VIRGINIA ANALATOM INC ANALYTICAL METHODS INC | MARKSON | | RALPH | J | 88-MA-251 | | BIRKAM |
| | PIKE | | ALAN | S | 88-MP-160 | | PRINCE |
| | MEERSCHAERT | | MARK | S | 88-MC-087 | | KOERMER |
| AIRBORNE RESEARCH ASSOCIATES ALAN S. PIKE ALBION COLLEGE AMERICAN METEOROLOGICAL SOCIETY AMERICAN PSYCHOLOGICAL ASSOCIATION INC AMERICAN RESEARCH CORP OF VIRGINIA ANALATOM INC ANALYTICAL METHODS INC | HAZUP | | EVELYN | M | 88-NL-134 | | FREGLY |
| | GOODSTEIN | | LEONARD | D | 88-NM-193 | | WOODRUFF |
| | MASANOBU LAUPER NATHMAN | | MASANOBU GABRIEL JAMES | D G K | 88-MC-200 88-NL-048 88-ME-071 88-MA-079 88-NA-101 | A A A | KOERMER FREGLY WOODRUFF KOERMER FREGLY WEINSTOCK TISHKOFF MELIN |

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| BROOKLYN COLLEGE OF CUNY BROWN UNIVERSITY | POLLAK | | FRED | H | 88-ME-127 | | MALLOY |
| | DEAN | | THOMAS | | 88-MM-419 | A | WAKSMAN |
| | PEARSON | | ALLAN | E | 88-MM-301 | | CROWLEY |
| | BURKE | | JOHN | M | 88-MP-085 | | BARBER |
| | CARROLL | | JAMES | V | 88-MM-258 | | CROWLEY |
| BURKE TECHNOLOGIES INC. BUSINESS & TECHNOLOGICAL SYSTEMS, INC. | LARIADRE | | WALLACE | E | 88-ML-132 | | BERRY |
| | | | SAM | | 88-MM-247 | A | NACHMAN |
| | POGEL | | RAVI | | 88-ML-221 | D | CERVEY |
| | CHANDRAN | | MARTHA | | 88-NE-092 | | MALLOY |
| | KAMM | | DAVID | W | 88-MM-262 | | CROWLEY |
| CCA BIOREMEDIATION SYSTEMS DIVISION CVD EQUIPMENT CORPORATION CALIFORNIA ADVANCED INTEGRATION | WEBSTER | | DONALD | S | 88-MM-280 | | CROWLEY |
| | COHEN | | GEORGE | C | 88-MM-148 | A | NACHMAN |
| | FOX | | ROBERT | J | 88-MM-270 | | NACHMAN |
| | MCLEICE | | ANNON | | 88-MM-327 | A | MILLER |
| | VARIY | | JACOBO | | 88-NE-131 | A | GILES |
| CARNEGIE-MELLON UNIVERSITY | BIELAK | | WILLIAM | | 88-MP-035 | A | SCHLOSSBER |
| | MUSA | | MARK | M | 88-MM-430 | | NACHMAN |
| | KRYDER | | DAVID | | 88-MM-358 | A | NACHMAN |
| | MCREDMON | | STEVEN | E | 88-NE-147 | | WITT |
| | SHREVE | | JOSEPH | S | 88-MM-396 | A | WAKSMAN |
| CASE WESTERN RESERVE UNIVERSITY | LEE | | TITEN | | 88-MM-302 | | CROWLEY |
| | | | JAMES | | 88-NE-175 | D | WITT |
| | | | GERHARD | | 88-NA-237 | A | ATKMAN |
| | | | SUNAM | | 88-NE-113 | | ROSENSTEIN |
| | | | GIULIO | D | 88-NA-080 | | NACHMAN |
| CENTER FOR REMOTE SENSING | | | GIULIO | | 88-MC-083 | | KOERNER |
| | | | MICHAEL | | 88-MC-084 | | KOERNER |
| | | | MARK | | 88-NE-053 | | GILES |
| | | | MARK | | 88-NE-055 | | GILES |
| | | | MARK | | 88-MP-052 | | BARBER |
| CENTRO DI CULTURA SCIENTIFICO A VOLTA CERAMICS PROCESS SYSTEMS CHARLES EVANS & ASSOC. CHEMICAL DYNAMICS CORPORATION | CASATI | | GIULIO | | 88-MM-189 | | NACHMAN |
| | MODGE | | JAMES | | 88-NE-066 | A | MARITOS |
| | HERMAN | | MICHAEL | M | 88-NE-080 | | WITT |
| | MURPHY | | C | S | 88-NE-091 | A | MALLOY |
| | SHAMMATHAN | | P | K | 88-MC-159 | A | DAVIS |
| CHIRP CORPORATION CITY COLLEGE - CUNY | ALTES | | RICHARD | A | 88-ML-135 | | PREGLY |
| | ALPANO | | ROBERT | R | 88-NE-141 | | GILES |
| | | | MARK | | 88-NE-184 | | WITT |
| | BROWN | | GOODARZ | | 88-MM-369 | | WOODRUFF |
| | AHMADI | | EYTAN | | 88-NA-234 | D | MELIN |
| CLARKSON UNIVERSITY | BAROUCH | | DAVID | | 88-NA-258 | | NACHMAN |
| | POKAS | | DAVID | | 88-RD-009 | A | C/VEMDER |
| | KAUP | | MARK | J | 88-MM-417 | | NACHMAN |
| | KOCH | | MARK | W | 88-MM-417 | A | NACHMAN |
| | LASKAR | | VIGAL | L | 88-NE-038 | | GILES |
| CLEMSON UNIVERSITY COLLEGE OF STATE ISLAND/CUNY COLLEGE OF WILLIAM AND MARY | EMRLICH | | DOUGLAS | M | 88-ML-194 | | ROSENSTEIN |
| | SPITZ | | GEORGE | R | 88-ML-208 | A | BERRY |
| | | | MARK | | 88-MM-368 | | WOODRUFF |
| | | | MARK | | 88-MM-368 | | WOODRUFF |
| | | | MARK | | 88-NA-271 | | WCMICHAEL |

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| COLORADO SCHOOL OF MINES | WAGIN | FRANK | G | 88-MM-356 | D | NACHMAN |
| COLORADO STATE UNIVERSITY | INS | GERARD P | MAR | 88-NC-168 | | ULRICH |
| | COTTON | WILLIAM | R | 88-NC-183 | W | KOERMER |
| | POORE | AUBREY | | 88-MM-649 | | MILLER |
| | REITER | ELMAR | R | 88-NC-152 | | KOERMER |
| | ROBINSON | GARY | V | 88-NE-176 | | MALLOY |
| | ROCCA | JORGE | J | 88-MP-110 | A | SCHLOSSER |
| | SRIVASTAVA | JAYA | | 88-MM-167 | A | WOODRUFF |
| | PATEL | DINESH | | 88-NE-162 | D | WEINSTOCK |
| COLUMBIA UNIVERSITY | EISENTHAL | KENNETH | B | 88-NC-073 | | BURGGRAF |
| | ROBBINS | HERBERT | E | 88-NC-187 | A | MATUSIARO |
| | ROBINSON | DAVID | A | 88-MM-662 | | WOODRUFF |
| | SPIEGEL | EDWARD | A | 88-NC-188 | | KOERMER |
| | TURRO | NICHOLAS | J | 88-MP-141 | A | RAOOSAT |
| | PALMER | HOWARD | B | 88-NC-177 | | MATUSIARO |
| COMBUSTION INSTITUTE | IDENTIFIED | YET | | 88-NA-150 | A | BIRKAN |
| COMPENSABLE SOLICITATION | STM | GEORGE | C | 88-NL-060 | A | FREGLY |
| COMPUTER CORP | MANHARDT | P | | 88-NA-136 | | MCMICHAEL |
| COMPUTATIONAL MECHANICS CONSULTANTS INC | VIDE | JOSEPH | J | 88-NA-089 | | MCMICHAEL |
| COMPUTER & INFORMATION SCIENCES, INC. | LOPGRM | CHRISTOPHER | B | 88-MM-250 | | CROWLEY |
| COMPUTER AIDED PLAN & SCHEDULE, INC. | LOCK | EVAN | B | 88-MM-283 | | CROWLEY |
| COMPUTER COMMAND & CONTROL COMPANY | WEISINGER | RICHARD | B | 88-MM-286 | A | CROWLEY |
| COMPUTER PERFECTION UNLIMITED (CPU) | GLANCE | PAUL | | 88-MM-229 | | CROWLEY |
| CONCEPT ANALYSIS CORPORATION | BESSEL | DAVID | M | 88-NE-064 | | ROSENSTEIN |
| CONCEPT TECHNOLOGY | BILANIM | ALAN | J | 88-MM-252 | | CROWLEY |
| CONTINUUM DYNAMICS, INC. | GILAD | GAD | M | 88-NA-194 | | TISHKOFF |
| CORIELL INSTITUTE FOR MEDICAL RESEARCH | GUCKENMEIJER | JOHN | | 88-NL-165 | | BERRY |
| CORNELL UNIVERSITY | HEALEY | TIMOTHY | J | 88-MM-659 | | NACHMAN |
| | HOLMES | PHILIP | J | 88-MM-174 | A | NACHMAN |
| | HOUSTON | PAUL | L | 88-MM-643 | | NACHMAN |
| | LIBOFF | R | L | 88-NC-119 | D | WOODARCEYK |
| | NATION | JOHN | L | 88-NE-182 | | WITT |
| | STUART | JOHN | L | 88-MP-126 | A | BARKER |
| COVIX INC. | DYMSKY | ARKADY | S | 88-NA-110 | | NACHMAN |
| CREARE INC. RESEARCH & DEVELOPMENT INC | STACY | W | D | 88-NA-094 | | MCMICHAEL |
| CRYSTALLUME | RAVI | K | V | 88-NE-144 | A | WEINSTOCK |
| | PAVICO | K | V | 88-NA-116 | | MARTOS |
| DMA COMPOSITE SPECIALITIES, INC. | DOLONY, JR | JOSEPH | F | 88-NE-093 | A | MALLOY |
| DATANAMICS COMPUTER CORPORATION | WHITE | MILTON | | 88-NE-059 | | ROSENSTEIN |
| DBA JAG INDUSTRIES | MOLT | ALBERT | C | 88-MM-420 | | WAKSMAN |
| DEACON RESEARCH | G. DEACON | DAVID | A | 88-NA-172 | | MU |
| | O'KEEF | ANTHONY | A | 88-NE-107 | | ROSENSTEIN |
| DECISION SCIENCE CONSORTIUM INC | LASKRY | KATHRYN | B | 88-MP-059 | A | SCHLOSSER |
| | LEDDO | JOHN | | 88-MP-112 | | SCHLOSSER |
| DEPT OF THE INTERIOR | CHAMBERLAIN | PETER | T | 88-MM-287 | | CROWLEY |
| DEVICE RESEARCH INSTITUTE | WANG | CHENG | | 88-NL-137 | | FREGLY |
| DIAMOND MATERIAL INSTITUTE, INC. | ROBA | RICHARD | | 88-NA-154 | A | MU |
| | | | | 88-MM-282 | | CROWLEY |
| | | | | 88-NE-103 | | MALLOY |

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| DONLAND-BACH CORPORATION ORNLXEL UNIVERSITY DUKE UNIVERSITY | SELFRIDGE | SCOTT | | 88-NA-190 | | TISHKOFF |
| | GILMORE | ROBERT | A | 88-NP-142 | | SCHLOSSER |
| | CRUMBLISS | A. | L | 88-NC-208 | D | BURGGRAF |
| | MADEY | JOHN M. | J | 88-NP-092 | A | SCHLOSSER |
| E C JORDON COMPANY ECOVA CORPORATION EPA-ENVIRONMENTAL RESEARCH LAB | SCHAEFFER | DAVID | G | 88-NP-095 | A | SCHLOSSER |
| | MAGEE | BRIAN | | 88-NM-276 | | NACHMAN |
| | HAMAFFEY | WILLIAM | H | 88-NL-224 | D | CERVENY |
| | LOUX | NICHOLAS | T | 88-NL-228 | D | CERVENY |
| | MCKIM | JAMES | | 88-NL-216 | D | CERVENY |
| | SQUIRE | ROBERT | K | 88-NL-198 | | CERVENY |
| | KENNEDY | MIKE | K | 88-NP-072 | | PRINCE |
| | | MIKE | | 88-NP-036 | A | SMITH |
| | | PATRICK | J | 88-NP-138 | A | SMITH |
| | | PATRICK | J | 88-NA-097 | | MELIN |
| ECODYNAMICS RESEARCH ASSOCIATION INC | CARDNE | EDWARD | F | 88-NM-166 | A | NACHMAN |
| | MALCOLM | GERALD | M | 88-NP-070 | | PRINCE |
| | NG | POH | M | 88-NA-174 | | MELIN |
| | LEDERMAN | BURTON | E | 88-NP-050 | | RADOSKI |
| | CHAM | WILLIAM | E | 88-NE-108 | | WEINSTOCK |
| | LEPPERSON | PETER | S | 88-NE-083 | | MALLOY |
| | KAUFMAN | MYRON | | 88-NE-076 | | MITT |
| | SCMMIC | RUDOLF | | 88-NA-219 | A | BIKMAN |
| | COX | TIMOTHY | | 88-NM-407 | | CROWLEY |
| | CLINTON | JAMES | | 88-NP-049 | D | SCHLOSSER |
| ENERGY OPTICS, INC. ENERGY SCIENCE LABORATORIES, INC. ENGINEERING ANALYSIS, INC. ENGINEERING DEVELOPMENT LAB. INC. ENRICO LEVI, INC. ENTROPIC SPEECH INC. ENVIRONMENTAL PROTECTION AGENCY | TAYOR | FRANK | B | 88-NE-101 | | WEINSTOCK |
| | CAMRELL | RICHARD | E | 88-NA-078 | | MCMICHAEL |
| | WUANG | MICHAEL | H | 88-NA-138 | | MCMICHAEL |
| | SHORE | JOHN | | 88-NP-054 | | RADOSKI |
| | BAKSI | SANDRA | M | 88-NM-235 | | CROWLEY |
| | CHAOWICK | ROBERT | M | 88-NL-222 | D | CERVENY |
| | KENNEDY | ROBERT | S | 88-NL-217 | A | CERVENY |
| | | ROBERT | | 88-NL-125 | | TANGNEY |
| | | ROBERT | | 88-NL-126 | | TANGNEY |
| | | JAMES | M | 88-NL-128 | | BERRY |
| EUROPEAN OFFICE OF AERO RSCH AND DEVELOP ELTER UNIVERSITY ENDTECH INC. | MCDUGAL | JAMES | | 88-NL-207 | A | TANGNEY |
| | SMITH, LT COL. USAF | LAREL | K | 88-NE-051 | | MALLOY |
| | MALL | PHILIP | | 88-NM-355 | A | NACHMAN |
| | MOYLE | IAN | M | 88-NA-105 | | MELIN |
| | | ROGER | J | 88-NA-106 | | MELIN |
| | | DHARMA SINGH | | 88-NM-261 | | CROWLEY |
| | | MARK | | 88-NM-260 | | CROWLEY |
| | | LUIS | M | 88-NA-177 | | NACHMAN |
| | | HERBERT | M | 88-NP-084 | | BARKER |
| | | LUIZ | | 88-NC-123 | A | DAVIS |
| FLORIDA A&M UNIVERSITY FLORIDA ATLANTIC UNIVERSITY FLORIDA STATE UNIVERSITY FLOW INDUSTRIES INC | LORENZO | EDUARDO | B | 88-NA-262 | A | MELIN |
| | PERMANDEZ | EDUARDO | | 88-NA-176 | A | WAKSMAN |
| | WEINER | ALLAN | M | 88-NC-098 | | GOERHER |
| | JOU | WEN-HUEI | | 88-NA-091 | A | GOERHER |
| | MENON | SURESH | | 88-NA-073 | | MCMICHAEL |
| | | | | | | TISHKOFF |
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| INSTITUTION | INVESTIGATOR | LAST NAME | FIRST NAME | MIDDLE | PROPOSAL | STATUS | PM NAME |
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| INFORMATION 6 CONTROL SYSTEMS INC. INSTITUTE FOR STUDY OF INTELLIGENT SYS. INT'L BUSINESS MACHINE CORP INT'L META SYSTEMS INC. | | MALYO | NESIM | | 88-MM-231 | | CROWLEY |
| | | EISENHARDT | ROBERT | G | 88-NE-178 | | GILES |
| | | MCCLELLAND | GARY | M | 88-NC-072 | A | BURGRAF |
| | | THAMES | JOSEPH | M | 88-MM-228 | | CROWLEY |
| INT'L NEURAL NETWORK SOCIETY INTEGRATED SYSTEMS, INC. INTELLIGENT SIGNAL PROCESSING | | GROSSBERG | STEPHEN | | 88-MM-232 | | CROWLEY |
| | | KOSUT | ROBERT | | 88-MM-239 | | CROWLEY |
| | | HONG | JAE | L | 88-MM-240 | | CROWLEY |
| | | | | Y | 88-MM-246 | A | GILES |
| INTELLIGENT SYSTEMS INTEGRATION INC. | | LU | Z | Y | 88-NE-150 | | CROWLEY |
| | | ROSS | TIMOTHY | J | 88-MM-284 | | CROWLEY |
| | | | | | 88-NA-178 | | NACHMAN |
| | | | | | 88-NA-193 | | NACHMAN |
| IOWA COLLEGE IOWA STATE UNIV OF SCIENCE AND TECH | | YUN LU | ZHI | | 88-NA-108 | | MCMICHAEL |
| | | VAGER | DONALD | | 88-NA-235 | | MELIN |
| | | MARTIN | STEVE | W | 88-NA-122 | A | MARITOS |
| | | NG | CHENG-YIU | | 88-NA-215 | | WU |
| IRVINE SCIENCE ASSOCIATES J. A. WOOLLAM COMPANY | | MESSEL | FRANK | J | 88-NE-060 | | ROSENSTEIN |
| | | WOOLLAM | JOHN | A | 88-MM-289 | | CROWLEY |
| | | | | | 88-MM-330 | A | NACHMAN |
| | | | | | 88-NC-213 | | WAKSMAN |
| JAYCOR JET PROPULSION LABORATORY JOHNS HOPKINS UNIVERSITY | | GLADD | M | T | 88-MM-433 | | ULRICH |
| | | BELLAN | JOSETTE | | 88-NC-204 | | MODARCZYK |
| | | BLUM | BRUCE | I | 88-MP-083 | | BARKER |
| | | ELLIS | J. HUGH | | 88-NE-078 | | WITT |
| JOSEPH TECHNOLOGY CORPORATION KMS FUSION INC KTECH CORPORATION KANSAS STATE UNIVERSITY KLEIN ASSOCIATES, INC. KRYVALIS CORPORATION KUD C ASSOCIATES LBM ASSOCIATES, INC. LAGUNA RESEARCH LAB. LARGO SCIENTIFIC INC. LASER GENICS CORPORATION LASER METRIC SYSTEMS, INC. LASER TECHNOLOGY ASSOCIATES LASERGENICS CORPORATION (CALIF UNIV) LAWRENCE LIVERMORE LAB (CALIF UNIV) | | KRUGER | CHING-I. | J | 88-NE-089 | | MALLOY |
| | | SEJNOWSKI | TERRENCE | | 88-NE-090 | | BARKER |
| | | YARKONY | DAVID | R | 88-NA-209 | | TISHKOFF |
| | | OLIKER | V. | I | 88-MM-422 | A | WAKSMAN |
| KANSAS STATE UNIVERSITY KLEIN ASSOCIATES, INC. KRYVALIS CORPORATION KUD C ASSOCIATES LBM ASSOCIATES, INC. LAGUNA RESEARCH LAB. LARGO SCIENTIFIC INC. LASER GENICS CORPORATION LASER METRIC SYSTEMS, INC. LASER TECHNOLOGY ASSOCIATES LASERGENICS CORPORATION (CALIF UNIV) LAWRENCE LIVERMORE LAB (CALIF UNIV) | | WIRDM | MICHAEL | R | 88-MM-171 | | MILLER |
| | | GARFNEY | EDWARD | S | 88-NC-184 | | ROSENSTEIN |
| | | RAMM | ALEXANDER | G | 88-NC-197 | | DAVIS |
| | | KLEIM | GARY | A | 88-MM-243 | | CROWLEY |
| KRYVALIS CORPORATION KUD C ASSOCIATES LBM ASSOCIATES, INC. LAGUNA RESEARCH LAB. LARGO SCIENTIFIC INC. LASER GENICS CORPORATION LASER METRIC SYSTEMS, INC. LASER TECHNOLOGY ASSOCIATES LASERGENICS CORPORATION (CALIF UNIV) LAWRENCE LIVERMORE LAB (CALIF UNIV) | | KINNEY | WAYNE | I | 88-NC-088 | | MATUSZKO |
| | | MCCANN | MICHAEL | P | 88-NA-170 | | BOYCE |
| | | CRAVENS | DEWITT | J | 88-MM-401 | | NACHMAN |
| | | LOOS | STYVAN | G | 88-ML-136 | | FREGLY |
| LASER GENICS CORPORATION LASER METRIC SYSTEMS, INC. LASER TECHNOLOGY ASSOCIATES LASERGENICS CORPORATION (CALIF UNIV) LAWRENCE LIVERMORE LAB (CALIF UNIV) | | SCHLECHT | RICHARD | M | 88-MP-075 | | MITT |
| | | PAPURT | DAVID | C | 88-MP-086 | | SCHLOSSER |
| | | BROWN | DAVID | C | 88-NC-094 | | SCHLOSSER |
| | | SCHLECHT | EDWARD | J | 88-MP-088 | A | SCHLOSSER |
| LASERGENICS CORPORATION (CALIF UNIV) LAWRENCE LIVERMORE LAB (CALIF UNIV) | | KAUSA | EDWARD | J | 88-MP-076 | | SCHLOSSER |
| | | | | | 88-MP-077 | | SCHLOSSER |
| | | | | | 88-NC-077 | | ULRICH |
| | | | | | 88-MM-398 | | NACHMAN |

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| LAST NAME | FIRST NAME | MIDDLE | | |
| MEMPHIS STATE UNIVERSITY | GEORGE E. OLUSEGUM | 88-NM-456 | | WOODRUFF |
| MENTOR TECHNOLOGIES, INC | BELZER MITCHELL | 88-ML-121 | | BERRY |
| MELDSCALE ENVIRON SIMUL & OPER INC | KAPLAN MICHAEL | 88-MC-175 | A | KOERMER |
| METAMATIX INC. | V. MOHAN KARYAMPUDI | 88-MC-070 | | KOERMER |
| | RICHARD MINCH | 88-NA-185 | | MARITOS |
| METRI WAVE INC. | GERALD WILEMSKI | 88-NA-182 | | TISHKOFF |
| MIAMI UNIVERSITY | WILLIAMS WYMAN | 88-NE-096 | | WITT |
| MICHIGAN STATE UNIVERSITY | GUTTHAN SHELDOON | 88-ML-244 | | CERVENY |
| | PALCO ROBERT | 88-NA-254 | D | MCMICHAEL |
| | PRAMANIA SARATI | 88-NA-441 | | WARSMAN |
| | TROSKO JAMES | 88-ML-259 | | CERVENY |
| MICROTRONICS ASSOCIATES, INC. | COON DARRYL | 88-NE-086 | | MALLOY |
| MILIMETER WAVE TECHNOLOGY, INC. | RONALD PORSYME | 88-NE-096 | | WITT |
| MISSION RESEARCH CORP | EISLER ROBERT | 88-NA-121 | | MARITOS |
| | GOPLEN BRUCE | 88-MP-107 | A | BARKER |
| | STONE STEVE | 88-MP-065 | | PRINCE |
| MISSISSIPPI STATE UNIVERSITY | CHAMBERS JARICE | 88-ML-294 | | CERVENY |
| MONTEREY TECHNOLOGIES, INC. | COLEMAN MUGH | 88-NA-255 | | MELIM |
| MULTISPEC CORPORATION | HENNESSY ROBERT | 88-ML-124 | | TANGNEY |
| MY BUSINESS INC. | SHEBY DAVID | 88-MP-073 | | PRINCE |
| NASA - LEWIS RESEARCH CENTER | YEE O. | 88-NM-294 | | CROWLEY |
| NMSU-PRIMATE RESEARCH INSTITUTE | MULARZ EDWARD | 88-NA-246 | A | TISHKOFF |
| NOAA - R AND D ATMOSPHERIC PROGRAMS | COUCH RONALD | 88-ML-220 | D | CERVENY |
| NANOPTICS INC. | MECHT ALAN | 88-MC-154 | A | KOERMER |
| NATIONAL ACADEMY OF SCIENCES | BAMPFORD GARY | 88-NE-104 | | MALLOY |
| | GILFEATHER M. S. BLUMENTHA | 88-NM-423 | A | WARSMAN |
| | LONG ROBERT | 88-NM-420 | A | WOODRUFF |
| | RAMKA ROBERT | 88-MP-127 | | PRINCE |
| | SHARO ROBERT | 88-XD-013 | A | CAVENDER |
| | BOGGS SWARO | 88-NM-387 | | CROWLEY |
| NATIONAL BUREAU OF STANDARDS | CAVANAGH PAUL | 88-MC-214 | A | MILLER |
| | NGUYEN RICHARD | 88-MC-214 | A | BURGGRAF |
| | THOMSON TINH | 88-NC-232 | | MU |
| NATIONAL INSTITUTE OF HEALTH | ROBB ROBB | 88-NC-211 | D | ULRICH |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN | RICHMOND BARRY | 88-ML-239 | A | TANGNEY |
| | HILL REGINALD | 88-MP-133 | | BARKER |
| | KREML HERBERT | 88-MC-139 | A | KOERMER |
| NATIONAL SCIENCE FOUNDATION | BERG JOSEPH | 88-MP-115 | A | PRINCE |
| | PRODYMA MICHAEL | 88-NE-067 | A | WEINSTOCK |
| | GOUULARO ROBERT | 88-NA-243 | A | TISHKOFF |
| NAVAL RESEARCH LABORATORY | GRIFFIN RICHARD | 88-NE-117 | A | GILES |
| | SU MAROLD | 88-NE-148 | A | GILES |
| NELSON ASSOCIATES | NORMAN MICHAEL | 88-NA-285 | | CROWLEY |
| NEUPOGEN | KUPERSTEIN MICHAEL | 88-ML-209 | | TANGNEY |
| NEW JERSEY ADVANCED TECHNOLOGY | AARON KLAPPHOLI | 88-MP-230 | | CROWLEY |
| NEW JERSEY INSTITUTE OF TECHNOLOGY | GOODE PHILIP | 88-MP-120 | A | RADOSKI |
| | MSU C THOMAS | 88-NA-257 | | MU |
| NEW MEXICO STATE UNIVERSITY | WILKS YORICK | 88-NA-300 | | WARSMAN |
| | | 88-NM-431 | | WARSMAN |

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| INSTITUTION | INVESTIGATOR | FIRST NAME | MIDDLE | PROPOSAL | STATUS | PM NAME |
|--|--------------|--------------|--------|-----------|--------|------------|
| NEW YORK ACADEMY OF SCIENCES | BOCKMAN | DALE | E | 88-NL-257 | D | BERRY |
| | CONRAD | GARY | | 88-NL-258 | D | BERRY |
| | DARSHAMURTI | KRISHNAMURTI | M | 88-NL-246 | D | BERRY |
| | BARNETT | MICHAEL | | 88-NL-248 | D | BERRY |
| NEW YORK CITY TECHNICAL COLLEGE - CUNY | CAPLISCH | RUSSEL | E | 88-NE-174 | | GILES |
| | LIU | TAI-PING | | 88-MM-432 | | NACHMAN |
| NEW YORK UNIVERSITY MEDICAL CENTER | PELLIONISZ | RODOLFO | R | 88-NL-055 | A | NACHMAN |
| | STONE | ERIC | J | 88-NE-185 | | BERRY |
| | CMLDS | ROBERT | A | 88-NL-205 | | GILES |
| | MIRON | DAVID | E | 88-NA-093 | | BERRY |
| NIELSEN ENGINEERING AND RESEARCH CO | | DAVE | | 88-NA-092 | A | MCMICHAEL |
| | | BOLINDRA | M | 88-NA-216 | A | MCMICHAEL |
| NORTH CAROLINA A AND T STATE UNIV | DUTTA | J | | 88-MM-411 | A | MELIN |
| | BEDAIR | SALAH | M | 88-MM-411 | A | NACHMAN |
| | PLEMMONS | ROBERT | M | 88-NC-209 | A | KOERMER |
| | SMEARER | MICHAEL | J | 88-NE-035 | A | MALLOY |
| NORTH STAR RESEARCH CORPORATION | ADLER | RICHARD | J | 88-MM-207 | A | MILLER |
| | BENJAMINSON | M. | | 88-MM-416 | A | NACHMAN |
| | DICKSON | KENNETH | L | 88-MP-148 | A | SMITH |
| | MCDANIEL | FLOYD | D | 88-NL-247 | A | CERVENY |
| NORTH STAR RESEARCH, INC. | SEILER | DAVID | G | 88-NL-120 | A | CERVENY |
| | SPANGLER | CHARLES | M | 88-NE-115 | | MALLOY |
| | DELISI | DONALD | P | 88-NC-173 | | DAVIS |
| | FRASER | ROBERT | B | 88-NC-158 | | KOERMER |
| NORTHERN ILLINOIS UNIVERSITY | FINE | MORRIS | E | 88-NA-107 | A | MCMICHAEL |
| | PREEMAN | A | J | 88-NE-167 | A | ROSENSTEIN |
| | MADDAD | ABRAHAM | M | 88-NE-154 | A | ROSENSTEIN |
| | MUPP | JOSEPH | Y | 88-MM-394 | A | CROWLEY |
| NORTHWEST RESEARCH ASSOCIATES, INC. | LEWIS | ELMER | E | 88-NC-101 | | WILKES |
| | MARKS | TOBIN | J | 88-MM-383 | A | WOODRUFF |
| | MURA | TOSHIO | | 88-NC-045 | | ULRICH |
| | RATCLIFF | ROGER | | 88-NA-224 | | MARITOS |
| OPTIMA SYSTEMS, INC. | SEKULER | MARK | A | 88-NL-196 | | PREGLY |
| | SHAM | SURENDRA | P | 88-NC-133 | | WILKES |
| | HARRISON, JR | LEON | | 88-NL-206 | A | TANGNEY |
| | MITCHELL | EDWARD | J | 88-NA-167 | A | WU |
| OAK RIDGE NATIONAL LAB | KREITZBERG | TOBY | J | 88-MP-087 | | PRINCE |
| | STEWART | PAULA | M | 88-NC-191 | | KOERMER |
| | GUEZENEC | YANN | G | 88-MM-170 | | WOODRUFF |
| | OZGUNER | UNIT | | 88-NC-162 | | KOERMER |
| OHIO STATE UNIV RESEARCH FOUNDATION | TARR | MELINDA | J | 88-XD-011 | A | DIMOCK |
| | QUINN | JARUS | M | 88-NA-253 | | MCMICHAEL |
| | QUINN | MELINDA | J | 88-NA-282 | | NACHMAN |
| | QUINN | JARUS | M | 88-NL-069 | A | CERVENY |
| OREGON GRADUATE CENTER FOR STUDY & RESCH | QUINN | JARUS | M | 88-MP-043 | A | SCLOSSBER |
| | QUINN | JARUS | M | 88-MP-044 | A | SCLOSSBER |
| | QUINN | JARUS | M | 88-MM-452 | A | WAKSMAN |
| | QUINN | JARUS | M | | | |

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| OREGON STATE UNIVERSITY | MPITSDS | GEORGE | J | 88-ML-215 | | BERRY |
| PDA ENGINEERING | HACK | T | E | 88-NA-195 | | MARITOS |
| PEDA CORPORATION | BAROZINA | JORGE | | 88-NA-084 | | MCMICHAEL |
| | HONG | S | K | 88-NA-085 | | MCMICHAEL |
| PK CORPORATION | AZAKOS | P PAPANTONI- | | 88-NM-403 | 0 | WOODRUFF |
| PAL CONSULTANTS, INC. | PAL | NICK | K | 88-NP-071 | | PRINCE |
| PAPYRUS SYSTEMS INC. | SIMANOMOR | KARL | | 88-ML-131 | | TANGNEY |
| PAROSOFT CORPORATION | KOLANA | ADAM | | 88-NA-153 | | MCMICHAEL |
| PENNSYLVANIA STATE UNIVERSITY | BOMA | JERRY | L | 88-NM-365 | | WACHMAN |
| | ALLCOCK | MARRY | R | 88-MC-121 | | MATUSZKO |
| | BRASSEUR | JAMES | G | 88-NA-249 | A | MCMICHAEL |
| | DULIKRAVICH | GEORGE | S | 88-NA-197 | D | WACHMAN |
| | GORDON, III | BERNARD | | 88-NA-208 | | MCMICHAEL |
| | MAGER | WILLIAM | W | 88-MC-170 | A | MATUSZKO |
| | IRWIN | MARY JANE | | 88-NM-324 | A | MILLER |
| | PANTANO | CARLO | G | 88-NE-109 | A | GILES |
| | ROY | RUSTUM | | 88-MC-182 | | ULRICH |
| | SANTAVICCA | DOMENIC | A | 88-MC-097 | A | ULRICH |
| PERS. IDENT. & ENTRY ACCESS CTRL, INC. | VEDAM | K | | 88-NA-241 | A | TISHKOFF |
| PHOENIX DIGITAL CORPORATION | COLBERT | CHARLES | A | 88-NE-118 | | WALLOY |
| PHOTON RESEARCH ASSOCIATES INC | BROWN | RONALD | A | 88-ML-123 | | CERVENY |
| PHOTON RESEARCH ASSOCIATES INC. | TURNER | J. | | 88-NE-052 | | GILES |
| PHYSICAL DYNAMIC INC | KEAT | JAMES | E | 88-NA-278 | | WACHMAN |
| | PODNEY | WALTER | M | 88-NM-279 | | CROWLEY |
| | WEST | BRUCE | J | 88-NP-074 | A | WEINSTOCK |
| PHYSICAL DYNAMICS INC | DUNKERTON | TIMOTHY | J | 88-MC-086 | | KOERNER |
| PHYSICAL RESEARCH INC. | CAYLOR | MARK | G | 88-MC-195 | | KOERNER |
| PHYSICAL SCIENCES INC | ALLEN | ROBERT | H | 88-NA-133 | | MELIN |
| | RAMLINS | W | T | 88-NA-119 | | TISHKOFF |
| | READ | MICHAEL | E | 88-NP-095 | | KELLY |
| PHYSICAL SCIENCES INC. | COLEMAN | RONALD | | 88-NA-159 | | TISHKOFF |
| PLEX SYSTEMS INC. | GERBI | DIANA | J | 88-MP-091 | | BARKER |
| POLYTECHNIC INSTITUTE OF NEW YORK | OYIBO | GABRIEL | P | 88-NM-234 | A | CROWLEY |
| | KUO | SPENCER | | 88-NC-150 | | ULRICH |
| POLYTECHNIC UNIVERSITY | CHRISTENSEN | C. PAUL | | 88-NA-260 | A | WACHMAN |
| POTOMAC PHOTONICS INC. | CORCORAN | V. | J | 88-NP-129 | A | BARKER |
| PRECISION COMBUSTION, INC. (PSI) | PFEFFERLE | WILLIAM | C | 88-NP-093 | A | SCMLOSSBER |
| PRINCETON SCIENTIFIC ENTERPRISE, INC. | BLAIR | DAVID | W | 88-NA-101 | | PRINCE |
| PRINCETON UNIVERSITY | ANDERSON | PHILLIP | W | 88-NA-175 | | TISHKOFF |
| | BERNASEK | STEVEN | L | 88-NE-114 | A | TISHKOFF |
| | BOGDANOFF | SEYMOUR | M | 88-NC-137 | A | WEINSTOCK |
| | DICKINSON | BRADLEY | M | 88-NA-277 | A | BURGGRAF |
| | GLASSMAN | IRVIN | W | 88-NA-277 | A | SAKELL |
| | JU | JIANM-WEN | | 88-NM-313 | A | WACHMAN |
| | KUNG | SUN-YUAN | | 88-NA-226 | A | TISHKOFF |
| | | | | 88-NA-245 | A | TISHKOFF |
| | | | | 88-NA-238 | A | MARITOS |
| | | | | 88-NE-040 | A | GILES |

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|---|---------------------|-----------------|--------|-----------|--------|------------|
| PROGRESSIVE LEARNING SYSTEMS PURDUE RESEARCH FOUNDATION | LUSTIG | IRVIN | | 88-MM-196 | | MILLER |
| | ONG | NAI-PHUAN | | 88-NE-177 | A | WEINSTOCK |
| | REIBMAN | AMY | R | 88-MM-305 | | WOODRUFF |
| | STEELE | J | M | 88-MM-370 | | WOODRUFF |
| | SUCHNER | SYMON | | 88-MP-147 | A | BARKER |
| | THOMPSON | MARK | E | 88-NC-196 | | ULRICH |
| | TSUI | D. | C | 88-NE-134 | A | WITT |
| | BASS | MICHAEL | | 88-ML-139 | | FREGLY |
| | CHEM | WAI-PAM | | 88-MA-233 | | WU |
| | CHEM-YU SHEU | PHILLIP | | 88-MM-373 | | WAKSMAN |
| QUALCOMM, INC. QUANSCAN, INC. | COOPER JR | JAMES | A | 88-NE-187 | | WITT |
| | KING | SANFORD | | 88-MA-242 | A | TISHKOFF |
| | PLEETER | GALEN | B | 88-MA-281 | | TISHKOFF |
| | MARINESCU | OAN | C | 88-MM-309 | | WAKSMAN |
| | VITERBI | ANDREW | J | 88-MM-259 | A | WAKSMAN |
| | WANG | CHENG | Y | 88-NE-102 | | WITT |
| | WEST | PAUL | E | 88-NE-105 | | MALLOY |
| | STORTI | GEORGE | M | 88-MP-067 | | PRINCE |
| | QUANTEX CORPORATION | | | 88-NE-072 | | WEINSTOCK |
| | | | | 88-NE-082 | | WITT |
| QUEP'S COLLEGE REF/SPEC INC | DIPADLA | ROBERT | A | 88-MM-352 | | MILLER |
| | BOYLE | WILLIAM | J | 88-MA-231 | | WU |
| | RATICAN | JOE | L | 88-MA-149 | | BOYCE |
| | CHOW | JOE | M | 88-MM-372 | | CROWLEY |
| | INTERANTE | LEONARD | V | 88-NC-105 | | ULRICH |
| | LEUNG | CHUN | M | 88-MP-066 | A | RADOOSKI |
| | EL-LAITHY | AMROD | | 88-MA-131 | | BOYCE |
| | SYNES | WILLIAM | M | 88-MM-371 | A | WAKSMAN |
| | AKIN | J. | E | 88-MM-450 | | MILLER |
| | BIRBY | ROBERT | E | 88-MM-339 | | MILLER |
| RITC INC. ROCKEFELLER UNIVERSITY ROCKWELL INTERNATIONAL ROCKY RESEARCH RUTGERS - THE STATE UNIVERSITY | DENNIS JR. | JOHN | E | 88-MM-357 | A | MILLER |
| | KIMSEY | JAMES | L | 88-NC-096 | A | DAVIS |
| | PETERSON | GARY | L | 88-NE-049 | | WEINSTOCK |
| | CYMK | JEFFREY | A | 88-ML-253 | | TANGNEY |
| | MARSHALL | DAVID | B | 88-NE-126 | | ROSENSTEIN |
| | LANGELIERS | JAMES | | 88-MA-191 | | TISHKOFF |
| | TAYLOR | JEAN | E | 88-MM-400 | A | WAKSMAN |
| | FRED S. ROBERTS | PETER L. HAMMER | L | 88-MM-321 | A | MILLER |
| | LEBOWITZ | JOEL | | 88-MP-149 | A | BARKER |
| | CHOWDHURY | B | | 88-NE-061 | | ROSENSTEIN |
| RUTHERFORD RESEARCH SM SYSTEMS & RESEARCH CORPORATION SRC INTERNATIONAL | HERSH | GILBERT | M | 88-MM-230 | | CROWLEY |
| | SOMAYAJULU | Y. | V | 88-MM-053 | | RADOOSKI |
| | BLUM | YIGAL | R | 88-NC-218 | | MATUSIHO |
| | CROWLEY | DAVID | E | 88-NC-125 | | MODARCZYK |
| | GREEN | CAROL | E | 88-ML-146 | | CERVENY |
| | MACDONALD | DIGBY | D | 88-NC-186 | | MATUSIHO |
| | RUSPINI | ENRIQUE | M | 88-MM-414 | A | WAKSMAN |
| | SHER | ARDEEN | | 88-MM-415 | A | WAKSMAN |
| | | | | 88-NE-049 | A | MALLOY |

| INSTITUTION | INVESTIGATOR | LAST NAME | FIRST NAME | MIDDLE | PROPOSAL | STATUS | PH NAME |
|---|--------------|-----------|------------|--------|-----------|--------|------------|
| SSDD RESEARCH CORPORATION SAM TECHNOLOGY, INC. | KLIKINIEWICZ | WOJCIECH | | | 88-MM-281 | | CROWLEY |
| | | ALAN | | H | 88-MM-437 | | NACHMAN |
| | | MELSON | | C | 88-NL-127 | | PREGLY |
| SAN DIEGO STATE UNIVERSITY | LEE | LONG | | | 88-MP-121 | | SMITH |
| | | SMITH | | | 88-MP-125 | | SMITH |
| SAN FRANCISCO STATE UNIV FOUNDATION INC SAN JOSE STATE UNIVERSITY SAHJIA LABORATORIES | REED | STEPHEN | | K | 88-NL-236 | A | PREGLY |
| | | ERNEST | | | 88-NL-170 | | CERVEY |
| | | EDWARD | | J | 88-MC-217 | D | BURGGRAF |
| | | RODNEY | | D | 88-MP-060 | | SCHLOSSBER |
| SAICON TECHNOLOGY CORPORATION SCIENCE APPLICATIONS INTERNATIONAL CORP. SCIENTIFIC COMPUTING ASSOCIATES INC | YU | ZENGOI | | | 88-MP-061 | | SCHLOSSBER |
| | | RICHARD | | | 88-ME-068 | | WEINSTOCK |
| | | SHMUEL | | E | 88-MM-413 | | NACHMAN |
| | | DAVID | | | 88-MM-222 | | CROWLEY |
| SCIENTIFIC RESEARCH ASSOCIATES INC | CHEN | S | | Y | 88-MM-224 | | CROWLEY |
| | | MAROLD | | L | 88-NA-113 | | NACHMAN |
| | | MAMSUEY | | | 88-ME-081 | A | WITT |
| | | STEPHEN | | J | 88-NA-074 | | MELIM |
| SCIENTIFIC RESEARCH ASSOCIATES, INC. | GRUBIN | BRIAN | | E | 88-NA-075 | | NACHMAN |
| | | AMIL | | K | 88-NA-211 | | MELIM |
| | | MAROLD | | L | 88-NA-115 | | TISHKOFF |
| | | M | | | 88-ME-136 | A | WITT |
| SCIENTIFIC SYSTEMS INC. | GUSTAFSON | DONALD | | E | 88-ME-084 | | MALLOY |
| | | BRUCE | | P | 88-MM-215 | | CROWLEY |
| | | WILLIAM | | B | 88-MM-214 | | CROWLEY |
| | | OMITARI | | | 88-NL-138 | | PREGLY |
| SEARCH TECHNOLOGY, INC. SIGMA TECHNOLOGIES SIGNITION, INC. SILHOUETTE TECHNOLOGY, INC SMALL BUSINESS VENDOR | DOLEZAL | GEORGE | | J | 88-NA-179 | | MARITOS |
| | | EUGENE | | | 88-NL-210 | | TANGNEY |
| | | HUBERT | | | 88-ME-075 | | WITT |
| | | SUZANNE | | P | 88-NL-129 | | TANGNEY |
| SMITH-RETTLEWELL EYE RESEARCH FOUNDATION | NAKAYAMA | KEM | | | 88-NL-130 | | TANGNEY |
| | | KEITH | | | 88-NL-073 | A | TANGNEY |
| | | ROBERT | | F | 88-NL-051 | | TANGNEY |
| | | SCOTT | | J | 88-NL-071 | | TANGNEY |
| SOFTROM, INC SOUTHERN ILLINOIS UNIVERSITY SOUTHERN METHODIST UNIVERSITY SOUTHWEST RESEARCH INSTITUTE | SPECTOR | RANDALL | | L | 88-MM-251 | | CROWLEY |
| | | JAMES | | S | 88-MM-312 | A | NACHMAN |
| | | CHIN | | | 88-MM-345 | | WOODRUFF |
| | | MICHAEL | | | 88-ME-194 | | ROSENSTEIN |
| SPACE TECH CORPORATION SPARTA INC. SPIRE CORPORATION STANFORD UNIVERSITY | LEISTEUTRE | GEORGE | | A | 88-MP-041 | A | RAOBSKI |
| | | VICTOR | | E | 88-MM-225 | | CROWLEY |
| | | PEREYDOON | | R | 88-MM-226 | | CROWLEY |
| | | MALCOLM | | | 88-ME-087 | | MALLOY |
| STANFORD UNIVERSITY | BOYO | DAVID | | H | 88-ME-152 | A | WEINSTOCK |
| | | STEPHEN | | | 88-MP-101 | A | SCHLOSSBER |
| | | ROBERT | | L | 88-MM-243 | | CROWLEY |
| | | DUNJA | | | 88-MP-047 | A | SCHLOSSBER |
| SMITH-RETTLEWELL EYE RESEARCH FOUNDATION | MANSON | RONALD | | K | 88-NL-085 | A | CERVEY |
| | | RONALD | | | 88-NA-713 | A | TISHKOFF |

| INSTITUTION | INVESTIGATOR | FIRST NAME | MIDDLE | PROPOSAL | STATUS | PM NAME |
|---------------------------------------|--------------|-------------|--------|-----------|--------|-----------|
| | HARRIS | S. | E | 88-MP-123 | A | SCHLOSSER |
| | KATLATH | S. | E | 88-MP-163 | | SCHLOSSER |
| | NIX | WILLIAM | | 88-MM-3-1 | A | WOODRUFF |
| | SHOHAM | YOAV | D | 88-NE-183 | | WITT |
| | ZARE | RICHARD | M | 88-MM-249 | | WAKSMAN |
| STAR MICROWAVE | PHILLIPS | ROBERT | M | 88-MC-112 | | DAVIS |
| STATE UNIVERSITY OF NEW YORK | BUDHU | MUNERAM | M | 88-MP-012 | | BARKER |
| | DAVIS | ELIZABETH | T | 88-ML-036 | | BOYCE |
| | GEORGE | THOMAS | F | 88-MC-207 | A | TANGNEY |
| | MAGSTROM | THOMAS | | 88-MM-349 | | DAVIS |
| | LIM | D | L | 88-NE-179 | | MACNAMAN |
| | PRASAD | PARAS | N | 88-MC-161 | | MALLOY |
| STEVENS INSTITUTE OF TECHNOLOGY | SEIDL | MILOS | N | 88-MP-145 | A | ULRICH |
| STRUCTURAL ANALYSIS TECHNOLOGY INC | KARIL | HASAN | | 88-NA-114 | | SMITH |
| STRUCTURAL INTEGRITY ASSOCIATES, INC. | KUO | AN-TU | | 88-NA-184 | | MACNAMAN |
| SUPERCOM, INC. | WONG | JAMES | | 88-NE-145 | A | MARITOS |
| -SURFACE OPTICS CORPORATION | MEU | JOHN | T | 88-MP-090 | | WEINSTOCK |
| SYNETICS CORP | LAQUADRA | GREGORY | | 88-MP-070 | | SCHLOSSER |
| SYRACUSE UNIVERSITY | LAGRAPP | JOHN | E | 88-NA-214 | | SCHLOSSER |
| SYSTEMS APPLICATION INC. | MONANTY | BIDHU | B | 88-MM-233 | | HELIN |
| SYSTEMS DYNAMICS INCORP. | REED | CHRISTOPHER | M | 88-NA-151 | | CROWLEY |
| SYSTEM CORPORATION | CAMPBELL | MAROLD | M | 88-MM-227 | | MCMICHAEL |
| TIA RESEARCH INC. | CLARKE | THOMAS | L | 88-MM-257 | | CROWLEY |
| TECHMIC RESEARCH LABORATORIES | RAUSCHER | E. | A | 88-MP-080 | | RADOSKI |
| TECHNION-ISRAEL INST OF TECHNOLOGY | ADLER | ROBERT | J | 88-MM-275 | | WOODRUFF |
| | LAVIE | PERETZ | | 88-ML-231 | | WOODRUFF |
| TECHNOLOGY SYSTEMS, INC. | FARUQI | PARHAM | A | 88-MM-244 | | PREGLY |
| TELEPHOS ASSOCIATED | KRITIKOS | MARALAMBOS | M | 88-MM-245 | | CROWLEY |
| TEMPLE UNIVERSITY SCHOOL OF MEDICINE | LIN | AVI | | 88-MM-210 | | CROWLEY |
| TERRA TER INC | SHARER | JOHN | C | 88-NE-073 | | WAKSMAN |
| TETRA CORPORATION | MOENY | W. | M | 88-MP-057 | | WEINSTOCK |
| TEXAS A AND M RESEARCH FOUNDATION | CARROLL | R. | J | 88-MM-322 | | SMITH |
| | CHEW | K | M | 88-MP-113 | A | WOODRUFF |
| | PELOMAN | R. | M | 88-MM-390 | | BARKER |
| | VANCE | J | | 88-NA-252 | A | WOODRUFF |
| TEXAS A AND M UNIVERSITY | OCMOA | O | O | 88-NA-076 | | MACNAMAN |
| TEXAS EXPLOSIVES CO., INC. | KEEFE | DAVID | D | 88-NA-183 | | MARITOS |
| TEXAS TECH UNIVERSITY | MARTIN | CLYDE | F | 88-MM-304 | | BIRKAN |
| TERMA-WAVE, INC | SMITH | M | L | 88-NE-077 | | CROWLEY |
| TOPIC TECHNOLOGY | GRAY | ROBERT | B | 88-MP-081 | | WITT |
| TOR GEOPHYSICS CORPORATION | KON | JOSEPH | R | 88-MP-068 | | RADOSKI |
| TRINITY UNIVERSITY | PREI | MELVIN | R | 88-XD-007 | A | PRINCE |
| TUSKEGEE INSTITUTE | JEELANI | SMAIK | | 88-NA-269 | A | CAVEMDEP |
| UNISORT INC. | THOMPSON | JOSEPH | B | 88-NE-097 | | MARITOS |
| UNITED STATES AIR FORCE ACADEMY | SAMPSON | ORMYN | | 88-MC-169 | A | WITT |
| UNITED TECHNOLOGIES RESEARCH CENTER | CASSENTI | M. | N | 88-NA-273 | | MARUSZKO |
| | MICHELIS | ROBERT | H | 88-MP-111 | | MARITOS |
| UNIV OF ALBERTA | ELLIOTT | | J | 88-MM-395 | A | SMITH |
| | | | | | | CROWLEY |

INSTITUTION

UNIV OF ARIZONA

LAST NAME INVESTIGATOR FIRST NAME MIDDLE

ANDREWS GREGORY R
 GEMRELS TOM
 GIBBS MYATT M
 GLEZER ARI A
 KOSTUK RAYMOND K
 LAUTER JUDITH L
 PETERSON MARY R
 UHLMANN D. E
 WIGLEY DAVID R
 BREWER DENNIS E
 BARLOW DENNIS E
 BAVARIAN BEHNAM
 BIGLIERT EZIO T
 BOWERS MICHAEL A
 BRAU C. A
 BRON W. E
 C. CHANG WILLIAM S
 CARTER EMILY A
 CHAN T. F
 PINK MERRAN J
 GARDNER WILLIAM A
 GHARIB MORTEZA A
 GRUNBAUM P. ALBERTO C
 HEMMINGER JOHN
 KADTKE JAMES
 KLEIN STANLEY
 LAUB ALAN J
 LIM ANTHONY T
 MILLER RANDOLPH K
 MUKHERJEE A
 OESTERREICHER JOHANN
 PIMENTEL GEORGE C
 ROSS SHELDON
 ROSTKER NORMAN
 SHAW GORDON
 SMITH PAUL
 STEIN LARRY
 TROGLER WILLIAM C
 VULLIET PHILIP R
 WAKINOTO ROGER M
 WALPITA L. M
 WETS L. M
 WILLIAMS ROGER J. B. A
 ZADEM FORNAN A
 ALTES LOTFI A
 SAMA RICHARD A
 SIBNER M. P
 STEVEN STEVEN J
 WOODZIMIERZ WOODZIMIERZ J

PROPOSAL

STATUS

PM NAME

88-NM-377 NACHMAN
 88-NP-135 RADOOSKI
 88-NP-131 SCHLOSSER
 88-NA-158 MC MICHAEL
 88-NE-125 GILES
 88-NL-075 TANGNEY
 88-NL-240 FREGLEY
 88-NC-215 ULRICH
 88-NC-104 MATUSZKO
 88-NM-206 CROMLEY
 88-NM-335 WOODRUFF
 88-NE-106 GILES
 88-NE-149 M. LLOYD
 88-NE-159 G. LES
 88-NC-117 DAVIS
 88-NM-185 NACHMAN
 88-NE-156 WEINSTOCK
 88-NM-346 WOODRUFF
 88-NA-247 MC MICHAEL
 88-NM-331 NACHMAN
 88-NC-190 BURGGRAF
 88-NM-363 NACHMAN
 88-NL-241 TANGNEY
 88-NM-439 CROMLEY
 88-NP-344 BARBER
 88-NM-392 MILLER
 88-NE-130 ROSENSTEIN
 88-NE-190 WEINSTOCK
 88-NC-142 WODARCZYK
 88-NM-172 WOODRUFF
 88-NP-122 SMITH
 88-NL-054 BERRY
 88-NC-157 ULRICH
 88-NL-242 BERRY
 88-NC-110 MATUSZKO
 88-NL-066 KOEHRER
 88-NC-140 BERRY
 88-NE-116 GILES
 88-NM-308 MILLER
 88-NA-259 TISMROFF
 88-NM-404 WAKSMAN
 88-NL-230 TANGNEY
 88-NP-136 KELLEY
 88-NC-130 BURGGRAF
 88-NM-311 WOODRUFF

UNIV OF CALIFORNIA, SAN DIEGO
 UNIV OF CENTRAL FLORIDA
 UNIV OF CHICAGO
 UNIV OF CINCINNATI

| INSTITUTION | INVESTIGATOR | LAST NAME | FIRST NAME | MIDDLE | PROPOSAL | STATUS | PH NAME |
|-----------------------------------|--------------|-------------|-------------|--------|-----------|--------|------------|
| UNIV OF COLORADO | | NAYFEM | ADMAN | H | 88-NE-163 | | WEINSTOCK |
| | | ROE | R. | J | 88-NC-216 | | DAVIS |
| | | ANDERSON | AMY | E | 88-ML-252 | | CERVEY |
| | | BIPINGEN | SEDAT | | 88-NA-228 | | MCMICHAEL |
| | | BRANCH | MELVYN | C | 88-NA-210 | A | BIRKAN |
| | | CHOW | CHUEN-YEN | | 88-NA-206 | A | MELIN |
| | | FREYMUTH | PETER | R | 88-NA-200 | A | MELIN |
| | | KASSDY | DAVID | R | 88-NA-244 | A | BIRKAN |
| | | LEONE | STEPHEN | R | 88-NC-093 | A | MODARCZYK |
| | | LUTIGES | MARVIN | W | 88-NA-201 | A | MELIN |
| UNIV OF COLORADO AT DENVER | | MANDEL | JAN | | 88-MM-290 | | NACHMAN |
| | | COHEN | MARION | F | 88-ML-052 | A | TANGNEY |
| | | COOPER | DOUGLAS | J | 88-MM-464 | | CROWLEY |
| | | DABORA | ELI | K | 88-NA-144 | | TISHKOFF |
| UNIV OF CONNECTICUT HEALTH CENTER | | KOLTRACHT | ISRAEL | | 88-MM-410 | | NACHMAN |
| | | TRAHIOTIS | CONSTANTINE | S | 88-ML-195 | | TANGNEY |
| | | ANGELL | T. | | 88-MM-434 | | CROWLEY |
| | | BRILL | THOMAS | B | 88-NA-171 | A | BIRKAN |
| UNIV OF DELAWARE | | DOLGOPOLSKY | ALEX | | 88-NA-146 | | HARITOS |
| | | SANTOSA | PADIL | | 88-MM-208 | A | NACHMAN |
| | | VINSOM | JACK | R | 88-NA-129 | | WU |
| | | COMBE | ROBERT | D | 88-NC-193 | A | MODARCZYK |
| | | HANSTAD | MARVIN | A | 88-NE-191 | | ROSENSTEIN |
| | | GREEN | WILLIAM | A | 88-XO-004 | | ROBISON |
| | | CHILDERS | DOMALD | G | 88-MM-381 | | WAKSMAN |
| | | GREEN | DAVID | M | 88-ML-076 | A | TANGNEY |
| | | HAMMER | JACOB | | 88-MM-318 | | CROWLEY |
| | | HENCH | D. | K | 88-NC-205 | A | ULRICH |
| UNIV OF GEORGIA | | KALMAN | R.E. | | 88-MM-190 | | CROWLEY |
| | | KHURI | ANDRE | I | 88-MM-384 | | WOODRUFF |
| | | OHON | YNGYE | | 88-NC-202 | | DAVIS |
| | | SORKIN | ROBERT | D | 88-ML-237 | A | TANGNEY |
| | | CAMPFIELD | E. ROONEY | | 88-MM-307 | A | MILLER |
| | | KING | BRUCE | | 88-MM-399 | | NACHMAN |
| | | STURCKLE | SAM | | 88-MM-273 | | MILLER |
| | | AMUJA | MARENORA | | 88-MM-178 | A | WAKSMAN |
| | | BEDIMI | ROBERT | A | 88-MM-272 | A | WAKSMAN |
| | | BENTSHAM | J. | | 88-NA-220 | A | BIRKAN |
| UNIV OF IDAHO | | CHEN | WAI-KAI | G | 88-NA-280 | | NACHMAN |
| | | EDEN | J. | | 88-NE-128 | | WITTMANN |
| | | ESLAMI | HANSOUR | | 88-MP-118 | A | SCHLOSSER |
| | | GELLMAN | ANDREW | J | 88-MM-447 | | CROWLEY |
| | | MEYAT | A. | S | 88-NC-151 | | BURGRAF |
| | | KOKOTOVIC | PETER | Y | 88-MM-455 | | WOODRUFF |
| | | KRIVEN | WALTERAUD | M | 88-MM-463 | | CROWLEY |
| | | MAZURER | J | | 88-NE-186 | | ROSENSTEIN |
| | | OROMUNDRO | STEPHEN | M | 88-NE-146 | A | ROSENSTEIN |
| | | PLESS | VERA | | 88-NE-188 | | GILES |
| UNIV OF ILLINOIS | | | | | 88-MM-294 | A | MILLER |
| | | | | | | | |

| INSTITUTION | INVESTIGATOR | FIRST NAME | MIDDLE | PROPOSAL | STATUS | PM NAME |
|-----------------------------------|--------------|--------------|--------|-----------|--------|------------|
| UNIV OF IOWA | PLEWA | MICHAEL | J | 88-ML-147 | A | CERVENY |
| | SACKS | JEROME | | 88-MM-332 | A | WOODRUFF |
| | STILLMAN | GREGORY | | 88-NE-169 | A | WITT |
| | | | | 88-NE-170 | A | WITT |
| | | DONALD | J | 88-NC-068 | | MATUSIKO |
| | | BOBBY | D | 88-NA-263 | | BOYCE |
| | | KENJI | | 88-NE-164 | D | WEINSTOCK |
| | | | | 88-NA-218 | | BALL |
| | | ROBERT | S | 88-ML-226 | D | CERVENY |
| | | SREERAMURTHY | | 88-NE-160 | | ROSENSTEIN |
| UNIV OF MARYLAND | ANKEM | STUART | | 88-MM-297 | | NACHMAN |
| | ANTMAN | BENJAMIN | | 88-MM-310 | A | WOODRUFF |
| | KEDEM | CHI | H | 88-MP-045 | A | SMITH |
| | LEE | D. | C | 88-MP-120 | A | PRINCE |
| | PERSLER | MUDDAPPA | S | 88-MM-199 | D | MILLER |
| | GONDA | DANIEL | A | 88-ML-064 | | TANGMEY |
| | | POLLEN | S | 88-NA-272 | | BOYCE |
| | | CHANG | E | 88-NC-179 | A | ULRICH |
| | | KARAS | | 88-NC-180 | A | ULRICH |
| | | | | 88-NC-189 | | ULRICH |
| UNIV OF MARYLAND BALTIMORE COUNTY | ROSENBERG | ARNOLD | L | 88-NC-203 | D | ULRICH |
| | | | | 88-MM-179 | | MILLER |
| | | | | 88-MM-320 | | WARSMAN |
| | | JAMES | H | 88-ML-078 | | TANGMEY |
| | | ALBERT | R | 88-KO-014 | A | CAVENDER |
| | | MARIA | | 88-NA-230 | | MARITOS |
| | | GERARD | H | 88-NA-147 | A | TISHKOFF |
| | | LINDA | S | 88-ML-161 | A | CERVENY |
| | | BRAM VAN | | 88-MM-367 | | NACHMAN |
| | | ROBERTO | | 88-NE-193 | | MALLOY |
| UNIV OF MICHIGAN | KENNETH | MILAGROS | G | 88-MM-374 | | NACHMAN |
| | SMOLLER | JOEL | S | 88-ML-251 | | CERVENY |
| | DANLBERG | E | D | 88-NE-180 | | MALLOY |
| | ERDIE | DOUGLAS | M | 88-MP-108 | A | KELLEY |
| | KAMFER | RUTH | | 88-ML-249 | | TANGMEY |
| | LEE | E. BRUCE | | 88-MM-393 | D | CROWLEY |
| | TEMPIK | AMMED | H | 88-MM-319 | | WOODRUFF |
| | AVULA | XAVIER | J | 88-KO-002 | A | CAVENDER |
| | BAIN | LEE | J | 88-MM-200 | D | WOODRUFF |
| | CALDWELL | CHARLES | M | 88-ML-229 | D | CERVENY |
| UNIV OF MINNESOTA | CMICONE | CARMEN | | 88-MM-344 | | NACHMAN |
| | DHARANI | LOKESH | A | 88-NA-276 | | MARITOS |
| | KELLER | JAMES | | 88-MM-436 | | WARSMAN |
| | | | | 88-MM-442 | | WARSMAN |
| | MILLER | GLENN | C | 88-ML-225 | D | CERVENY |
| | SHEPARD | MARVEY | K | 88-MM-201 | A | NACHMAN |
| | SMITH | ROBERT | A | 88-ML-082 | A | TANGMEY |
| | WRIGHT | JOHN | J | 88-NC-092 | | MODARCITYK |
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| UNIV OF MISSOURI | | | | | | |
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AIR FORCE OFFICE OF SCIENTIFIC RESEARCH
 STATUS - 'A' = ACCEPTED, 'O' = DECLINED, 'W' = WITHDRAWN

| INSTITUTION | LAST NAME | INVESTIGATOR | FIRST NAME | MIDDLE | PROPOSAL | STATUS | PM NAME |
|--|------------------------|--------------|-------------|---------|-----------|--------|------------|
| UNIV OF NEW MEXICO | BRUECK | S | C. RANDALL | R | 88-MP-139 | A | SCHLOSSBER |
| | TRUMAN | | PETER | | 88-KO-017 | A | CAVENDER |
| | POLITZER | | GREGORY | | 88-KO-016 | | DAVIS |
| | UNIV OF NEW ORLEANS | | GEORGE | S | 88-MM-347 | | NACHMAN |
| | UNIV OF NEW YORK CITY | | ROGER | E | 88-MM-386 | | WOODRUFF |
| | UNIV OF NORTH CAROLINA | | MILLER | | 88-NC-107 | | WODARCZYK |
| | | MURPHY | | A | 88-MM-448 | | CROWLEY |
| | | TOLLE | | W | 88-MM-426 | | MILLER |
| | | DDW | | D | 88-MM-429 | A | MILLER |
| | | GAD-EL-MAR | | M | 88-NE-181 | | MALLOY |
| UNIV OF NOTRE DAME | RICHEL | A | MOMANED | M | 88-NA-149 | | MCMICHAEL |
| | MICHOLOS | M | KENNETH | M | 88-MM-397 | | WARSZAN |
| | BECK | A | JACOB | A | 88-MC-176 | | MATUSZKO |
| | STEVENS | A | KENT | A | 88-ML-053 | A | TANGNEY |
| | BAJCEY | A | RUZEMA | F | 88-ML-250 | A | TANGNEY |
| | GARITO | A | A. | F | 88-MM-329 | A | WPKSMAN |
| | MASHIN | V | ZVI | | 88-NC-132 | A | ULRICH |
| | VITEK | | | | 88-NA-222 | A | MARITOS |
| | | KOZIKOWSKI | P | ALAN | 88-NE-165 | A | ROSENSTEIN |
| | | RODRIGUEZ | A | LEANDRO | 88-NE-195 | | ROSENSTEIN |
| UNIV OF PITTSBURGH | CRUICKSMARK | M | STEVEN | M | 88-ML-243 | A | BERRY |
| | RAY | M | CHRISTOPHER | M | 88-NA-267 | A | WU |
| | BROWN | M | JOSEPH | M | 88-MM-353 | A | MATUSZKO |
| | EBERLY | M | A. | C | 88-MM-453 | A | WOODRUFF |
| | MELISSINDS | M | DAVID | R | 88-MP-102 | A | WARSZAN |
| | WILLIAMS | M | REVIN | M | 88-MP-119 | A | BARKER |
| | BOWYER | M | K. | M | 88-ML-058 | A | TANGNEY |
| | RAPACHANDRAM | M | JOHN | M | 88-MM-654 | A | WARSZAN |
| | DYKE | M | JACK | M | 88-MM-388 | A | CROWLEY |
| | PEINBERG | R | STEPHEN | R | 88-MC-156 | A | WODARCZYK |
| UNIV OF SOUTH FLORIDA | GAUDIOT | H | JEAN-LUCH | R | 88-MP-104 | A | SCHLOSSBER |
| | HO | M | CHIH-MING | | 88-MP-132 | A | SCHLOSSBER |
| | MENDEL | M | JERRY | | 88-NE-123 | A | GILLES |
| | NEVATIA | R. | R. | | 88-NE-124 | A | GILLES |
| | REKOPP | M | LARRY | | 88-NA-102 | A | MELIM |
| | SAPONOV | M | MICHAEL | | 88-MM-348 | D | WOODRUFF |
| | STEIER | M | WILLIAM | | 88-MM-375 | A | WARSZAN |
| | MITTIG | M | CURT | | 88-NA-125 | A | MCMICHAEL |
| | | ROSKO | O | VICTOR | 88-MM-190 | A | CROWLEY |
| | | LI | S | HERBERT | 88-MM-111 | A | GILLES |
| UNIV OF SOUTHERN CALIFORNIA (ELEC ENG) | SCHRADE | O | MAMANTOV | | 88-MC-120 | A | WODARCZYK |
| | MAMANTOV | O | GLEB | | 88-ML-172 | A | WODARCZYK |
| | SAYLER | S | GARY | | 88-NE-048 | A | GILLES |
| | BITTNER | D | GEORGE | | 88-MM-048 | A | WOODRUFF |
| | | | | | 88-NA-336 | A | WOODRUFF |
| | | | | | 88-NA-207 | A | BIRKAN |
| | | | | | 88-MC-106 | A | MILKES |
| | | | | | 88-ML-061 | A | CERVENY |
| | | | | | 88-ML-214 | | BERRY |
| | | | | | | | |

INSTITUTION

| INSTITUTION | LAST NAME | INVESTIGATOR | FIRST NAME | MIDDLE | PROPOSAL | STATUS | PM NAME |
|-------------------------|-------------------|--------------|---------------|--------|-----------|--------|------------|
| UNIV OF UTAH | DEWAR | | MICHAEL J. S. | | 88-NC-066 | | MATUSZKO |
| | MARCUS | | STEVEN | I | 88-MM-445 | | CROWLEY |
| | MICHL | | JOSEF | | 88-NC-155 | A | MATUSZKO |
| | PARRY | | ROBERT | W | 88-NC-167 | | ULRICH |
| | JOHNSTON | | WILLIAM | A | 88-ML-255 | | FREGLY |
| | MATHEWS | | V. JOHN | | 88-MM-609 | | WOODRUFF |
| | LASIECKA | | IRENA | | 88-MM-299 | A | CROWLEY |
| | PAPANTONI-KAZAKOS | | P. | | 88-MM-457 | | WOODRUFF |
| | BEIDENTHAL | | ROBERT | E | 88-NA-127 | A | TISHKOFF |
| | CHRISTIANSEN | | WALTER | H | 88-NA-202 | A | MCMICHAEL |
| UNIV OF WASHINGTON | CLARK | | KENNETH | C | 88-NC-210 | | KOERMER |
| | GESSNER | | FRED | B | 88-NA-270 | | MELIN |
| | NELSON | | THOMAS | D | 88-ML-057 | A | FREGLY |
| | OLSEN | | LARRY | C | 88-MP-137 | | SMITH |
| | ROCKAFELLAR | | RALPH | Y | 88-MM-366 | A | MILLER |
| | MITCHELL | | BRIAN | A | 88-MP-064 | A | SMITH |
| | ANDREN | | ANDERS | W | 88-ML-086 | A | CERVENY |
| | CHANG | | Y | A | 88-NE-119 | | MALLOY |
| | CRIM | | F. FLEMING | | 88-NC-134 | | WODARLZYK |
| | KURTZ | | THOMAS | G | 88-MM-380 | | WOODRUFF |
| UNIV OF WESTERN ONTARIO | LIN | | CHUN | C | 88-MM-408 | | WOODRUFF |
| | MAMAGASARIAN | | OLVI | L | 88-MM-124 | | KELLEY |
| | MONEL | | JOHN | A | 88-MM-658 | | MILLER |
| | PETERSON | | RICHARD | E | 88-MM-314 | A | NACHMAN |
| | SLEMMOD | | MARSHALL | | 88-ML-256 | | CERVENY |
| | WEST | | ROBERT | | 88-MM-328 | | NACHMAN |
| | BUCHL | | ROBERT | | 88-NC-109 | A | MATUSZKO |
| | LUBRANO | | ROBERT | A | 88-XO-003 | A | CAVENDER |
| | BASILI | | TAI-IL HAM | J | 88-NC-126 | | ULRICH |
| | SHAMMA | | VICTOR | R | 88-ML-122 | A | CERVENY |
| UNIVERSITY OF MICHIGAN | WILLIAMS | | ELLEN | A | 88-ML-068 | A | TANGNEY |
| | CALAMAN | | DONALD | D | 88-NC-113 | | BURGGRAF |
| | KEEMER | | ROBERT | A | 88-MM-211 | A | NACHMAN |
| | POWELL | | KENNETH | W | 88-MM-187 | | WOODRUFF |
| | ULLMAN | | ROBERT | | 88-NA-143 | | MCMICHAEL |
| | DOUCETTE | | ROBERT | | 88-NC-067 | | ULRICH |
| | SCHUMK | | WILLIAM | J | 88-ML-098 | | CERVENY |
| | ULWICK | | ROBERT | W | 88-NC-174 | A | KOERMER |
| | WICKMAR | | JAMES | C | 88-NC-141 | | KOERMER |
| | DESPANDEY | | Y | B | 88-NC-204 | | KOERMER |
| UT-LITY POWER GROUP | LENNERT | | CHANDRA | G | 88-NE-065 | A | ROSENSTEIN |
| | TOLK | | PAUL | | 88-XO-015 | | CAVENDER |
| | LANGLEY | | MORRAN | H | 88-NC-149 | A | BURGGRAF |
| | TALLEY | | LAWRENCE | W | 88-NA-188 | | TISHKOFF |
| | LEBERI | | ROBERT | L | 88-NA-166 | | TISHKOFF |
| | CHITTSOMBOON | | F. | W | 88-MM-249 | | CROWLEY |
| | | | TAMIT | | 88-NA-086 | | TISHKOFF |
| | | | | | 88-NA-112 | | TISHKOFF |
| | | | | | | | |
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UNIV OF WISCONSIN-EAU CLAIRE
 UNIVERSAL ENERGY SYSTEMS INC
 UNIVERSAL SENSORS, INC.
 UNIVERSITY OF MARYLAND

UNIVERSITY OF MICHIGAN
 UTAH STATE UNIVERSITY

UT-LITY POWER GROUP
 VANDERBILT UNIVERSITY

VATELL CORPORATION
 VERITAY TECHNOLOGY, INC.
 VEXCEL CORPORATION
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INVESTIGATOR

LAST NAME FIRST NAME MIDDLE

PROPOSAL

STATUS

PM NAME

| INSTITUTION | INVESTIGATOR | LAST NAME | FIRST NAME | MIDDLE | PROPOSAL | STATUS | PM NAME |
|-------------|--------------|---------------|-------------|--------|-----------|--------|-----------|
| | | ODDRELE | SIMPRASAD | S | 88-NA-088 | | MCMICHAEL |
| | | MERINARO, JR | RALPH | M | 88-NC-079 | | KOERMER |
| | | | | | 88-NC-080 | | KOERMER |
| | | | | | 88-NC-081 | | KOERMER |
| | | | | | 88-NC-082 | | KOERMER |
| | | RAO | D | M | 88-NA-095 | | MCMICHAEL |
| | | | | | 88-NA-100 | | MELIN |
| | | SUNDARAM | P | | 88-NA-087 | | MCMICHAEL |
| | | | | | 88-NA-098 | | MELIN |
| | | ARMSTONG | JAMES | R | 88-NE-173 | D | WITT |
| | | BURMS | JOHN | A | 88-MM-378 | A | CROWLEY |
| | | MALLAUER, JR. | WILLIAM | L | 88-XD-018 | A | CAVANDEK |
| | | LINDNER | DOUGLAS | K | 88-MM-446 | | CROWLEY |
| | | RUSSELL | DAVID | L | 88-MM-354 | A | CROWLEY |
| | | TELIOMIS | DEMETRI | P | 88-NA-168 | | MELIN |
| | | WATSON | LAYNE | T | 88-NP-362 | | CROWLEY |
| | | CALDWELL | J. | G | 88-MM-291 | | CROWLEY |
| | | DE LA CRUZ | RODOLFO | V | 88-NA-132 | | BOYCE |
| | | DELA CRUZ | RODOLFO | V | 88-NA-134 | | WU |
| | | MIRSCH | I | C | 88-NA-229 | | MELIN |
| | | SINGH | MAHENDRA | | 88-MM-248 | | CROWLEY |
| | | JOHNSON | WAYNE | | 88-NA-072 | | MELIN |
| | | | | | 88-MM-165 | | CROWLEY |
| | | HAYTON | WILLIAM | L | 88-NL-160 | A | CERVEY |
| | | SABERI | ALI | | 88-MM-466 | | CROWLEY |
| | | BYRNES | CHRISTOPHER | I | 88-MM-191 | A | CROWLEY |
| | | KATZ | Z. NORMAN | | 88-MM-376 | D | NACHMAN |
| | | KRIEGSMAN | G. | A | 88-MM-334 | A | NACHMAN |
| | | NELSON | IVAN | | 88-NA-104 | | WU |
| | | ZHANG | CUN-QUAN | | 88-MM-306 | | MILLER |
| | | MESSHAM | R. | L | 88-NE-047 | A | WITT |
| | | ELCRAT | ALAN | | 88-MM-435 | | NACHMAN |
| | | WILCOXON | M. | C | 88-NP-069 | | PRINCE |
| | | OLIVER | STUART | M | 88-NA-194 | | TISHKOFF |
| | | BRIDGES | THOMAS | J | 88-MM-266 | A | NACHMAN |
| | | RAP-MOMAN | L | R | 88-NE-197 | | MALLOY |
| | | MILLER | DAVID | F | 88-MM-204 | | NACHMAN |
| | | BOYCE | JAMES | B | 88-NE-189 | | WEINSTOCK |
| | | YU | Y | E | 88-NA-240 | | WU |
| | | PROBER | DANIEL | E | 88-NE-151 | A | WEINSTOCK |
| | | SCHANK | ROGER | | 88-MM-421 | A | WAKSMAN |
| | | MIRSCH | JOY | C | 88-NL-167 | | TAMNEY |

VIRGINIA POLYTECHNIC INST L STATE UNIV

VISTA RESEARCH CORPORATION

VRIJE UNIVERSITEIT

WADDAN SYSTEMS

WANTE JOHNSON

WASHINGTON STATE UNIVERSITY

WASHINGTON UNIVERSITY

WAVE-PRO

WEIDLINGER ASSOCIATES

WEST VIRGINIA UNIVERSITY

WESTINGHOUSE ELECTRIC CORPORATION

WICHITA STATE UNIVERSITY

WILCOXON RESEARCH

WOODSIDE GROUP, INC.

WORCESTER POLYTECHNIC INSTITUTE

WRIGHT STATE UNIVERSITY

XEROX RESEARCH CENTER

Y. Y. YU ASSOCIATES

YALE UNIVERSITY

YALE UNIVERSITY SCHOOL OF MEDICINE

PART II

| TITLE (CONT.) INSTITUTION | INVESTIGATOR | TYPE/MONTHS RECEIVED AMOUNT | STATUS PROGRAM MANAGER PROPOSAL # | INITIATE START DATE TOT AMT |
|---|--------------------|-----------------------------------|---|-----------------------------------|
| CONNA'S TEST PROPOSAL UNIV OF MARYLAND | | N 15/04/88 90 | BALL 88-NA-218 | |
| (SBR) DEVELOP ELECTROMAGNETIC POWER AMPLIFICATION DEVICE (EMPAD) WITH PROPULSION APPLICATIONS GENESIS COMPUTER PRODUCTS INC | KELLY WALTER | N 06 15/01/88 94,977,250 | BIRKAN 88-NA-082 | |
| (SBR) AN EXPERIMENTAL INVESTIGATION OF COMBUSTION INSTABILITY PHENOMENA IN LIQUID-FUELED ROCKET ENGINES AEROMETRICS INC | BACHALO WILLIAM | N 06 20/01/88 949,895 | BIRKAN 88-NA-111 | |
| SUPPORT FOR THE COMBUSTION INSTITUTE COMBUSTION INSTITUTE | PALMER HOWARD | R 12 22/02/88 910,000 | A BIRKAN 88-NA-150 | 910,000 15/09/88 910,000 |
| PROPULSION RESEARCH ON THE HYBRID PLUME PLASMA ROCKET MASSACHUSETTS INSTITUTE OF TECHNOLOGY | CHANG-DIAZ F | R 12 01/03/88 9182,000 | A BIRKAN 88-NA-161 | 9182,000 02/09/88 9182,000 |
| STRUCTURE/PROPERTY/REACTIVITY RELATIONSHIPS AMONG NITRAMINES AND OTHER EMERGETIC MATERIALS UNIV OF DELAWARE | BRILL THOMAS | R 12 04/03/88 999,999 | A BIRKAN 88-NA-171 | 999,999 30/09/88 999,999 |
| SBR THERMALLY INDUCED MOLECULAR IMPULSION ELECTRIC GENERATOR LOCH ENTERPRISES | LOCHMILLER ALAN | N 06 09/03/88 9101,575 | BIRKAN 88-NA-180 | |
| SBR SYNTHESIS OF STABLE HIGH-ENERGY ROCKET PROPELLANTS TEXAS EXPLOSIVES CO., INC. | KEEFE DAVID | N 06 09/03/88 950,000 | BIRKAN 88-NA-183 | |
| BASIC PROCESSES OF PLASMA PROPULSION UNIV OF STUTTGART | SCHRADE HERBERT | R 24 22/03/88 9172,397 | A BIRKAN 88-NA-207 | 984,373 01/08/88 9172,397 |

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|---|--------------|------------|--------------|-----------------------------------|---|-----------------------------------|
| FLAME CHEMISTRY OF SOLID PROPELLANT COMBUSTION UNIV OF COLORADO | | | MELVYN | R 12 25/03/88 890,576 | A BIRKAN 88-NA-210 | 890,576 30/09/88 890,576 |
| COMBUSTION OF HYDROGEN AND HYDROCARBONS IN FLOURINE EMERY UNIVERSITY | | KAUFMAN | MYRON | R 12 18/04/88 854,955 | A BIRKAN 88-NA-219 | 854,955 01/08/88 854,955 |
| EFFECTS OF TURBULENCE ON STATIONARY PROCESSES IN C-SYSTEMS UNIV OF ILLINOIS | | BEDDINI | ROBERT | R 12 26/04/88 879,966 | A BIRKAN 88-NA-220 | 879,966 01/09/88 879,966 |
| TURBULENT DIFFUSION PLANE ADJACENT TO A SOLID FUEL CASE WESTERN RESERVE UNIVERSITY | | T' IEM | JAMES | R 12 10/05/88 850,000 | A BIRKAN 88-NA-237 | 850,000 01/09/88 850,000 |
| SOLID ROCKET COMBUSTION PHENOMENA UNIV OF COLORADO | | KASSOY | DAVID | N 36 23/05/88 8352,445 | A BIRKAN 88-NA-244 | 8100,000 30/09/88 8352,445 |
| AN EXPERIMENTAL INVESTIGATION OF THE LEADING EDGE OF DIFF. FLAMES GEORGIA TECH RESEARCH CORPORATION | | PRICE | EDWARD | N 36 26/05/88 8337,923 | BIRKAN 88-NA-250 | |
| CRAY COMPUTER SUPPORT AIR FORCE WEAPONS LAB | | HARMESON | TIM | N 06 27/05/88 8350 | A BIRKAN 88-NA-251 | 8350 20/03/88 8350 |
| (SBR) BIMODULAR AND CROSS-ANISOTROPIC STRESS ANALYSIS OF SOILS RESOURCE INTERNATIONAL INC. | | EL-LAITHY | AMMED | N 06 04/02/88 947,250 | BOYCE 88-NA-131 | |
| MEASURING IN SITU ROCK STRESSES VISTA RESEARCH CORPORATION | | DE LA CRUZ | RODOLFO | N 06 04/02/88 950,000 | BOYCE 88-NA-132 | |
| (SBR) TENSILE STRENGTH IN THE HYDRAULIC FRACTURE FIELD TEST FOR DETERMINING IN SITU STRESSES RESPEC INC | | RATIGAN | JOE | N 06 03/03/88 849,244 | BOYCE 88-NA-169 | |

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| CENTRIFUGE MODELLING OF BLAST-INDUCED LIQUEFACTION KTECH CORPORATION | GAFFNEY EDWARD | M 06 03/03/88 849,894 | BOYCE 88-NA-170 | |
| FABRIC-STRESS-STRAIN RELATIONSHIP FOR SOILS BY NEUTRON DIFFRACTION STATE UNIVERSITY OF NEW YORK | BUDHU MUNIRAM | M 24 28/04/88 9101,474 | BOYCE 88-NA-221 | |
| CONE PENETRATION IN COHESIONLESS SOILS UNIV OF KENTUCKY | MARDIN BOBBY | M 25 07/04/88 8177,980 | BOYCE 88-NA-263 | |
| INTERPRETATION OF IN SITU TESTING OF COHESIVE SOILS USING RATIONAL METHODS MASSACHUSETTS INSTITUTE OF TECHNOLOGY | LADD CHARLES | M 36 07/06/88 9506,118 | BOYCE 88-NA-264 | |
| CONSTITUTIVE MODELLING FOR GRANULAR MATERIAL UNDER FINITE STRAINS WITH PARTICLE SLIDINGS AND FABRIC CHANGES UNIV OF MASSACHUSETTS | CHANG CHING | M 24 16/06/88 9162,920 | BOYCE 88-NA-272 | |
| SOIL FABRIC, ANISOTROPIES AND THEIR INFLUENCE ON CONSTITUTIVE BEHAVIOR OF SILT ILLINOIS INSTITUTE OF TECHNOLOGY | BUDIMAN JEFFRY | M 24 20/06/88 9208,480 | BOYCE 88-NA-274 | |
| DYNAMIC RESPONSE OF MULTIPHASE OF POROUS MEDIA APPLIED RESEARCH ASSOCIATES INC | BLOUIN SCOTT | M 36 22/06/88 9401,214 | BOYCE 88-NA-275 | |
| ASSESSMENT OF REPAIR OF COMPOSITES TEXAS A AND M UNIVERSITY | CHOHA O | M 48 05/01/88 9553,211 | MARITOS 88-NA-076 | |
| (SBR) DIAMOND THIN FILM/METAL MATRIX COMPOSITES FOR ENHANCED STRUCTURAL PERFORMANCE CRYSTALLUME | RAVI K | M 06 21/01/88 955,000 | MARITOS 88-NA-116 | |

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| (SBIR) DEVELOPMENT OF DAMAGE TOLERANT CONCEPTS FOR ADVANCED COMPOSITE STRUCTURES MISSION RESEARCH CORP | EISLER | N 06 21/01/80 850,625 | HARITOS 88-NA-121 | |
| (SBIR) DEVELOPMENT OF AN ISOTROPIC HIGH-SYMMETRY SOLID (IMSS) INTELLIGENT SYSTEMS INTEGRATION INC. | ROSS | N 06 21/01/80 867,875 | HARITOS 88-NA-122 | |
| (SBIR) MIXED MODE DELAMINATION FRACTURE MECHANISMS IN LAMINATED COMPOSITES MATERIALS SCIENCES CORPORATION | CHATTERJEE | N 06 21/01/80 850,000 | HARITOS 88-NA-123 | |
| A NEW MODEL FOR MATRIX FATIGUE DAMAGE ACCUMULATION IN COMPOSITE LAMINATES BATTELLE PACIFIC NORTHWEST LABORATORIES | WILLIFORD | N 04 17/02/88 912,000 | HARITC 88-NA-145 | |
| CONSTITUTIVE RESPONSE PREDICTIONS ON THE BASIS OF A COUPLED MATERIAL SPACETIME MODEL UNIV OF DELAWARE | DOLGOPOLSKY | N 36 17/02/88 9234,526 | HARITOS 88-NA-146 | |
| SBIR PERMANENT DEFORMATION IN METAL-MATRIX COMPOSITE STRUCTURES ADVANCED COMPOSITE ENGINEERING, INC. | SUN | N 06 02/03/88 8494,800 | HARITOS 88-NA-162 | |
| (SBIR) DEVELOPMENT OF A NEW BERYLLIUM/GRAPHITE-EPOXY SANDWICH COMPOSITE ADVANCED COMPOSITE ENGINEERING, INC. | SUN | N 6 02/03/88 849,200 | HARITOS 88-NA-163 | |
| SBIR NONLINEAR RESPONSE OF CARBON-CARBON PANELS IN HYPERSONIC ENVIRONMENT SIGMA TECHNOLOGIES | BOFILIOS | N 06 09/03/88 870,354 | HARITOS 88-NA-179 | |
| SBIR FREE EDGE STRESSES FOR COMPOSITE LAMINATES UNDER RAPID THERMAL/MOISTURE TRANSIENTS STRUCTURAL INTEGRITY ASSOCIATES, INC. | KUD | N 06 09/03/88 848,204 | HARITOS 88-NA-184 | |
| SBIR FUEL ATOMIZATION FOR PROPULSION SYSTEMS METAMATIX INC. | MENCH | N 06 09/03/88 848,251 | HARITOS 88-NA-185 | |

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| SBIR MACRO-MACROMECHANICS MODEL FOR THE STRENGTH AND INTEGRITY OF LAMINATED CERAMIC MATRIX COMPOSITE APPLIED ANALYSIS, INC | TANG HUANQI | N 06 09/03/88 849,880 | HARITOS 88-NA-186 | |
| SBIR DAMAGE GROWTH PREDICTION AND ASSESSMENT IN COMPOSITES USING SYSTEM IDENTIFICATION APPLIED ENGINEERING RESEARCH, INC. | BEDEMI MADIM | N 06 09/03/88 848,500 | HARITOS 88-NA-187 | |
| SBIR A NOVEL FINITE MODELLING TECHNIQUE FOR MULTI-LAYERED COMPOSITES APTECH ENGINEERING SERVICES, INC. | CIPOLLA RUSSELL | N 06 10/03/88 849,933 | HARITOS 88-NA-189 | |
| SBIR DEVELOPMENT OF ADVANCED CONSTITUTIVE RELATIONSHIPS FOR COATED CARBON-CARBON COMPOSITE MATERIALS PDA ENGINEERING | MACK T | N 06 11/03/88 849,982 | HARITOS 88-NA-195 | |
| 3D ANALYSIS AND VERIFICATION OF FRACTURE GROWTH MECHANISMS IN FIBER-REINFORCED CERAMIC COMPOSITES MASSACHUSETTS INSTITUTE OF TECHNOLOGY | CLEARY MICHAEL | N 36 15/03/88 8345,159 | A HARITOS 88-NA-198 | 8113,261 01/09/88 8346,785 |
| COMPOSITE MATERIAL INTERFACES: ANALYTICAL AND EXPERIMENTAL STUDIES UNIV OF PENNSYLVANIA | MASHIM ZVI | N 24 28/04/88 8440,806 | HARITOS 88-NA-222 | |
| MICROMECHANICS OF INTERFACE IN HIGH-TEMPERATURE COMPOSITES NORTHWESTERN UNIVERSITY | MURA TOSHIO | N 36 28/04/88 8445,246 | HARITOS 88-NA-224 | |
| A NEW MODEL FOR MATRIX FATIGUE DAMAGE ACCUMULATION IN COMPOSITE LAMINATES BATTELLE PACIFIC NORTHWEST LABORATORIES | SOURS DANIEL | N 03 28/04/88 812,000 | HARITOS 88-NA-225 | |
| DETERMINATION OF FATIGUE AND FRACTURE MECHANISMS IN ARALL USING ACOUSTIC EMISSION UNIV OF MICHIGAN | COMMINOU MARIA | N 24 28/04/88 8229,893 | HARITOS 88-NA-230 | |

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| DAMAGE MECHANICS OF COMPOSITE MATERIALS: CONSTITUTIVE MODELING AND COMPUTATIONAL ALGORITHMS PRINCETON UNIVERSITY | JU JIANN-WEN | N 24 10/05/88 \$107,700 | A HARITOS 88-NA-238 | 852,100 01/09/88 \$107,700 |
| EIGENSENSITIVITY ANALYSIS OF COMPOSITE LAMINATES: EFFECT OF MICROSTRUCTURE HOWARD UNIVERSITY | REISS ROBERT | N 24 14/06/88 \$199,878 | A HARITOS 88-NA-268 | 98,324 01/09/88 \$199,878 |
| DEVELOPMENT OF CAPABILITY FOR CHARACTERIZATION OF CERAMIC/CERAMIC COMPOSITES TUSKEGEE INSTITUTE | JEELANI SHAIK | N 24 14/06/88 \$243,128 | A HARITOS 88-NA-269 | \$10,200 01/09/88 \$243,128 |
| MODELING MATERIAL BEHAVIOR ON THE BASIS OF FUNDAMENTAL PHYSICAL PRINCIPLES UNITED TECHNOLOGIES RESEARCH CENTER | CASSENTI B | N 36 20/04/88 \$373,208 | HARITOS 88-NA-273 | |
| FRACTURE & CRACK GROWTH IN CERAMIC MATRIX COMPOSITES: MODEL DEVELOPMENT AND EXPERIMENTAL CHARACTERIZATION UNIV OF MISSOURI | DMARANI LOKESH | N 24 23/06/88 \$139,393 | HARITOS 88-NA-276 | |
| (SBR) GENERAL TIME-DOMAIN UNSTEADY AERODYNAMICS OF WINGS WAYNE JOHNSON | JOHNSON WAYNE | N 06 05/01/88 \$41,493 | MELIN 88-NA-072 | |
| THE EFFECT OF DISTURBANCE FREQUENCY CONTENT ON COMPRESSOR STALL PROPAGATION SCIENTIFIC RESEARCH ASSOCIATES INC | LIU NANSUEY | N 06 05/01/88 \$90,000 | MELIN 88-NA-074 | |
| (SBR) COMPUTATION OF UNSTEADY 3D VISCOUS FLOWS AND DYNAMIC STALL OF PITCHING BODIES ECODYNAMICS RESEARCH ASSOCIATION INC | ROACHE PATRICK | N 06 15/01/88 \$56,900 | MELIN 88-NA-097 | |
| (SBR) INVESTIGATIONS OF STRONG VORTEX INTERACTION AND WEIS-FOHM LIFT MECHANISM WITH APPLICATION TO TURBOMACHINES VIGYAN RESEARCH ASSOCIATES INC | SUNDARAM P | N 06 15/01/88 \$51,282 | MELIN 88-NA-098 | |
| (SBR) EXPLORATORY STUDY OF A TIP VORTEX MANAGEMENT CONCEPT VIGYAN RESEARCH ASSOCIATES INC | RAO D | N 06 15/01/88 \$53,786 | MELIN 88-NA-099 | |

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|---|-------------------|------------------------------|---|-----------------------------------|
| (SBIIR) EXPERIMENTAL EVALUATION OF VORTEX BREAKDOWN CHARACTERISTICS OF HIGHLY MANEUVERABLE AIRCRAFT CONFIGURATIONS VIGYAN RESEARCH ASSOCIATES INC | 0 | N 06 15/01/80 851,606 | MELIN 88-NA-100 | |
| (SBIIR) VISCOUS/POTENTIAL COUPLING FOR OFF-DESIGN CALCULATION OF INLET FLOWS ANALYTICAL METHODS INC | NATHMAN | N 06 15/01/80 849,996 | MELIN 88-NA-101 | |
| CONTROL OF UNSTEADY AERODYNAMIC FORCES UNIV OF SOUTHERN CALIFORNIA | JAMES | N 24 19/01/80 8223,200 | A MELIN 88-NA-102 | 858,067 01/85/88 5223,201 |
| (SBIIR) ROTOR-STATOR INTERACTIVE NAVIER-STOKES FLOW CODES. DEVELOPMENT FOR SIMULATION OF TIP CLEARANCE LOSSES. EXOTECH INC. | MO MOYLE | N 06 19/01/80 849,862 | MELIN 88-NA-105 | |
| (SBIIR) EVALUATION OF BLADE PASSAGE VORTEX CORE MEASUREMENTS AS STALL PRECURSIVE AND STALL MARGIN INDICATIVE SIGNALS EXOTECH INC. | IAN | N 06 19/01/80 849,862 | MELIN 88-NA-106 | |
| A NUMERICAL INVESTIGATION OF DYNAMIC STALL USING A DISCRETE VORTEX METHOD PHYSICAL RESEARCH INC. | CAYLOR | N 06 04/02/88 849,935 | MELIN 88-NA-133 | |
| THE TRANSIENT DEVELOPMENT OF VORTICES OVER A DELTA WING VIRGINIA POLYTECHNIC INST & STATE UNIV | MARK YELIONIS | N 24 03/03/88 8129,674 | MELIN 88-NA-168 | |
| (SBIIR PHASE II) DEVELOPMENT OF A UNIQUE NONINTRUSIVE TECHNIQUE FOR THE MEASUREMENT OF VORTEX FLOWS EIDETICS INTERNATIONAL INC. | GERALD MALCOLM | N 24 09/03/88 8585,837 | MELIN 88-NA-174 | |
| DYNAMIC SEPARATION: SEARCH FOR THE CAUSE OF DYNAMIC STALL AND SEARCH FOR ITS CONTROL UNIV OF COLORADO | PETER FREYHUTH | N 18 16/03/88 8105,669 | A MELIN 88-NA-200 | 839,233 01/08/88 8105,669 |

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| UNSTEADY SEPARATED FLOWS: PHYSICAL MECHANISMS AND CONTROLS UNIV OF COLORADO | LUTTGES MARVIN | N 23 14/03/88 9268,824 | A MELIN 88-NA-201 | 892,500 01/08/88 8268,824 |
| THEORETICAL STUDIES OF THE KINEMATICS, DYNAMICS, STABILITY AND CONTROL OF UNSTEADY/VORTICAL FLOWS UNIV OF COLORADO | CHOW CHUEN-YEN | N 24 21/03/88 829,000 | A MELIN 88-NA-206 | 833,500 01/08/88 8216,760 |
| (SOIR PHASE II) HOT-BLOCK ANEMOMETRY SCIENTIFIC RESEARCH ASSOCIATES INC | THOMPSON ORIAN | N 06 28/03/88 953,320 | MELIN 88-NA-211 | |
| TURBULENT SPOT GENERATION AND GROWTH RATES IN A TRANSONIC BOUNDARY LAYER SYRACUSE UNIVERSITY | LAGRAPP JOHN | N 36 05/04/88 9258,164 | MELIN 88-NA-214 | |
| NIXON'S SUPERMANUEVER AERODYNAMICS AND MULTIPLE SOLUTIONS SBERS - COMPUTER SUPPORT NIELSEN ENGINEERING AND RESEARCH CO | NIXON DAVE | N 20 07/04/88 934,000 | A MELIN 88-NA-216 | 934,000 15/07/88 934,000 |
| RADIAL MIXING IN AXIAL COMPRESSORS INTRODUCTION IN AND INTERACTION EXISTING THROUGH-FLOW CODES VRIJE UNIVERSITEIT | MIRSCM I | N 12 28/04/88 853,500 | MELIN 88-NA-229 | |
| THERMODYNAMICAL FORMULATIONS IN TURBULENCE MODELING AND INTERNAL FLOWS CLARSON UNIVERSITY | ANNAZI GOODARZ | N 36 06/05/88 8214,298 | MELIN 88-NA-234 | |
| A NEW ADAPTIVE NUMERICAL APPROACH FOR DETERMINING THE EVOLUTION OF VORTICITY FIELDS IN HIGH REYNOLDS NUMBER VISCOUS FLOW INTELLIGENT SYSTEMS INTEGRATION INC. | LU ZMI | N 12 09/05/88 898,829 | MELIN 88-NA-235 | |
| (AFRAP) MASSACHUSETTS INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY | GREITZER E | R 12 12/05/88 8258,720 | A MELIN 88-NA-239 | 8258,720 01/09/88 8258,720 |
| INVESTIGATIONS OF SURFACE ROUGHNESS EFFECTS ON TURBULENT FLOW AND HEAT TRANSFER MISSISSIPPI STATE UNIVERSITY | COLEMAN HUGH | N 36 03/06/88 9465,663 | MELIN 88-NA-255 | |

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|---|--------------|--|----------|--------|-----------------------------------|---|-----------------------------------|
| UNSTEADY FLOW PAST SYMMETRIC AIRFOILS AT CONSTANT PITCH RATES FLORIDA A&M UNIVERSITY | LORENZO | | | | R 24 03/06/88 \$260,000 | MELIN 88-NA-256 | 88,463 01/09/88 \$327,010 |
| MIXING AND STRUCTURE OF SWIRLING JETS UNIV OF WASHINGTON | GESSNER | | | FRED | M 12 16/06/88 \$144,558 | MELIN 88-NA-270 | |
| (SBIR) A SEPARATION SENSOR BASED ON A NEWLY DISCOVERED ANALYTICAL SERVICES & MATERIALS INC. | MANGALAM | | | S | M 06 15/01/88 \$50,000 | MCMICHAEL 88-NA-077 | |
| (SBIR) QUANTIFICATION OF TURBULENCE FOR HYPERSONIC FLOW AROUND AEROSPACE SYSTEMS ENGINEERING ANALYSIS, INC. | TATUM | | | FRANK | M 06 15/01/88 \$91,707 | MCMICHAEL 88-NA-078 | |
| (SBIR) ANALYTICAL FLUID DYNAMICS GENERAL ANALYTICS CORPORATION | ADOMIAN | | | G | M 07 15/01/88 \$50,000 | MCMICHAEL 88-NA-081 | |
| (SBIR) SHOCK-TURBULENCE INTERACTIONS IN ELEMENTARY GEOMETRIES PEGA CORPORATION | HONG | | | S | M 06 15/01/88 \$49,704 | MCMICHAEL 88-NA-083 | |
| (SBIR) TURBULENCE MODELING OF COMPRESSIBLE BOUNDARY LAYERS PEGA CORPORATION | BARDINA | | | JORGE | M 06 15/01/88 \$49,887 | MCMICHAEL 88-NA-084 | |
| (SBIR) MODELING OF SHEAR IN TURBULENT ROTATING FLOWS PEGA CORPORATION | BARDINA | | | JORGE | M 06 15/01/88 \$49,887 | MCMICHAEL 88-NA-085 | |

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|---|-------------------------|-----------------------------------|---|-----------------------------------|
| (SBR) A NEW DESIGN FOR A THERMAL HOMOGENEIZER IN A PULSED CLOSED-CYCLE HIGH POWER EXCIMER LASER VIGYAN RESEARCH ASSOCIATES INC | SUNDARAM P | N 06 15/01/88 850,214 | MCMICHAEL 88-NA-087 | |
| (SBR) DESIGN OF ADVANCED TRANSONIC LOW DRAG NATURAL LAMINAR FLOW FUSELAGE SHAPES VIGYAN RESEARCH ASSOCIATES INC | DOBBELE SINHA PRASAD | N 06 15/01/88 855,009 | MCMICHAEL 88-NA-088 | |
| (SBR) IMPROVED FLOW UNDERSTANDING: DESIGN OF A HIERARCHICAL PARALLEL-PROCESSING CFD CODE COMPUTATIONAL MECHANICS CONSULTANTS INC | MANHARDT P | N 06 15/01/88 850,000 | MCMICHAEL 88-NA-089 | |
| (SBR) A SEPARATION SENSOR BASED ON A NEWLY DISCOVERED PHASE REVERSAL PHENOMENON ANALYTICAL SERVICES & MATERIALS INC. | MANGALAM S | N 06 15/01/88 850,000 | MCMICHAEL 88-NA-090 | |
| (SBR) STREAMLINE CURVATURE EFFECTS ON A HYPERSONIC/SUPERSONIC SHEAR/MIXING LAYER FLOW INDUSTRIES INC | JOU WEN-HUEI | N 06 15/01/88 849,950 | MCMICHAEL 88-NA-091 | |
| (SBR) EXPLOITATION OF MULTIPLE SOLUTIONS OF THE NAVIER-STOKES EQUATIONS TO ACHIEVE RADICALLY IMPROVED FLIGHT NIELSEN ENGINEERING AND RESEARCH CO | NIXON DAVID | N 06 15/01/88 854,021 | MCMICHAEL 88-NA-092 | 854,021 01/08/88 854,021 |
| (SBR) STABILITY AND TURBULENCE MECHANISMS IN VORTEX FLOWS NIELSEN ENGINEERING AND RESEARCH CO | CHILD ROBERT | N 06 15/01/88 859,893 | MCMICHAEL 88-NA-093 | |
| (SBR) A NEW METHODOLOGY FOR ADAPTIVE GRID GENERATION CREARE INC. RESEARCH & DEVELOPMENT INC | DVINSKY ARKADY | N 06 15/01/88 849,971 | MCMICHAEL 88-NA-094 | |
| (SBR) BLUNT FOREBODY DRAG REDUCTION BY FORCED SEPARATION VIGYAN RESEARCH ASSOCIATES INC | RAD T | N 06 15/01/88 849,651 | MCMICHAEL 88-NA-095 | |
| (SBR) PARALLEL PROCESSING ALGORITHMS FOR FLUID MECHANICS FORMAL SYSTEMS DESIGN & DEVELOPMENT INC | STUCKWISCH STEVE | N 06 15/01/88 850,000 | MCMICHAEL 88-NA-096 | |

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|--|--------------------|-----------------------------------|---|-----------------------------------|
| (SBIR) QUANTITATIVE DESCRIPTION OF THREE-DIMENSIONAL FLOW FIELDS USING FLOW VISUALIZATION AND AUTOMATED IMAGE PROCESSING MORTHWEST RESEARCH ASSOCIATES, INC. | ROBERT FRASER | N 06 19/01/88 849,952 | MCMICHAEL 88-NA-107 | |
| (SBIR) ADVANCED ALGORITHM FOR 3D VISCOUS AND SEPARATED FLOW INTELLIGENT SYSTEMS INTEGRATION INC. | LU Z | N 06 19/01/88 869,833 | MCMICHAEL 88-NA-108 | |
| (SBIR) ADVANCED SIGNAL PROCESSING FOR HIGH SPEED FLOWS USING LIDAR FREQUENCY DOMAIN TECHNIQUES AEROMETRICS INC | WILLIAM BACHALO | N 06 19/01/88 849,979 | MCMICHAEL 88-NA-109 | |
| ANALYSIS OF HYPERSONIC FLOWS LOCKHEED CALIFORNIA COMPANY | LONG LYLE | N 12 02/02/88 8355,221 | MCMICHAEL 88-NA-124 | |
| UNSTEADY BEHAVIORS OF TURBULENT SHEAR FLOWS UNIV OF SOUTHERN CALIFORNIA | REDKOPP LARRY | R 24 02/02/88 8777,050 | A MCMICHAEL 88-NA-125 | 8337,621 15705788 8777,050 |
| NONLINEAR DYNAMICS AND CHAOTIC MOTIONS OF FLUID-STRUCTURE INTERACTION SYSTEMS MCCELL UNIVERSITY | PAIDOUSSIS MICHAEL | N 36 04/02/88 8257,227 | MCMICHAEL 88-NA-130 | |
| (SBIR) ENHANCED COMPUTATIONAL/MODELING OF VISCOUS AND SEPARATED FLOWS FOR COMPLEX FIELDS COMPTON CORP | SIM GEORGE | N 06 04/02/88 849,997 | MCMICHAEL 88-NA-136 | |
| (SBIR) RESEARCH INSTRUMENTATION: GAS/AIR FLOW MEASUREMENT DEVICE ARCHITECTURAL ENERGY CORPORATION | WORTMEN DAVID | N 06 04/02/88 837,227 | MCMICHAEL 88-NA-137 | |
| (SBIR) MINIATURE AERODYNAMIC FLOW ANGLE SENSOR ENGINEERING DEVELOPMENT LAB, INC. | CAMBELL RICHARD | N 06 04/02/88 849,278 | MCMICHAEL 88-NA-138 | |

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A STUDY OF VORTICES IN COMPRESSIBLE FLOW
 UNIVERSITY OF MICHIGAN

KENNETH

N 24

MCMICHAEL
 88-NA-143

FLOW AROUND A FLEXIBLY SUPPORTED CYLINDER
 UNIV OF NOTRE DAME

MUHAMMAD

N 36
 22/02/88
 8371,302

MCMICHAEL
 89-NA-149

(SBIR) THREE DIMENSIONAL ADAPTIVE GRID GENERATION FOR ARBITRARY
 GEOMETRIES
 SYSTEMS DYNAMICS INCORP.

CHRISTOPHER

N 6
 22/02/88
 849,862

MCMICHAEL
 88-NA-151

(SBIR) FLUID MECHANICS: INVISCID-VISCOUS ANALYSIS BY FINITE
 ELEMENT METHOD FOR AIRFOILS WITH ICING
 MEGA RESEARCH INC.

ERM-RONG

N 6
 22/02/88
 849,988

MCMICHAEL
 88-NA-152

(SBIR) MODULAR PARALLEL PARTIAL DIFFERENTIAL EQUATION SOLVER FOR
 FLUID MECHANICS
 PAROSOFT CORPORATION

ADAM

N 5
 22/02/88
 849,861

MCMICHAEL
 88-NA-153

(SBIR) SIMULANT GAS AIR CHEMISTRY EFFECTS TEST TECHNIQUE
 FLUID PHYSICS IND.

RICHARD

N 6
 22/02/88
 854,234

MCMICHAEL
 88-NA-154

(SBIR) INNOVATIVE NUMERICAL METHODS FOR COMPUTATIONAL FLUID
 DYNAMICS
 ADVANCED TECHNOLOGY ENGINEERING CONS.

MAHADEVA

N 6
 22/02/88
 846,710

MCMICHAEL
 88-NA-155

(SBIR) FLUID MECHANICS
 AEROCOM INC

STEPHEN

N 5
 23/02/88
 846,766

MCMICHAEL
 88-NA-157

EXPERIMENTAL INVESTIGATION OF A SPANWISE FORCED MIXING LAYER
 UNIV OF ARIZONA

ARI

R 24
 26/02/88
 8165,802

MCMICHAEL
 88-NA-158

OPTICAL PROPERTIES OF PLANE SHEAR LAYERS UNDER PERIODIC
 DISTURBANCES
 UNIV OF WASHINGTON

WALTER

N 18
 16/03/88
 8133,721

MCMICHAEL
 88-NA-202

879,997
 01/00/88
 8165,802
 866,368
 01/07/88
 8133,721

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|---|--------------------|-----------------------------------|---|-----------------------------------|
| THREE-DIMENSIONAL VORTEX INTERACTIONS IN TURBULENT BOUNDARY LAYERS LEHIGH UNIVERSITY | SMITH JR CHARLES | R 24 17/03/88 9542,692 | MCMICHAEL 88-NA-203 | |
| PHYSICALLY BASED NUMERICAL DISSIPATION FOR EULER AND NAVIER-STOKES EQUATIONS PENNSYLVANIA STATE UNIVERSITY | DULIKRAVICH GEORGE | N 24 23/03/88 9120,000 | MCMICHAEL 88-NA-208 | |
| NUMERICAL SIMULATION OF THREE-DIMENSIONAL SPATIALLY-EVOLVING BOUNDARY LAYER TRANSITION AND TRANSITION CONTROL UNIV OF COLORADO | BERINGEN SEDAT | N 24 28/04/88 9174,360 | MCMICHAEL 88-NA-228 | |
| ORIGIN OF THREE DIMENSIONAL STRUCTURES IN SHEAR FLOW THROUGH EXTERNAL FORCING UNIV OF CALIFORNIA | GHARIB MORTEZA | R 12 24/05/88 924,992 | A MCMICHAEL 88-NA-247 | 924,992 15/09/88 924,992 |
| TURBULENCE STRUCTURE ASSOCIATED WITH INTERCOMPONENT AND INTERSCALE ENERGY TRANSFER, AND MODIFICATION BY FORCING PENNSYLVANIA STATE UNIVERSITY | BRASSEUR JAMES | N 18 26/05/88 843,030 | A MCMICHAEL 88-NA-249 | 843,030 15/09/88 843,030 |
| STOCHASTIC ESTIMATION OF COHERENT STRUCTURES AND THEIR DYNAMICS IN TRANSITION AND TURBULENT LAYERS CMIO STATE UNIV RESEARCH FOUNDATION | GUEZENEC YANN | N 12 02/06/88 854,658 | MCMICHAEL 88-NA-253 | |
| SENSITIVITY OF TURBULENT BOUNDARY LAYER PRODUCTION MECHANISMS TO TURBULENCE CONTROL MICHIGAN STATE UNIVERSITY | FALCO ROBERT | R 24 03/06/88 9319,991 | MCMICHAEL 88-NA-254 | |
| DECIMATION AND TURBULENCE COLLEGE OF WILLIAM AND MARY | YAMAHA GEORGE | N 24 16/06/88 9226,918 | MCMICHAEL 88-NA-271 | |
| (SBR) AEROTHERMAL LOADS FOR HYPERSONIC VEHICLES SCIENTIFIC RESEARCH ASSOCIATES INC | SHARROTH STEPHEN | N 06 05/01/88 850,000 | MACHNAM 88-NA-075 | |

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|--|------------------|---|
| (SBR) IMPROVE STRUCTURAL EFFICIENCY AND DURABILITY CENTER FOR REMOTE SENSING | GANGULY SUMAN | TYPE/RDNTMS RECEIVED AMOUNT M 04 15/01/88 \$48,929 NACHMAN 88-NA-080 |
| (SBR) RESEARCH ON INSTRUMENTATION USING MULTIPLE ZERO CROSSINGS COVDA INC. | STUART JOHN | STATUS PROGRAM MANAGER PROPOSAL # NACHMAN 88-NA-110 |
| (SBR) COUPLED STRUCTURE-FLUID INTERACTION APPROACH TO ROCKET MIZILE FATIGUE AND INSTABILITY PROBLEMS SCIENTIFIC RESEARCH ASSOCIATES INC | CHEN 5 | NACHMAN 88-NA-113 |
| (SBR) KNOWLEDGE-BASED NONLINEAR ANALYSIS AND DAMAGE PREDICTIONS FOR AEROSPACE STRUCTURES STRUCTURAL ANALYSIS TECHNOLOGY INC | KAMIL MASAN | NACHMAN 88-NA-114 |
| (SBR) INNOVATIVE STORAGE METHODS AND SOLUTION-ADAPTIVE GRIDS FOR FINITE ELEMENT METHODS MAINSTREAM ENGINEERING CORPORATION | BUCKMAN JAY | NACHMAN 88-NA-140 |
| (SBR) STRAIN-RATE SENSOR DEVELOPMENT IAP RESEARCH, INC. | BARBER JOHN | NACHMAN 88-NA-164 |
| (SBR) RESEARCH INSTRUMENTATION FOR HIGH RESOLUTION RESOLUTION SURFACE SHAPE & DEFLECTION MEASUREMENT ATLANTIC APPLIED RESEARCH | KERN FRED | NACHMAN 88-NA-165 |
| SBIR DEVELOPMENT OF A LIGHTWEIGHT TACTICAL TOWER PANTOZZI COMPANY, INC. | FANTOZZI MARK | NACHMAN 88-NA-177 |
| SBIR A STUDY OF NONCLASSICAL FLOW-INDUCED RESPONSES OF A LIFTING SURFACE DUE TO LOCALIZED DAMAGE OR DISTURBANCES INTELLIGENT SIGNAL PROCESSING | MOHG JAE | NACHMAN 88-NA-178 |
| SBIR TRANSDUCER INDUCED ANOMALIES ON NONLINEAR COMPUTATIONAL ANALYSIS AND MODELING TECHNIQUES INTELLIGENT SIGNAL PROCESSING | MOHG JAE | NACHMAN 88-NA-193 |

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| INVERSE DESIGN AND OPTIMIZATION OF AERODYNAMIC CONFIGURATIONS PENNSYLVANIA STATE UNIVERSITY | DULIKRAVICH GEORGE | M 24 15/03/88 \$197,705 | D NACHMAN 88-NA-197 | 860,025 01/07/88 \$203,924 |
| FINITE ELEMENT ANALYSIS OF COMPOSITE SHELLS RESEARCH PROSPECTUS AIR FORCE INSTITUTE OF TECHNOLOGY | PALAIOTTO ANTHONY | M 30 19/03/88 \$203,924 | A NACHMAN 88-NA-205 | |
| ACTIVE NONLINEAR FEEDBACK CONTROL FOR AEROSPACE SYSTEMS MARRIS CORPORATION | MYLAND D | M 36 26/05/88 \$446,214 | NACHMAN 88-NA-248 | |
| AFRAPT-TEXAS ACM UNIVERSITY-88 TEXAS A AND M RESEARCH FOUNDATION | VANCE J | R 12 27/05/88 \$83,740 | A NACHMAN 88-NA-252 | 883,740 01/09/88 \$83,740 |
| FUNCTIONAL SERIES EXPANSION FOR RANDOM RESPONSE CLARKSON UNIVERSITY | AMMADI GOODARZ | M 36 06/06/88 \$173,043 | D NACHMAN 88-NA-258 | |
| OPTIMUM AEROELASTIC CHARACTERISTICS FOR COMPOSITE SUPER- MANEUVERABLE AIRCRAFT POLYTECHNIC INSTITUTE OF NEW YORK | OYIBO GABRIEL | R 36 06/06/88 \$267,335 | NACHMAN 88-NA-260 | |
| DISTRIBUTED FINITE ELEMENT MODELING AND CONTROLS RESEARCH FOR LARGE SPACE STRUCTURES LAWRENCE LIVERMORE LAB (CALIF UNIV) | YOUNG K. | M 36 06/06/88 \$180,000 | NACHMAN 88-NA-261 | |
| TRANSFORM METHODS FOR PRECISION NONLINEAR WAVE MODELS OF FLEXIBLE SPACE STRUCTURES PHOTON RESEARCH ASSOCIATES INC | TURNER J. | M 24 28/06/88 \$324,980 | NACHMAN 88-NA-278 | |
| RESEARCH INTO TRAVELLING WAVE CONTROL IN FLEXIBLE STRUCTURES MASSACHUSETTS INSTITUTE OF TECHNOLOGY | VON FLOTOW ANDREAS | R 12 28/06/88 \$125,003 | NACHMAN 88-NA-279 | |

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| ELECTROSTATIC SHAPE CONTROL OF A WIRE MESH PARABOLIC REFLECTOR UNIV OF ILLINOIS | BENTSMAN | J. | N 36 29/06/88 9315,667 | NACHMAN 88-NA-280 | 9265,000 01/10/88 9545,000 |
| RELEGATION FOR DECENTRALIZED CONTROL OHIO STATE UNIV RESEARCH FOUNDATION | OZGURER | UNIT | N 36 29/06/88 9179,366 | NACHMAN 88-NA-292 | |
| STRUCTURE AND CONTROL OF THREE-DIMENSIONAL SHOCK WAVE TURBULENT BOUNDARY LAYER INTERACTIONS PRINCETON UNIVERSITY | BOGDANOFF | SEYMOUR | N 24 24/06/88 8545,000 | A SAKELL 88-NA-277 | |
| (SBR) ANTI-SOUND ACTIVE CONTROL OF COMBUSTION INSTABILITY IN RAMJET DUMP COMBUSTORS FLOW INDUSTRIES INC | MENON | SURESH | N 06 05/01/88 956,214 | TISHKOFF 88-NA-073 | |
| (SBR) AN INSTRUMENT FOR THE SIMULTANEOUS MEASUREMENT OF VELOCITY TEMPERATURE AND DENSITY OF UNSEEDED AIR-FLOWS ANALATOM INC | LAUFER | GABRIEL | N 06 15/02/88 849,808 | A TISHKOFF 88-NA-079 | 849,808 01/08/88 849,808 |
| (SBR) IMPROVED PARABOLIZED NAVIER-STOKES (PNS) ALGORITHM FOR SUPERSONIC REACTING FLOWS VIGYAN RESEARCH ASSOCIATES INC | CHITSOBDOON | TAMIT | N 06 15/01/88 849,206 | TISHKOFF 88-NA-086 | |
| (SBR) IMPROVED PARABOLIZED NAVIER-STOKES (PNS) ALGORITHM FOR SUPERSONIC REACTING FLOWS VIGYAN RESEARCH ASSOCIATES INC | CHITSOBDOON | TAMIT | N 04 20/01/88 849,206 | TISHKOFF 88-NA-112 | |
| (SBR) MEASUREMENT OF THREE-DIMENSIONAL TEMPERATURE AND VELOCITY FIELDS USING HOLOGRAPHY SCIENTIFIC RESEARCH ASSOCIATES INC | TOLPADI | ANIL | N 06 21/01/88 955,807 | TISHKOFF 88-NA-115 | |
| (SBR) ADVANCED NON-INTRUSIVE DIAGNOSTICS FOR SPRAYS ADVANCED FUEL RESEARCH INC. | SOLOMON | PETER | N 06 21/01/88 968,401 | TISHKOFF 88-NA-117 | |
| (SBR) ADVANCED NON-INTRUSIVE DIAGNOSTICS FOR TURBULENT FLAMES ADVANCED FUEL RESEARCH INC. | SOLOMON | PETER | N 06 21/01/88 962,141 | TISHKOFF 88-NA-118 | |

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(SBIR) A NON-INTRUSIVE OPTICAL TECHNIQUE FOR SIMULTANEOUS
MULTIPOINT TEMPERATURE MEASUREMENTS IN FLAMES (PC-080)
PHYSICAL SCIENCES INC

INVESTIGATOR
ALLEN

(SBIR) KINETIC MODELING OF SOOT FORMATION IN MULTICOMPONENT FUEL
COMBUSTION
ADVANCED FUEL RESEARCH INC.

SERIO

TURBULENT MIXING IN EXPONENTIAL TRANSVERSE JETS
UNIV OF WASHINGTON

A STUDY OF OBLIQUE DETONATIONS FOR SUPERSONIC COMBUSTION
UNIV OF CONNECTICUT

DABORA

DENSE-SPRAY STRUCTURE AND PHENOMENA
UNIV OF MICHIGAN

FAETH

SBIR KINETICS AND INHIBITION OF SOOT FORMATION
PHYSICAL SCIENCES INC

RAWLINS

SBIR FT-IR EMISSION AND TRANSMISSION TOMOGRAPHY FOR COMBUSTION
DIAGNOSTICS
ADVANCED FUEL RESEARCH INC.

SOLOROM

(SBIR) PROPULSION (LIQUID ATOMIZATION)
VERITAY TECHNOLOGY, INC.

TALLEY

SBIR RADIATIVE IGNITION AND FLAMEHOLDING FOR SUPERSONIC COMBUSTORS
PRINCETON SCIENTIFIC ENTERPRISE, INC.

BLAIR

| TYPE/MONTHS RECEIVED AMOUNT | STATUS PROGRAM MANAGER PROPOSAL # | INITIATE START DATE TOT AMT |
|-----------------------------------|---|-----------------------------------|
| N 06 21/01/88 849,980 | TISHKOFF 88-NA-119 | |
| N 06 21/01/88 872,718 | TISHKOFF 88-NA-120 | |
| R 24 03/02/88 863,997 | A TISHKOFF 88-NA-127 | 863,897 01/08/88 8130,994 |
| N 24 17/02/88 8196,370 | TISHKOFF 88-NA-144 | |
| R 12 17/02/88 8110,000 | A TISHKOFF 88-NA-147 | 8110,000 15/07/88 8110,000 |
| N 06 01/03/88 849,998 | TISHKOFF 88-NA-159 | |
| N 06 01/03/88 864,532 | TISHKOFF 88-NA-160 | |
| N 6 02/03/88 849,994 | TISHKOFF 88-NA-166 | |
| N 06 09/03/88 850,000 | TISHKOFF 88-NA-175 | |

MARK

MICHAEL

ROBERT

ELI

GERARD

W

PETER

ROBERT

DAVID

| TITLE (CONT.) INSTITUTION | INVESTIGATOR | TYPE/MONTHS RECEIVED AMOUNT | STATUS PROGRAM MANAGER PROPOSAL # | INITIATE START DATE TOT AMT |
|---|----------------------|-----------------------------------|---|-----------------------------------|
| SBIR DEMONSTRATION OF THE OBLIQUE DETONATION WAVE FOR HYPERSONIC PROPULSION ASTRON RESEARCH & ENGINEERING | NAKAMURA TAKASHI | M 06 09/03/88 877,715 | A TISHKOFF 88-NA-176 | 877,715 01/08/88 877,715 |
| SBIR CATALYTIC COMBUSTION FOR IMPROVED IGNITION AND FLAME STABILITY PRECISION COMBUSTION, INC. | PPEFFERLE WILLIAM | M 06 09/03/88 850,000 | TISHKOFF 88-NA-181 | |
| SBIR COLLOIDAL DYNAMICS SIMULATIONS OF HIGHLY VISCOUS CONCENTRATED FUEL SLURRIES (PE-106) METAMATIX INC. | MILEMSKI GERALD | M 06 09/03/88 849,991 | TISHKOFF 88-NA-182 | |
| SBIR HEAT FLUX GAGE DEVELOPMENT VATELL CORPORATION | LANGLEY LAWRENCE | M 06 10/03/88 848,607 | TISHKOFF 88-NA-180 | |
| SBIR FULLY AUTOMATIC CALIBRATION SYSTEM DOWLAND-BACH CORPORATION | SELFRIDGE SCOTT | M 06 10/03/88 891,200 | TISHKOFF 88-NA-190 | |
| SBIR DEVELOPMENT OF AN AUTOMATED VAPOR PRESSURE MEASURING INSTRUMENT ROCKY RESEARCH | LANGELIERS JAMES | M 06 10/03/88 850,000 | TISHKOFF 88-NA-191 | |
| SBIR INVESTIGATION OF THRUST AUGMENTATION METHODS WOODSIDE GROUP, INC. | OLIVER STUART | M 06 10/03/88 849,832 | TISHKOFF 88-NA-194 | |
| (SBIR) A NON-INVASIVE LAMINAR TO TURBULENT FLOW DETECTOR CONTINUUM DYNAMICS, INC. | BILAMIN ALAN | M 6 14/03/88 849,537 | TISHKOFF 88-NA-196 | |
| THE MODELING OF DROP-CONTAINING TURBULENT EDDIES JET PROPULSION LABORATORY | BELLAN JOSETTE | M 12 24/03/88 863,900 | TISHKOFF 88-NA-209 | |
| ADVANCED DIAGNOSTICS FOR REACTING FLOWS STANFORD UNIVERSITY | HANSON RONALD | R 24 04/04/88 8900,000 | A TISHKOFF 88-NA-213 | 8441,696 01/10/88 8883,392 |

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|---|----------------------------|-----------------------------------|---|-----------------------------------|
| FUELS COMBUSTION RESEARCH PRINCETON UNIVERSITY | GLASSMAN IRVIN | N 36 28/04/88 8560,500 | A TISHKOFF 88-NA-226 | 8179,900 01/10/88 8560,580 |
| STUDIES OF THE EFFECTS OF TEMPERATURE ON THE OPTICAL PROPERTIES OF FLAME SOOTY LOUISIANA STATE UNIVERSITY | CHARALAMPOPOULOS TRYFON | N 36 28/04/88 8268,597 | TISHKOFF 88-NA-227 | |
| DETECTING MICROWAVE EMISSIONS FROM TERRESTRIAL SOURCES: A FEASIBILITY STUDY MARQUETTE UNIVERSITY | EHLERT THOMAS | N 12 10/05/88 831,004 | A TISHKOFF 88-NA-236 | 831,004 01/09/88 831,004 |
| (AFRPT)-PENNSYLVANIA STATE UNIVERSITY-88 PENNSYLVANIA STATE UNIVERSITY | SANTAVICCA DOMENIC | R 12 17/05/88 8155,560 | A TISHKOFF 88-NA-241 | 8155,560 19/08/88 8155,560 |
| (AFRPT) PURDUE UNIVERSITY-88 PURDUE RESEARCH FOUNDATION | FLEETER SANFORD | R 12 17/05/88 8146,434 | A TISHKOFF 88-NA-242 | 8146,434 19/08/88 8146,434 |
| FUELS COMBUSTION RESEARCH NATIONAL SCIENCE FOUNDATION | GOULARD ROBERT | N 04 23/05/88 812,854 | A TISHKOFF 88-NA-243 | 812,854 01/06/88 812,854 |
| (AFRPT)-PRINCETON UNIVERSITY-88 PRINCETON UNIVERSITY | GLASSMAN IRVIN | R 12 24/05/88 884,600 | A TISHKOFF 88-NA-245 | 884,600 01/09/88 884,600 |
| NASA FUNDING SUPPLEMENT NASA - LEWIS RESEARCH CENTER | MULARZ EDWARD | N 12 24/05/88 820,000 | A TISHKOFF 88-NA-246 | 820,000 01/06/88 820,000 |
| THEORIES OF TURBULENT COMBUSTION IN HIGH SPEED FLOWS UNIV OF CALIFORNIA | WILLIAMS FORMAN | N 36 06/06/88 8370,203 | TISHKOFF 88-NA-259 | |

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|---|----------------------|-----------------------------------|---|-----------------------------------|
| ASYNCHRONOUS OPTICAL SAMPLING FOR LASER-BASED COMBUSTION DIAGNOSTICS IN HIGH PRESSURE FLAMES PURDUE RESEARCH FOUNDATION | KING GALEN | M 24 29/06/88 8295,448 | TISHKOFF 88-NA-201 | |
| (SBIR) TWO STEP DETAILED NUMERICAL STUDY OF NONLINEAR CONCRETE- RELAX INTERACTION WEIDLINGER ASSOCIATES | NELSON IVAN | N 06 19/01/88 860,017 | WU 88-NA-104 | |
| STRUCTURAL OPTIMIZATION OF SANDWICH COMPOSITE SHELLS TO VARIOUS LOADINGS UNIV OF DELAWARE | VINSON JACK | N 24 04/02/88 9137,462 | WU 88-NA-129 | |
| (SBIR) TRACKING AND LOCATING FRACTURES AWAY FROM BOREHOLE IN A ROCK MASS VISTA RESEARCH CORPORATION | DELA CRUZ RODOLFO | N 06 04/02/88 850,000 | WU 88-NA-134 | |
| (SBIR) A RATE-SENSITIVE CONTINUUM DAMAGE MODEL FOR GEOMATERIALS BERKELEY APPLIED SCIENCE & ENGR. | PANAMANDEN M | N 06 04/02/88 849,441 | WU 88-NA-135 | |
| THE CONTINUING ACTIVITIES OF THE US NATIONAL COMMITTEE FOR ROCK MECHANICS DEPT OF THE INTERIOR | CHAMBERLAIN PETER | N 07 22/02/88 822,500 | WU 88-NA-156 | 922,500 01/03/88 922,500 |
| A STUDY OF FRACTURE PROCESSES IN CONCRETE USING LASER HOLOGRAPHY NORTHWESTERN UNIVERSITY | SMAN SURENDRA | N 14 03/03/88 8114,835 | WU 88-NA-167 | 816,600 01/08/88 8114,835 |
| TETRAHEDRAL FRAMES FOR STRUCTURES AND COMPOSITES DBA JAG INDUSTRIES | MOLT ALBERT | N 06 07/03/88 850,000 | WU 88-NA-172 | |
| (SBIR) DEVELOPMENT OF A HIGH IMAGING-SPEED SCANNING ELECTRON MICROSCOPE FOR DYNAMICALLY LOADED MATERIALS INTELLIGENT SYSTEMS INTEGRATION INC. | ROSS TIMOTHY | R 24 05/06/88 8394,000 | WU 88-NA-215 | 8224,900 01/09/88 8394,901 |
| THE DIVISION OF SPACE BY FOUR SETS OF PLANES RE/SPEC INC | BOYLE WILLIAM | M 12 29/06/88 861,235 | WU 88-NA-231 | |

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|--|----------------------|-----------------------------------|---|-----------------------------------|
| THE ROLE OF ACID-BASE INTERACTIONS IN THE ADHESION OF ASPHALT- AGGREGATE MIXTURES NATIONAL BUREAU OF STANDARDS | NGUYEN TIMM | N 18 29/06/88 8100,250 | MU 88-NA-232 | |
| FAILURE PROCESS AND MICROMECHANICAL STUDY OF CONCRETE MATERIALS PURDUE RESEARCH FOUNDATION | CHEN WAI-PAN | N 24 02/05/88 8198,953 | MU 88-NA-233 | |
| DYNAMIC ANALYSIS AND DAMPING CONTROL OF LAYERED PLATES AND SMELLS Y. Y. YU ASSOCIATES | YU Y | N 36 13/05/88 8136,200 | MU 88-NA-240 | |
| CONSTITUTIVE EQUATIONS FOR MICROCRACKED CONCRETE BY MICROMECHANICS AND LASER SPECKLE INTERFEROMETRY NEW JERSEY INSTITUTE OF TECHNOLOGY | MSU C THOMAS | N 24 03/06/88 8209,831 | MU 88-NA-257 | |
| RADIATION EFFECTS ON CONCRETE GENERAL ATOMICS | MILL DALE | N 30 08/06/88 8470,613 | MU 88-NA-265 | |
| ANALYTICAL STUDY OF CONCRETE PAVEMENT BEHAVIOR UNIV OF PUERTO RICO | RODRIGUEZ LEANDRO | N 12 10/06/88 874,204 | A MU 88-NA-267 | 86,204 01/09/88 875,204 |

| TITLE (CONT.) INSTITUTION | INVESTIGATOR | TYPE/MONTHS RECEIVED/ AMOUNT | STATUS PROGRAM MANAGER PROPOSAL # | INITIATE START DATE TOT AMT |
|---|----------------------|------------------------------------|---|-----------------------------------|
| FUNDAMENTAL STUDIES OF FRICTION, LUBRICATION AND WEAR BY ATOMIC FORCE MICROSCOPY INT'L BUSINESS MACHINE CORP | MCCLELLAND GARY | M 12 11/01/88 800,000 | A BURGGRAF 88-MC-072 | 800,350 01/10/88 8252,686 |
| STUDIES OF LIQUID/SOLID INTERFACES BY NONLINEAR SPECTROSCOPY COLUMBIA UNIVERSITY | EISENTHAL KENNETH | M 12 11/01/88 8110,611 | BURGGRAF 88-MC-073 | |
| SIMPLIFIED FABRICATION OF STABLE HIGH TEMPERATURE SUPERCONDUCTING FILMS, BY COEVAPORATION OF FLUORIDES BELTRAN ASSOCIATES INC | SIND CONSTANCE | M 06 14/01/88 850,000 | BURGGRAF 88-MC-089 | |
| IMPROVED DUCTILITY IN MELT SPUN HTSC RIBBON/WIRE: Y8/EU-8A-CU ALLOYS OF NOBLE METALS BELTRAN ASSOCIATES INC | SIND CONSTANCE | M 06 14/01/88 850,000 | BURGGRAF 88-MC-090 | |
| SIMPLIFIED FABRICATION OF STABLE HIGH TEMPERATURE SUPERCONDUCTING FILMS, BY PULSED LASER EVAPORATION OF THE FLUORIMATED 1-2-3 COMPOU BELTRAN ASSOCIATES INC | SIND CONSTANCE | M 06 14/01/88 850,000 | BURGGRAF 88-MC-091 | |
| SCANNING TUNNELING MICROSCOPE STUDIES OF FACETING UNIVERSITY OF MARYLAND | WILLIAMS ELLEN | M 12 01/02/88 894,147 | BURGGRAF 88-MC-113 | |
| DYNAMICS OF GAS-SURFACE INTERACTIONS UNIV OF CHICAGO | SIBENER STEVEN | M 12 03/02/88 8135,395 | A BURGGRAF 88-MC-130 | 865,094 01/06/88 8487,741 |
| MECHANISMS OF REACTIVE ETCHING PRINCETON UNIVERSITY | BERNASEK STEVEN | R 12 05/02/88 868,650 | A BURGGRAF 88-MC-137 | 868,510 01/05/88 868,650 |
| NEW MATERIALS APPROACHES TO TRIBOLOGY: THEORY AND APPLICATIONS MATERIALS RESEARCH SOCIETY | POPE LARRY | M 12 17/02/88 85,000 | A BURGGRAF 88-MC-146 | 85,000 01/08/88 85,000 |

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|--|---------------------|-----------------------------------|---|-----------------------------------|
| ELECTRONIC INTERACTIONS OF DIRECTED PHOTON BEAMS WITH SURFACES VANDERBILT UNIVERSITY | TOLK NORMAN | N 12 23/02/88 8312,761 | A BURGGRAF 88-MC-149 | 8113,000 01/06/88 8360,800 |
| SURFACE SPECIES IN TRIBOLOGY UNIV OF ILLINOIS | GELLMAN ANDREW | N 12 29/02/88 8114,900 | BURGGRAF 88-MC-151 | |
| KINETICS OF SURFACE REACTIONS STUDIED BY LASER DESORPTION WITH PTMS DETECTION UNIV OF CALIFORNIA | HEMMINGER JOHN | N 12 17/05/88 850,759 | A BURGGRAF 88-MC-190 | 821,119 01/09/88 850,769 |
| MOLECULAR DYNAMICS OF ICING ON CABLES AND STRUCTURES MASSACHUSETTS INSTITUTE OF TECHNOLOGY | SUNDER S. | N 12 27/05/88 8160,000 | D BURGGRAF 88-MC-198 | |
| CHEMISTRY AT SURFACES AND INTERFACES DUKE UNIVERSITY | CRUMBLISS A. | N 6 16/06/88 81,000 | D BURGGRAF 88-MC-208 | |
| PICOSECOND LASER STUDIES OF VIBRATIONAL ENERGY TRANSFER IN MOLECULES ON SURFACES NATIONAL BUREAU OF STANDARDS | CAVANAGH RICHARD | N 12 29/06/88 8320,000 | A BURGGRAF 88-MC-214 | 8120,000 01/10/88 8120,000 |
| SURFACE CHEMISTRY OF CHEMICAL VAPOR DEPOSITION BY SECOND ORDER NON LINEAR OPTICAL TECHNIQUES SAN JOSE STATE UNIVERSITY | RODE EDWARD | N 12 30/06/88 8293,133 | D BURGGRAF 88-MC-217 | |
| ENERGY AND CHEMICAL CHANGE RICE UNIVERSITY | KINSEY JAMES | N 12 20/01/88 845,937 | A DAVIS 88-MC-096 | 831,712 01/11/88 8100,510 |
| STATE-RESOLVED REACTION DYNAMICS STANFORD UNIVERSITY | ZARE RICHARD | N 12 01/02/88 8361,583 | DAVIS 88-MC-112 | |
| OXIDATION, NITRIDATION AND FLUORINE ETCHING OF Si UNIV OF CALIFORNIA | CARTER EMILY | N 12 02/02/88 890,821 | DAVIS 88-MC-117 | |

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TITLE
TITLE (CONT.)
INSTITUTION

ANALYTICAL METHODS USING SLATER-TYPE ORBITALS IN QUANTUM CHEMISTRY
FLORIDA A&M UNIVERSITY

HERBERT

JONES

INVESTIGATOR

TYPE/MONTHS
RECEIVED
AMOUNT

N 12
02/02/88
800,079

STATUS
PROGRAM MANAGER
PROPOSAL #

A
DAVIS
88-NC-123

INITIATE
START DATE
TOT AMT

87,490
01/09/88
8285,255

CALCULATIONS OF KINETIC DATA FOR PROCESSES LEADING TO UV SIGNATURE
CHEMICAL DYNAMICS CORPORATION

P

SWAMINATHAN

N 06
10/03/88
849,862

A
DAVIS
88-NC-159

849,862
01/08/88
849,862

NEW ORGANIC MATERIALS FOR NONLINEAR OPTICS APPLICATIONS
NORTHERN ILLINOIS UNIVERSITY

CHARLES

SPANGLER

N 12
08/04/88
800,509

DAVIS
88-NC-173

GELATION OF RODLIKE POLYMERS: FUNDAMENTAL CHARACTERISTICS AND
NOVEL MATERIALS
LOUISIANA STATE UNIVERSITY

PAUL

RUSSO

N 12
02/05/88
814,815

DAVIS
88-NC-181

ELECTRONICALLY MONOADIABATIC CHEMISTRY

JOHNS HOPKINS UNIVERSITY

YARLONY

DAVID

N 12
26/05/88
859,310

M
DAVIS
88-NC-197

REACTIONS OF LASER-GENERATED FREE RADICALS AT SEMICONDUCTOR
SURFACES
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

JEFFREY

STREMPELD

R 12
01/06/88
895,023

A
DAVIS
88-NC-201

895,023
01/10/88
895,023

1989 SAMUEL SYMPOZIA

UNIV OF FLORIDA

OMRN

YNGVE

N 12
02/06/88
89,500

DAVIS
88-NC-202

MOLECULAR DYNAMICS AND SPECTROSCOPY AT GAS-SOLID INTERFACES
STATE UNIVERSITY OF NEW YORK

THOMAS

GEORGE

R 12
13/06/88
818,000

A
DAVIS
88-NC-207

8109,000
01/10/88
8109,000

COMPUTER SIMULATION OF REALISTIC MODELS OF BULK AMORPHOUS POLYMERS
UNIV OF CINCINNATI

R.

ROE

N 12
29/06/88
8103,355

DAVIS
88-NC-216

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|--|------------------------|-----------------------------------|---|-----------------------------------|
| DEVELOPMENT OF A SLANTWISE CONVECTIVE PARAMETERIZATION SCHEME FOR AN OPERATIONAL MESOSCALE NUMERICAL WEATHER PREDICTION SYSTEM MESOSCALE ENVIRON SIMUL & OPER INC | V. ROMAN KARYAMPUDI | N 06 01/01/88 949,968 | KOERMER 88-NC-070 | |
| OPTIMAL FORMULATION OF PLANETARY BOUNDARY LAYER (PBL) PARAMETERIZATION FOR MESOSCALE NUMERICAL WEATHER PREDICTION (NWP) MASSACHUSETTS TECHNOLOGICAL LABORATORY | J CHANG | N C6 12/01/88 949,360 | KOERMER 87-NC-075 | |
| ATMOSPHERIC MESOSCALE MODEL DEVELOPMENT | THOMAS | N 06 12/01/88 946,230 | KOERMER 88-NC-076 | |
| ATMOSPHERIC AND ENVIRONMENTAL RESEARCH | MEHRKORN | N 06 13/01/88 950,000 | KOERMER 88-NC-079 | |
| APPLICATIONS FOR AN AQUEOUS GAS SCRUBBER FOR THE MEASUREMENT OF AMMONIA AEROSOLS VIGYAN RESEARCH ASSOCIATES INC | RALPH MARINARO, JR | N 06 13/01/88 950,000 | KOERMER 88-NC-080 | |
| IN-SITU ATMOSPHERIC DRONE MEASUREMENTS WITH THE TUNGSTIC ACID TECHNIQUE VIGYAN RESEARCH ASSOCIATES INC | RALPH MARINARO, JR | N 06 13/01/88 950,000 | KOERMER 87-NC-081 | |
| IN-SITU ATMOSPHERIC DRONE MEASUREMENTS WITH THE ANNULAR DENUDER METHOD VIGYAN RESEARCH ASSOCIATES INC | RALPH MARINARO, JR | N 06 13/01/88 950,000 | KOERMER 88-NC-082 | |
| APPLICATION OF THE TUNGSTIC ACID TECHNIQUE FOR DETECTION OF AMMONIA AEROSOLS VIGYAN RESEARCH ASSOCIATES INC | RALPH MARINARO, JR | N 06 13/01/88 949,406 | KOERMER 88-NC-083 | |
| ULF RECEIVER/MAGNETOMETER | SUMAN | N 06 13/01/88 948,679 | KOERMER 88-NC-084 | |
| CENTER FOR REMOTE SENSING | GANGULY | N 06 13/01/88 944,360 | KOERMER 88-NC-085 | |
| IMPROVED WIND PROFILER | SUMAN | | | |
| CENTER FOR REMOTE SENSING | GANGULY | | | |
| ON THE USE OF MULTIPROCESSING COMPUTERS FOR GLOBAL NUMERICAL WEATHER PREDICTION ATMOSPHERIC AND ENVIRONMENTAL RESEARCH | HOFFMAN ROSS | | | 944,360 01/09/88 944,360 |

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|--|-------------------|-----------------------------------|---|-----------------------------------|
| PREDICTABILITY MEASURES OF ATMOSPHERIC GRAVITY WAVE STATES PHYSICAL DYNAMIC INC | WEST BRUCE | N 06 13/01/88 849,976 | KOERNER 88-NC-086 | |
| MICROBURST/WINDSHEAR WARNING SYSTEM AIRBORNE RESEARCH ASSOCIATES | MARKSON RALPH | N 06 14/01/88 850,000 | KOERNER 88-NC-087 | |
| SENSITIVE AEROSOL ELECTROMETER LAGUNA RESEARCH LAB | LOOS MENDRICUS | N 06 19/01/88 865,245 | KOERNER 88-NC-094 | |
| IMPROVED GLOBAL SPECTRAL MODEL MOISTURE AND CLOUD FORECASTING DUE TO INITIALIZATION BY OBSERVED OUTGOING LONGWAVE RADIATION FLORIDA STATE UNIVERSITY | WEINER ALLAN | N 12 22/01/88 850,000 | A KOERNER 88-NC-098 | 84,000 01/05/88 821,000 |
| IONOSPHERIC ELECTRIC FIELDS, CURRENTS AND JOULE HEATING AT HIGH LATITUDES NATIONAL OCEANIC AND ATMOSPHERIC ADMIN | KROEML HERBERT | N 4 09/02/88 82,000 | A KOERNER 88-NC-139 | 82,000 01/03/88 82,000 |
| NON-SUPERCELLULAR TORNADOES UNIV OF CALIFORNIA | WAKIMOTO ROGER | M 12 10/02/88 833,300 | KOERNER 88-NC-140 | |
| MESOSPHERIC/THERMOSPHERIC INFRARED AERODYNAMICS AND STRUCTURE INVESTIGATION UTAH STATE UNIVERSITY | ULWICK JAMES | N 12 10/02/88 8109,595 | KOERNER 88-NC-141 | |
| MESOSCALE SEVERE WEATHER DEVELOPMENT UNDER OROGRAPHIC INFLUENCES COLORADO STATE UNIVERSITY | REITER ELKAR | N 12 29/02/88 8155,769 | KOERNER 88-NC-152 | |
| TRACE ELEMENTS IN CLOUD- AND PRECIPITATION-WATER MASSACHUSETTS INSTITUTE OF TECHNOLOGY | PAY JAMES | M 12 29/02/88 8142,148 | KOERNER 88-NC-153 | |

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|---|--------------|-----------------------------------|---|-----------------------------------|
| NAS BOARD ON ATMOSPHERIC SCIENCE AND CLIMATE (BRASC) | HECHT | N 12 29/02/88 \$3,000 | A KOERMER 88-MC-154 | 930,000 01/10/88 \$30,000 |
| NOAA - R AND C ATMOSPHERIC PROGRAMS | ALAN | | | |
| LABORATORY EXPERIMENTS TO INVESTIGATE THE ROLE OF GRAVITY WAVE/ SHEAR INTERACTIONS IN GLOBAL ATMOSPHERIC CIRCULATION NORTHWEST RESEARCH ASSOCIATES, INC. | DELISI | N 06 10/03/88 \$52,744 | KOERMER 88-MC-158 | |
| EXPERIMENT ON RAPIDLY INTENSIFYING CYCLONES OVER THE ATLANTIC (ERICA) | KREITZBERG | N 12 17/03/88 \$5,000 | KOERMER 88-MC-162 | |
| ENVIRONMENTAL TECHNICAL EXCHANGE CONFERENCE PLANNING ACTIVITIES | | N 06 22/03/88 \$6,000 | A KOERMER 88-MC-163 | \$6,000 01/04/88 \$6,000 |
| ARMY ENGINEER WATERWAYS EXPERIMENT STA | HUSKY | | | |
| USU CENTER OF EXCELLENCE IN THEORY AND ANALYSIS OF THE GEO-PLASMA ENVIRONMENT | SCHUNK | R 05 19/04/88 \$8,000 | A KOERMER 88-MC-174 | \$8,000 01/05/88 \$8,000 |
| UTAH STATE UNIVERSITY | ROBERT | | | |
| A NUMERICAL STUDY OF THE ROLE OF MESO B AND MESO Y SCALE VERTICAL EXCHANGE PROCESSES IN THE EVOLUTION OF UPPER TROPOSPHERIC FRONTAL - MEOSCALE ENVIRON SIMUL & OPER INC | KAPLAN | R 05 19/04/88 \$19,700 | A KOERMER 88-MC-175 | \$19,700 01/05/88 \$19,700 |
| NUMERICAL MODELING OF MIDDLE AND HIGH LEVEL CLOUDS WITH THE COLORADO STATE UNIV REGIONAL ATMOSPHERIC MODELING SYSTEM | COTTON | N 05 10/05/88 \$9,240 | M KOERMER 88-MC-183 | |
| COLORADO STATE UNIVERSITY | WILLIAM | | | |
| CONTINUATION OF THE INVESTIGATION OF ATMOSPHERIC EMISSIONS IN THE ULTRAVIOLET AND FAR ULTRAVIOLET WAVELENGTHS | MENG | R 12 30/05/88 \$115,900 | KOERMER 88-MC-184 | |
| JOHNS HOPKINS UNIVERSITY | CHING-I. | | | |
| SNOW COVER AND ATMOSPHERIC VARIABLES | | N 12 13/05/88 \$63,020 | KOERMER 88-MC-188 | |
| COLUMBIA UNIVERSITY | ROBINSON | | | |
| NUMERICAL SIMULATIONS OF MULTI-SCALE PHENOMENA | | N 12 17/05/88 \$238,228 | KOERMER 88-MC-191 | |
| ORI, INC. | HARRISON, JR | | | |
| | EDWARD | | | |

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|---|---------------------|-----------------------------------|---|-----------------------------------|
| NONLINEAR GRAVITY WAVE TRANSPORT AND ITS ROLE IN THE GENERAL CIRCULATION OF THE ATMOSPHERE PHYSICAL DYNAMICS INC | DUMBERTON TIMOTHY | N 12 25/05/88 869,704 | KOERMER 88-MC-195 | |
| EVALUATION OF THE PARTIAL MOLAR REFRACTIONS OF AQUEOUS ELECTROLYTE S OF AMBIENT TROPOSPHERIC LIGHT SCATTERING IMPORTANCE ATLANTA UNIVERSITY CENTER INC | STELSON ARTHUR | N 12 31/05/88 854,518 | KOERMER 88-MC-199 | |
| AMS WORKSHOP ON FLOW AND TRANSPORT IN RUGGED TERRAIN AMERICAN METEOROLOGICAL SOCIETY | MAZUR EVELYN | N 03 31/05/88 95,000 | A KOERMER 88-MC-200 | 85,000 01/07/88 85,000 |
| STUDIES OF THE AURORAL OVAL AND POLAR CAP USING INCOHERENT-SCATTER RADAR OBSERVATIONS AND THEORETICAL MODEL CALCULATIONS UTAH STATE UNIVERSITY | WICKMAR V | N 12 10/06/88 8139,879 | KOERMER 88-MC-206 | |
| HIGH RESOLUTION MOLECULAR SPECTROSCOPY OF ATMOSPHERIC SPECIES NORTH CAROLINA CENTRAL UNIVERSITY | DUTTA J | N 12 16/06/88 803,580 | KOERMER 88-MC-209 | |
| INVESTIGATIONS OF THE DYNAMICS AND THERMODYNAMICS OF THE MESOSPHER LOWER THERMOSPHERE AND UPPER THERMOSPHERE AT THE POLAR REGIONS W/ UNIV OF WASHINGTON | CLARK KENNETH | N 12 20/06/88 8162,716 | KOERMER 88-MC-210 | |
| RADAR-SATELLITE STUDIES OF THE HIGH-LATITUDE IONOSPHERE MASSACHUSETTS INSTITUTE OF TECHNOLOGY | POSTER JOHN | R 12 23/06/88 8179,970 | KOERMER 88-MC-212 | |
| DEVELOPMENT OF PRACTICAL MO TECHNIQUES FOR PREDICTION OF THE PROPERTIES AND BEHAVIOR OF MATERIALS UNIV OF TEXAS | DEMAR MICHAEL J. S. | R 12 04/01/88 8166,663 | MATUSZKO 88-MC-066 | |
| NEW METHODOLOGY FOR FLUOROCARBON SYNTHESIS UNIV OF IOWA | BURTON DONALD | N 12 06/01/88 8130,676 | MATUSZKO 88-MC-068 | |

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|---|---------------------|-----------------------------------|---|-----------------------------------|
| SYNTHESIS OF NEW METASTABLE ULTRASTRUCTURED MATERIALS KMS FUSION INC | WIXOM MICHAEL | N 06 14/01/88 849,992 | MATUSZKO 88-WC-088 | 95,000 01/09/88 95,000 |
| SYMPOSIUM ON METALS IN BIOCHEMISTRY AND MATERIALS SCIENCE GEORGIA UNIV RESEARCH FOUNDATION INC | KING R. BRUCE | N 12 25/01/88 824,142 | A MATUSZKO 88-WC-100 | 8230,000 01/10/88 8230,000 |
| ORGANOSILICON MONOMERS AND POLYMERS: PRECURSORS TO SILICON-CONTAINING CERAMICS MASSACHUSETTS INSTITUTE OF TECHNOLOGY | SEYFERTH DIETMAR | N 12 26/01/88 8230,000 | A MATUSZKO 88-WC-103 | 8230,000 01/10/88 8230,000 |
| PRECURSOR DESIGN AND SYNTHESIS FOR ADVANCED OXIDE AND NITRIDE MATERIALS UNIV OF ARIZONA | WIGLEY DAVID | N 12 26/01/88 879,309 | MATUSZKO 88-WC-104 | |
| CHEMICAL REACTIONS AND PROPERTIES OF ORGANOSILICON COMPOUNDS RELATED TO NEW MATERIALS UNIV OF WISCONSIN | WEST ROBERT | N 12 28/01/88 8321,499 | A MATUSZKO 88-WC-109 | 8243,930 01/10/88 8732,222 |
| NEW N-N BOND FORMING REACTIONS. SYNTHESIS OF UNSATURATED NITROGEN COMPOUNDS OF THE MAIN GROUP AND TRANSITION ELEMENTS. EXPLORATORY UNIV OF CALIFORNIA | TROGLER WILLIAM | N 12 28/01/88 8124,029 | MATUSZKO 88-WC-110 | |
| NEW INORGANIC-ORGANIC POLYMER SYSTEMS PENNSYLVANIA STATE UNIVERSITY | ALLCOCK HARRY | N 12 02/02/88 8178,115 | MATUSZKO 88-WC-121 | |
| 1988 GORDON RESEARCH CONFERENCE ON ELASTOMERS UNIV OF RHODE ISLAND | CRUICKSHANK A | N 12 03/02/88 86,000 | MATUSZKO 88-WC-129 | |
| DEVELOPMENT OF CHIRAL POLYSILOXANES FOR ENANTIOSELECTIVE SUPERCRITICAL FLUID CHROMATOGRAPHY BRIGHAM YOUNG UNIVERSITY | ROSSITER BRYANT | N 12 11/02/88 889,557 | MATUSZKO 88-WC-143 | |
| STRUCTURE AND PROPERTIES OF NOVEL COMPOUNDS OF SILICON, GERMANIUM, AND TIN UNIV OF TEXAS | MICHL JOSEF | R 12 01/03/88 8100,000 | A MATUSZKO 88-WC-155 | 8100,000 01/10/88 8300,000 |

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|---|------------------------|-----------------------------------|---|-----------------------------------|
| SILICON NITRIDE PRECURSORS MC CHEMICAL RESEARCH & SERVICE CORP. | HSU MING-TA | N 06 10/03/88 \$62,177 | MATUSZKO 88-MC-160 | 84,000 01/05/88 84,000 |
| BIOTECHNOLOGY AND AEROSPACE APPLICATIONS UNITED STATES AIR FORCE ACADEMY | SAMPSON ORWYN | N 05 05/04/88 \$4,000 | A MATUSZKO 88-MC-169 | 84,000 01/05/88 84,000 |
| AT-RESIN RESEARCH: BIOTECHNICAL SUPPORT AND HETEROGENEOUS CATALYSIS PENNSYLVANIA STATE UNIVERSITY | GORDON, III BERNARD | N 12 06/04/88 \$97,763 | MATUSZKO 88-MC-170 | |
| SYNTHESIS AND PROPERTIES OF METALLOCENE-BASED LIQUID CRYSTALS UNIV OF OKLAHOMA | NICHOLAS KENNETH | N 12 26/04/88 \$109,155 | MATUSZKO 88-MC-176 | |
| DYNAMICS AND STABILIZATION OF MATERIALS POSSESSING HIGH ENERGY CONTENT COLUMBIA UNIVERSITY | TURRO NICHOLAS | R 12 26/04/88 \$100,000 | MATUSZKO 88-MC-177 | |
| SUPPORT FOR THE FIRST INTERNATIONAL SYMPOSIUM ON ELECTROCHEMICAL IMPEDANCE SPECTROSCOPY SR. INTERNATIONAL | TURRO MACDONALD | N 12 11/05/88 \$10,000 | MATUSZKO 88-MC-186 | |
| PICOSECOND LASER STUDIES OF CHEMICAL INTERMEDIATES COLUMBIA UNIVERSITY | EISENTHAL KENNETH | R 12 13/05/88 \$99,902 | A MATUSZKO 88-MC-187 | \$99,902 01/10/88 \$99,902 |
| ROLE OF FORMULATIONS AND STRUCTURES OF POLYSILAZANES ON THEIR PYROLYSIS CHARACTERISTICS SR. INTERNATIONAL | BLUM TIGAL | N 12 30/06/88 \$104,976 | MATUSZKO 88-MC-218 | |
| PBT,PBO-BASED HYBRID POLYMERIC MATERIALS WITH NONLINEAR OPTICAL PROPERTIES NORTHWESTERN UNIVERSITY | MARKS TOBIN | R 12 04/01/88 \$162,000 | A ULRICH 88-MC-055 | \$75,000 01/08/88 \$150,000 |

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|--|-----------------------|-----------------------------------|---|--------------------------------------|
| AN X-RAY AND NEUTRON SCATTERING STUDY OF POLYMER BLENDS UNIVERSITY OF MICHIGAN | ULLMAN ROBERT | N 12 05/01/88 \$165,103 | ULRICH 88-MC-067 | \$188,000 01/04/88 \$376,000 |
| ORDERED POLYMER NONLINEAR OPTICAL MATERIALS FOSTER-MILLER INC | DRUY MARK | N 12 06/01/88 \$188,000 | ULRICH 88-MC-069 | \$188,000 01/04/88 \$376,000 |
| HIGH JC SUPERCONDUCTING OXIDES VIA A THREE DIMENSIONAL TEMPLATE FOSTER-MILLER INC | LUSIGNEA RICHARD | N 06 07/01/88 \$64,319 | ULRICH 88-MC-071 | |
| SINGLE CRYSTAL SUPERCONDUCTING FIBERS OF LUBACU309-Y AND YBBA ZCU300-Y LASERGENICS CORPORATION | SCHLECHT RICHARD | N 06 12/01/88 \$48,498 | ULRICH 88-MC-077 | |
| TECHNOLOGICALLY USEFUL MLD FILMS OF POLYPHENYLENE VINYLENE AND IDS COPOLYMERS FOSTER-MILLER INC | DRUY MARK | N 06 12/01/88 \$66,733 | ULRICH 88-MC-078 | \$66,733 01/08/88 \$66,733 |
| CRYSTALLIZATION OF NANOCOMPOSITE GLASSES MADE BY THE SSG PROCESS PENNSYLVANIA STATE UNIVERSITY | ROY RUSTUM | N 12 21/01/88 \$153,530 | ULRICH 88-MC-097 | \$70,000 01/09/88 \$143,837 |
| ZRGANOMETALLIC PRECURSOR ROUTES TO SI-C-AL-O-N RENSELAEER POLYTECHNIC INSTITUTE | INTERRAMTE LEONARD | N 12 27/01/88 \$114,697 | ULRICH 88-MC-105 | |
| CHEMICAL PROCESSING OF CERAMIC AND COMPOSITES UNIVERSAL ENERGY SYSTEMS INC | TAI-IL MAH | N 12 02/02/88 \$235,648 | ULRICH 88-MC-126 | |
| MOLECULAR OPTICS: NONLINEAR OPTICAL PROCESSES IN ORGANIC AND POLYMERIC CRYSTALS AND FILMS UNIV OF PENNSYLVANIA | GARITO A. | N 12 03/02/88 \$54,037 | ULRICH 88-MC-132 | \$175,000 15/08/88 \$1,500,000 |
| PROCESSING, FABRICATION, CHARACTERIZATION, AND DEVICE DEMONSTRATION OF HIGH TEMPERATURE SUPERCONDUCTING CERAMICS BOEING CO | LUMMAN THOMAS | N 12 05/02/88 \$372,279 | ULRICH 88-MC-136 | \$559,000 01/09/88 \$1,116,822 |

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FRACTAL ASPECTS OF MATERIALS: DISORDERED SYSTEMS

MATERIALS RESEARCH SOCIETY WEITZ DAVID

ORGANIC AND POLYMERIC NONLINEAR OPTICAL MATERIALS

POLYTECHNIC INSTITUTE OF NEW YORK GERBI OLIANA

TRACTABLE HIGH PERFORMANCE POLYMERS

UNIV OF CALIFORNIA SMITH PAUL

MOLECULAR ENGINEERING, DYNAMICS OF ELECTRON TRANSPORT AND
NONLINEAR OPTICAL INTERACTION IN LANGMUIR-BLODGETT FILMS ORGANIC
STATE UNIVERSITY OF NEW YORK PRASAD PARAS

MATERIALS SCIENCE AND ENGINEERING OF RIGID-ROD POLYMERS

MATERIALS RESEARCH SOCIETY ADAMS M

SYNTHESIS AND PROPERTIES OF OXIDE POWDERS PREPARED BY HOMOGENEOUS
PRECIPITATION TECHNIQUES

UNIV OF UTAH PARRY ROBERT

SOL-GEL SYNTHESIS OF MgAl2O4 SPINEL POWDERS FOR OPTICAL CERAMICS

COLORADO SCHOOL OF MINES INS GERARD P MAR

DEVELOPMENT OF A HIGH EFFICIENCY Q-SWITCHED GLASS LASER VIA
SOL-GEL AND PROCESSING

GEL-TECH, INC. MOGUES JEAN-LUC

A CENTER FOR ADVANCED ELECTRICAL AND STRUCTURAL POLYMERS

UNIV OF MASSACHUSETTS KARASZ FRANK

N 12
17/02/88
83,000
ULRICH
88-NC-147

M 06
23/02/88
95,000
ULRICH
88-NC-150

M 12
03/03/88
8403,500
ULRICH
88-NC-157

R 12
15/03/88
85,492
ULRICH
88-NC-161

M 12
29/03/88
821,000
ULRICH
88-NC-166

M 12
01/04/88
8213,267
ULRICH
88-NC-167

M 12
05/04/88
874,484
ULRICH
88-NC-168

M 12
06/04/88
8100,000
ULRICH
88-NC-171

R 12
27/04/88
8569,953
ULRICH
88-NC-179

88,000
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88,000

81,000,000
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81,330,000

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| ULTRASTRUCTURE PROCESSING OF MACROMOLECULAR MATERIALS UNIV OF MASSACHUSETTS | KARASZ FRANK | M 12 28/04/88 \$365,000 | A ULRICH 88-MC-180 | 8365,000 01/10/88 8365,000 |
| 10TH UNIVERSITY CONFERENCE ON GLASS SCIENCE PHYSICS AND CHEMISTRY OF GLASS SURFACES PENNSYLVANIA STATE UNIVERSITY | PANTANO CARLO | M 12 09/05/88 89,851 | ULRICH 88-MC-182 | |
| EXPERT SYSTEM CONTROL OF ORIENTATION IN ORDERED POLYMERS FOR MLD APPLICATIONS FOSTER-MILLER INC | DRUY MARK | M 12 11/05/88 \$150,000 | A ULRICH 88-MC-185 | 8249,973 30/09/88 8499,947 |
| POLYIMIDE-POLYETHERSULFONE BLENDS UNIV OF MASSACHUSETTS | KARASZ FRANK | M 12 15/05/88 \$100,000 | ULRICH 88-MC-189 | |
| DESIGN, SYNTHESIS AND CHEMICAL PROCESSING OF HIERARCHICAL CERAMIC STRUCTURES FOR AEROSPACE APPLICATIONS MASSACHUSETTS INSTITUTE OF TECHNOLOGY | BOWEN HARVEY | M 12 23/05/88 \$150,213 | ULRICH 88-MC-192 | |
| MULTIFUNCTIONAL POLYMER SYSTEMS M.C.C., SCIENCE & TECHNOLOGY INC. | CALUNDANN GORDON | M 12 23/05/88 \$399,912 | ULRICH 88-MC-194 | |
| ORGANOMETALLIC COMPOUNDS AND POLYMERS WITH SECOND AND THIRD ORDER NON-LINEAR OPTICAL PROPERTIES PRINCETON UNIVERSITY | THOMPSON MARK | M 12 26/05/88 \$197,884 | ULRICH 88-MC-196 | |
| THIN FILMS OF FUNCTIONAL POLYMERS FOR OPTO-ELECTRONIC APPLICATIONS : A NEW APPROACH TO MOLECULAR ARCHITECTURES UNIV OF MASSACHUSETTS | KARASZ FRANK | M 12 02/06/88 \$100,420 | ULRICH 88-MC-203 | |
| SOL-GEL OPTICS CHARACTERIZATION EQUIPMENT UNIV OF FLORIDA | MENCH D. | M 12 10/06/88 \$78,650 | ULRICH 88-MC-205 | |
| GROUP TRAVEL TO INTERNATIONAL CONFERENCE ON FUNDAMENTALS OF FRACTURE NATIONAL BUREAU OF STANDARDS | THOMPSON ROBB | M 12 21/06/88 \$5,000 | D ULRICH 88-MC-211 | |

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| PREPARATION AND CHARACTERIZATION OF NEW HIGH-TEMPERATURE 0-14 M IR TRANSMITTING CHALCOGENIDE GLASSES IOWA STATE UNIV OF SCIENCE AND TECH | MARTIN STEVE | N 12 27/06/80 868,353 | ULRICH 88-NC-213 | |
| THE FOURTH INTERNATIONAL CONFERENCE ON ULTRASTRUCTURE PROCESSING OF CERAMICS, GLASSES, AND COMPOSITES UNIV OF ARIZONA | UHLMANN O. | N 12 29/06/80 832,500 | ULRICH 88-NC-215 | |
| ULTRA-SENSITIVE ELEMENT ANALYSIS BY COMBINING LASER ATOMIZATION WITH RESONANCE IONIZATION SPECTROSCOPY ATOM SCIENCES, INC. | THOMAS MORBERT | N 06 19/01/80 856,655 | WILKES 88-NC-095 | |
| MULTI-ELECTRON AND COUPLED ATOM TRANSFER REACTION KINETICS AT ELEC TROMICAL INTERFACES NORTHWESTERN UNIVERSITY | MUPP JOSEPH | N 12 26/01/80 8127,959 | WILKES 88-NC-101 | |
| ELECTROCHEMICAL AND SPECTROSCOPIC STUDIES OF MOLTEN HALIDES UNIV OF TENNESSEE | MAMANTOV GLEB | N 12 27/01/80 8105,369 | WILKES 88-NC-106 | 8130,000 15/09/80 8390,000 |
| STRUCTURES, SPECTRA, AND THERMODYNAMICS OF DIALKYLIMIDAZOLIUM MALDALUMINATES ARGONNE NATIONAL LABORATORY | MARANTOV SABOUNGI MARIE-LOUISE | N 12 01/02/80 8100,000 | WILKES 88-NC-111 | |
| A QUANTITATIVE STUDY OF THE ELECTROCHEMICAL FORMATION OF SALT MONOLAYERS GEORGETOWN UNIVERSITY | DELEVIE ROBERT | N 12 01/02/80 8109,242 | WILKES 88-NC-115 | |
| SYNTHESIS, ION TRANSPORT AND THEORY OF SOLID POLYELECTROLYTES AND RELATED ROOM-TEMPERATURE MOLTEM SALT ELECTROLYTES NORTHWESTERN UNIVERSITY | RATNER MARK | N 12 04/02/80 8100,000 | WILKES 88-NC-133 | |
| PS CHEMICAL LASER STUDIES UNIV OF NEW HAMPSHIRE | WRIGHT JOHN | N 12 14/01/80 843,532 | WOODRIZYK 88-NC-092 | |

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| STATE RESOLVED DYNAMICS OF ION-MOLECULE COLLISIONS IN A FLOWING AFTERGLOW UNIV OF COLORADO | LEONE STEPHEN | N 12 15/01/88 9218,140 | WODARCZYK 88-NC-093 | |
| INFRARED SPECTROSCOPY AND DYNAMICS OF VAPOR PHASE COMPLEXES OF WAT ER UNIV OF NORTH CAROLINA | MILLER ROGER | N 12 26/01/88 9170,965 | WODARCZYK 88-NC-107 | |
| PHOTODISSOCIATION DYNAMICS OF CLUSTER IONS UNIV OF CALIFORNIA | BOWERS MICHAEL | N 12 02/02/88 9197,562 | WODARCZYK 88-NC-118 | |
| VACUUM ULTRAVIOLET STUDIES OF MOLECULAR DYNAMICS CORNELL UNIVERSITY | HOUSTON PAUL | N 12 02/02/88 9141,652 | WODARCZYK 88-NC-119 | |
| GA.-SURFACE INTERACTIONS NEAR DISSOCIATION THRESHOLD UNIV OF SOUTHERN CALIFORNIA | WITIG CURT | N 12 02/02/88 9100,000 | WODARCZYK 88-NC-120 | |
| STATE-SPECIFIC ENERGY TRANSFER AND CHEMILUMINESCENT REACTIONSS SR. INTERNATIONAL | CROSLY DAVID | N 12 02/02/88 9209,534 | WODARCZYK 88-NC-125 | |
| STATE-RESOLVED COLLISIONAL ENERGY TRANSFER IN HIGH VIBRATIONALLY EXCITED POLYATOMIC MOLECULES UNIV OF WISCONSIN | CRIM F. FLEMING | N 12 04/02/88 9123,923 | WODARCZYK 88-NC-134 | |
| TRANSIENT BEHAVIORS IN CHEMICAL REACTIONS UNIV OF CALIFORNIA | PIMENTEL GEORGE | N 12 11/02/88 9164,155 | WODARCZYK 88-NC-142 | |
| CHEMIELECTRON AND PHOTOELECTRON SPECTROSCOPY OF METALS AND METAL OXIDES OF IMPORTANCE IN THE UPPER ATMOSPHERE UNIV OF SOUTHAMPTON | DYKE JOHN | N 12 02/03/88 954,360 | WODARCZYK 88-NC-156 | |
| XVIII INFORMAL PHOTOCHEMISTRY CONFERENCE UNIV OF SOUTHERN CALIFORNIA | WITIG CURT | N 08 08/04/88 95,000 | A WODARCZYK 88-NC-172 | 96,900 01/09/88 96,900 |

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AND RELATED MOLECULES
UNIV OF DENVER

INVESTIGATOR

COOMBE ROBERT

UNIMOLECULAR AND BIMOLECULAR REACTION DYNAMICS OF STATE (DR ENERGY)
3--SELECTED CLUSTER IONS
IOWA STATE UNIV OF SCIENCE AND TECH

NG

CHEUK-YIU

| TYPE/MONTHS RECEIVED AMOUNT | STATUS PROGRAM MANAGER PROPOSAL # | INITIATE START DATE TOT AMT |
|-----------------------------|-----------------------------------|-----------------------------|
| N 12 23/05/88 84,090 | A WODARCZYK 88-WC-193 | 82,515 01/09/88 82,515 |
| N 12 06/06/88 899,817 | WODARCZYK 88-WC-204 | |

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| USING NEURAL NETWORK TO LEARN FEATURES FOR COMPUTER VISION CLARKSON UNIVERSITY | KOCH MARK | N 12 04/01/88 \$61,930 | GILES 88-NE-038 | |
| ALGORITHM/ARCHITECTURE STUDY ON ARTIFICIAL NEURAL NETS PRINCETON UNIVERSITY | SUN-YUAN KUNG | N 36 04/13/88 \$300,000 | A GILES 88-NE-040 | \$150,000 01/09/88 \$300,000 |
| STABILITY AND ADAPTION OF NEURAL NETWORKS UNIV OF SOUTHERN CALIFORNIA (ELEC ENG) | BART KOSKO | N 36 28/01/88 \$357,000 | A GILES 88-NE-048 | \$116,700 01/08/88 \$357,000 |
| MULTI-CHANNEL, FAULT TOLERANT OPTICAL COMM TECH FOR INCREASED PERFORMANCE, THROUGHPUT, AND CAPACITY; SIMULTANEOUS VOICE, DATA PHOENIX DIGITAL CORPORATION | BROWN RONALD | N 06 01/02/88 \$47,391 | GILES 88-NE-052 | |
| H. F. MODULE CENTER FOR REMOTE SENSING | GANGULY SUMAN | N 06 01/02/88 \$49,287 | GILES 88-NE-053 | |
| BOROPHOSPHILICATE GLASS AS AN OPTICAL INTERCONNECT IN AN INTEGRATED CIRCUIT COMPLEX HARVEY MECHAN ASSOCIATES | MECHAN HARVEY | N 06 01/02/88 \$50,325 | GILES 88-NE-054 | |
| PORTABLE H. F. SOUNDER CENTER FOR REMOTE SENSING | GANGULY SUMAN | N 06 01/02/88 \$53,456 | GILES 88-NE-055 | |
| INVESTIGATIONS IN NONMONOTOMIC REASONING ARTIFICIAL INTELLIGENCE RESEARCH INSTITUTE | BROWN FRANK | N 36 02/02/88 \$341,050 | GILES 88-NE-056 | |
| 15TH ANNUAL INTERNATIONAL SYMPOSIUM ON COMPUTER ARCHITECTURE PENNSYLVANIA STATE UNIVERSITY | IRWIN MARY JANE | N 06 23/02/88 \$5,000 | A GILES 88-NE-109 | \$5,000 15/05/88 \$5,000 |

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|--|-----------------------|-----------------------------------|---|------------------------------------|
| INTEGRATED OPTO-ELECTRONIC COMPUTING UNIV OF SOUTHERN CALIFORNIA | STEER WILLIAM | N 07 23/02/88 \$66,000 | A GILES 88-NE-111 | \$66,000 01/07/88 \$66,000 |
| RESEARCH ON SPATIAL LIGHT MODULATORS WITH INTERNAL MEMORY UNIV OF CALIFORNIA | WALPITA L | N 24 25/02/88 \$207,976 | GILES 88-NE-116 | |
| GENERALIZED CONSTRAINT ENCODING IN CONNECTIONIST NETWORKS NAVAL RESEARCH LABORATORY | GRIFFIN RICHARD | N 06 29/02/88 \$53,500 | A GILES 88-NE-117 | \$53,500 01/04/88 \$53,500 |
| HIGHLY COMPACT MONOLITHIC INTEGRATED CIRCUITS FOR OPTICAL COMPUTING AND INTERCONNECTION APPLICATIONS UNIV OF SOUTHERN CALIFORNIA | FORREST STEPHEN | N 36 04/03/88 \$488,689 | GILES 88-NE-123 | |
| NEUROBIOLOGY AND SIMULATION OF NEURAL NETS FOR INVARIANT OBJECT RECOGNITION UNIV OF SOUTHERN CALIFORNIA | GAUDIOT JEAN-LUCH | N 36 07/03/88 \$400,000 | A GILES 88-NE-124 | \$200,000 01/08/88 \$600,000 |
| DEVELOPMENT OF MULTIPLERED HOLOGRAM MODELS DESCRIBING OPTICAL INTERCONNECT AND MEMORY SYSTEMS UNIV OF ARIZONA | KOSTUK RAYMOND | N 36 08/03/88 \$258,427 | GILES 88-NE-125 | |
| AN OPTOELECTRONIC REALIZATION OF NEURAL NETWORK MODELS CALIFORNIA INSTITUTE OF TECHNOLOGY | YARIV AMNON | N 12 30/03/88 \$299,312 | A GILES 88-NE-131 | \$50,000 01/08/88 \$299,312 |
| IEEE CONFERENCE OF NEURAL INFORMATION PROCESSING SYSTEM, JOHNS HOPKINS UNIVERSITY | SEJNOWSKI TERRENCE | N 12 30/03/88 \$5,000 | A GILES 88-NE-133 | \$5,000 15/08/88 \$5,000 |
| GENETIC SYNTHESIS OF NEURAL NETWORKS MONEYWELL INC | GUMA ALOK | N 12 05/04/88 \$104,882 | GILES 88-NE-140 | |
| ANNUAL MEETING OF INTERNATIONAL NEURAL NETWORK SOCIETY INT'L NEURAL NETWORK SOCIETY | GROSSBERG STEPHEN | N 12 22/04/88 \$10,000 | A GILES 88-NE-130 | \$10,000 01/08/88 \$10,000 |

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|--|----------------------|-----------------------------------|---|-----------------------------------|
| RESEARCH ON MATERIALS AND COMPONENTS FOR OPTO-ELECTRONIC SIGNAL PROCESSING AND COMPUTING UNIV OF CALIFORNIA | C. CHANG WILLIAM | R 24 02/05/88 8203,242 | GILES 88-NE-159 | |
| PHYSICS, ENGINEERING AND APPLICATIONS OF AN ULTRAFAST SPATIAL LIGHT MODULATOR CITY COLLEGE - CUNY | ALFANO ROBERT | N 36 05/05/88 8601,198 | GILES 88-NE-161 | |
| BIT-WISE IMPLEMENTATION OF DIGITAL FILTERS WITH NEURAL NETWORKS UNIV OF CALIFORNIA | BAVARIAN BERNAN | N 24 17/05/88 8150,037 | GILES 88-NE-166 | |
| OPTICAL CROSS-BAR MATRIX SWITCH DESIGN STUDY USING HIGH TEMPERATURE SUPERCONDUCTIVITY NAVAL RESEARCH LABORATORY | SZU HAROLD | N 04 23/05/88 830,000 | A GILES 88-NE-168 | 830,000 01/06/88 830,000 |
| COMPUTING SYSTEMS BASED ON A MODEL OF DATA PROCESSING WITHIN THE NEURON NEW YORK CITY TECHNICAL COLLEGE - CUNY | BARNETT MICHAEL | N 36 25/05/88 8184,983 | GILES 88-NE-174 | |
| A GENETIC ADAPTIVE SYSTEMS FOR IMAGE UNDERSTANDING AND LEARNING RESEARCH INSTITUTE FOR STUDY OF INTELLIGENT SYS. | EISENHARDT ROBERT | N 12 31/05/88 8006,309 | GILES 88-NE-178 | |
| SENSORIMOTOR NEUROBOTICS: COMPUTATION OF INTRINSIC COORDINATES BY NEURAL NETS NEW YORK UNIVERSITY MEDICAL CENTER | PELLIONISZ A | N 36 09/06/88 8587,415 | GILES 88-NE-175 | |
| ADAPTIVE DYNAMICS WITH NETWORKS & GEOMETRICAL LEARNING ALGORITHMS UNIV OF ILLINOIS | OMOHUNDRO STEPHEN | N 36 15/06/88 8448,700 | GILES 88-NE-188 | |
| HIGHLY ORIENTED FIBER REINFORCED CERAMIC COMPOSITES CERAMICS PROCESS SYSTEMS | MUDGE JAMES | N 06 05/02/88 850,000 | A HARITOS 88-NE-066 | 850,000 01/08/88 850,000 |

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| DEFECT REDUCTION IN EPITAXIAL GROWTH USING SUPERLATTICE BUFFER LAYERS NORTH CAROLINA STATE UNIVERSITY | BEDAIR SALAH | R 30 04/01/88 \$412,000 | A MALLOY 88-NE-035 | \$131,000 01/04/88 \$412,000 |
| LIMITATIONS OF THE TRANSMISSION OF PAR-INFRARED LASER RADIATION THROUGH CONDENSED MATTER UNIV OF CALIFORNIA | ORON M | N 36 04/01/88 \$544,978 | MALLOY 88-NE-037 | |
| DEPOSITION OF KTN FILMS BY ATOMIC LAYER EPITAXY HUGHES RESEARCH LABORATORIES | ELWELL DENNIS | N 36 04/01/88 \$632,384 | MALLOY 88-NE-039 | |
| POST NUCLEATION HETEROEPITAXY IN NON-LATTICE-MATCHING SYSTEMS MASSACHUSETTS INSTITUTE OF TECHNOLOGY | THOMPSON CARL | R 18 04/01/88 \$136,000 | A MALLOY 88-NE-042 | \$136,000 15/04/88 \$135,808 |
| MECHANICAL PROPERTIES OF SEMICONDUCTORS AND THEIR ALLOYS SR. INTERNATIONAL | SHER ARON | R 36 28/01/88 \$573,991 | A MALLOY 88-NE-049 | \$28,292 01/09/88 \$505,191 |
| MONBE OF Z(N)SCE/Z(CN)S(X)-S(CE)(I-X) QUANTUM WELL LASERS EUROPEAN OFFICE OF AERO RSCH AND DEVELOP | SMITH, LT COL, USAF LABEL | N 36 29/01/88 \$294,142 | MALLOY 88-NE-051 | |
| INSB/COINTE METROSTRUCTURE ELECTRO-OPTIK CORPORATION | CHAN WILLIAM | N 06 11/02/88 \$57,721 | MALLOY 88-NE-083 | |
| PROCESS MODELING OF MOCVD GROWTH TECHNIQUE VIA NUMERICAL SIMULATION-APPLICATION TO GAAS, ALGAAS AND INGAAS SCIENTIFIC RESEARCH ASSOCIATES, INC. | METAYAPPAN M | N 06 11/02/88 \$51,517 | MALLOY 88-NE-084 | |
| GAAS SPREADING RESISTANCE MEASUREMENT INSTRUMENT FOUR DIMENSIONS, INC | CHEN JAMES | N 06 11/02/88 \$50,000 | MALLOY 88-NE-085 | |
| ANALYSIS OF GROWTH-INDUCED INTERFACE ROUGHNESS EFFECTS ON METROSTRUCTURES DEVICES MICROTRONICS ASSOCIATES, INC. | COON DARRYL | N 06 11/02/88 \$50,000 | MALLOY 88-NE-086 | |

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| MULTI-METROSTRUCTURES BY ENERGY ION IMPLANTATION SPIRE CORPORATION | MANAVAR PEREYDOON | N 06 11/02/88 \$53,357 | MALLOY 88-NE-087 | |
| MORTE CARLO SIMULATION OF HOMOEPITAXIAL AND METEROEPITAXIAL THIN FILM GROWTH DYNAMICS AERODYNE RESEARCH INC | STINESPRING CHARTER | N 06 11/02/88 \$49,927 | MALLOY 88-NE-088 | |
| LOW TEMPERATURE OPTICAL CONSTANTS OF OPTOELECTRONIC MATERIALS J. A. WOOLLAM COMPANY | WOJLLAN JOHN | N 06 11/02/88 \$50,000 | MALLOY 88-NE-089 | |
| ELECTRO-OPTIC POLARIZATION EFFECTS FROM METEROJUNCTION STRUCTURES J. A. WOOLLAM COMPANY | WOJLLAN JOHN | N 06 11/02/88 \$50,000 | MALLOY 88-NE-090 | |
| GROWTH STUDIES OF METAL-METAL/SEMICONDUCTOR STRUCTURES CHEMICAL DYNAMICS CORPORATION | MURTHY C | N 06 11/02/88 \$49,908 | A MALLOY 88-NE-091 | 949,908 01/08/88 \$49,908 |
| METEROEPITAXY CVD EQUIPMENT CORPORATION | CHANDRAN RAVI | N 06 11/02/88 \$49,875 | MALLOY 88-NE-092 | |
| THERMOCHEMISTRY OF HYDROCARBON DECOMPOSITION AND RELATIONSHIP TO PROPERTIES OF PECVD DIAMOND FILMS CRYSTALLUME | RAVIED K | A 24 11/02/88 \$497,892 | A MALLOY 88-NE-093 | 8248,892 15/09/88 \$497,892 |
| SELECTIVE-AREA EPITAXY OF GALLIUM ARSENIDE ON SILICON SPIRE CORPORATION | HAVEN VICTOR | N 06 11/02/88 \$37,120 | MALLOY 88-NE-095 | |
| ELECTRICALLY CONDUCTING GRAPHITIC CARBON ULTRASTRUCTURES EMBEDDED IN DIAMOND SUBSTRATES DIAMOND MATERIAL INSTITUTE, INC. | KOBA RICHARD | N 06 17/02/88 \$67,544 | MALLOY 88-NE-103 | |

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| DESIGN OF A SUB-MICRON SEVERAL MEV SCANNING ION MICROSCOPE FOR THREE-DIMENSIONAL MATERIAL CHARACTERIZATION NAOPTICS INC. | BAMFORD | N 06 17/02/88 850,000 | MALLOY 88-NE-104 | |
| INSTRUMENT FOR NANOMETER LITHOGRAPHY BASED ON SCANNING TUNNELING MICROSCOPY QUAMSCAN, INC. | WEST | N 06 17/02/88 849,696 | MALLOY 88-NE-105 | |
| INTERNATIONAL CONFERENCE ON NARROW GAP MATERIALS | | | | |
| NORTH TEXAS STATE UNIVERSITY | SEILER | N 12 24/02/88 87,000 | MALLOY 88-NE-115 | |
| OPTICAL PROPERTIES OF THIN FILMS | | | | |
| PENNSYLVANIA STATE UNIVERSITY | VEDAM | R 24 01/03/88 8203,199 | MALLOY 88-NE-118 | |
| THERMODYNAMICS, KINETICS, & INTERFACE MORPH OF PHASE FORMATION REACTIONS AT METAL/INDIUM PHOSPHIDE INTERFACES: BULK VS THIN- UNIV OF WISCONSIN | CHANG | M 36 01/03/88 9388,620 | MALLOY 88-NE-119 | |
| DEVELOP AND ACCELERATOR MASS SPECTROMETRY FACILITY FOR TRACE ELEMENT CHARACTERIZATION IN ELECTRONIC MATERIALS UNIVERSITY OF TEXAS STATE UNIVERSITY | MCDANIEL | N 36 01/03/88 91,489,878 | MALLOY 88-NE-120 | |
| 6TH INTERNATIONAL CONFERENCE ON HOT CARRIERS IN SEMICONDUCTORS | | | | |
| ARIZONA STATE UNIVERSITY | FERRY | N 18 03/03/88 825,000 | MALLOY 88-NE-121 | |
| THE PHYSICS AND DYNAMICS OF SURFACE EMITTING LASER DIODES | | | | |
| LOCKHEED MISSILES & SPACE CO INC | WANG | N 36 04/03/88 8450,000 | A MALLOY 88-NE-122 | 850,000 01/06/88 8450,000 |
| MODULATION SPECTROSCOPY CHARACTERIZATION OF SEMICONDUCTOR MESOSTRUCTURES BROOKLYN COLLEGE OF CUNY | POLLAK | N 36 10/03/88 8379,866 | MALLOY 88-NE-127 | |
| 1988 MRS: SYMPOSIUM ON THIN FILMS STRESSES AND MECHANICAL PROPERTIES MATERIALS RESEARCH SOCIETY | BALLANCE | N 07 01/04/88 85,000 | MALLOY 88-NE-137 | |

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| SULFIDECORROSION RESOLVED IMCIPIENT LASER DAMAGE UNIV OF CALIFORNIA | BROWN W | N 36 22/04/88 \$449,654 | MALLOY 88-NE-149 | |
| ARCHITECTURE AND DESIGN OF HIGH SPEED VLSI AIR FORCE INSTITUTE OF TECHNOLOGY | LINDERMAN RICHARD | N 06 26/04/88 \$30,000 | A MALLOY 88-NE-155 | \$30,000 04/01/88 \$30,000 |
| SUPPORT OF THE WORKSHOP ON THE PHYSICS AND CHEMISTRY OF MERCURY CADMIUM TELLURIDE ARMY RESEARCH OFFICE | STROSCHE MIKE | N 04 02/05/88 \$7,000 | A MALLOY 88-NE-158 | \$7,000 01/06/88 \$7,000 |
| BEAM ASSISTED FABRICATION OF III-V/ SILICON MONOLITHIC DEVICES COLORADO STATE UNIVERSITY | ROBINSON GARY | R 12 26/05/88 \$200,000 | MALLOY 88-NE-176 | |
| ELECTRON-PHONON INTERACTIONS AND ELECTRONIC PROPERTIES OF COMPIED SEMICONDUCTOR SYSTEMS STATE UNIVERSITY OF NEW YORK | LIN D | N 36 02/06/88 \$331,831 | MALLOY 88-NE-179 | |
| THIN MAGNETIC FILMS UNIV OF MINNESOTA | DANLBERG E | N 36 02/06/88 \$362,786 | MALLOY 88-NE-180 | |
| VIBRATIONAL, MECHANICAL AND THERMAL PROPERTIES OF III-V SEMICONDUCTORS UNIV OF NOTRE DAME | DOU JOHN | R 36 06/06/88 \$312,160 | MALLOY 88-NE-181 | |
| FOURTH INTERNATIONAL CONFERENCE ON MODULATED SEMICONDUCTOR STRUCTURES UNIV OF MICHIGAN | MERLIN ROBERTO | N 12 28/06/88 \$8,000 | MALLOY 88-NE-193 | |
| NONLINEAR OPTICS AND TRANSPORT IN SEMICONDUCTORS SUPERLATTICES WORLESTER POLYTECHNIC INSTITUTE | RAM-MOHAN L | N 36 29/06/88 \$440,517 | MALLOY 88-NE-197 | |

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| ULTRASONIC INSTRUMENTATION TO CONTROL CERAMIC PROCESSING INDUSTRIAL QUALITY INC | JONES THOMAS | M 06 05/02/88 953,297 | ROSENSTEIN 88-ME-058 | |
| DEVELOPMENT AND RESPONSE MODELING OF 3-D REINFORCED HYBRID MMC DWA COMPOSITE SPECIALTIES, INC. | DOLOWY, JR JOSEPH | M 06 05/02/88 849,956 | ROSENSTEIN 88-ME-059 | |
| DEVELOPMENT OF AN ISOTROPIC HIGH-SYMMETRY SOLID (IMSS) INTELLIGENT SYSTEMS INTEGRATION INC. | ROSS TIMOTHY | M 06 05/02/88 867,875 | ROSENSTEIN 88-ME-060 | |
| RESEARCH INSTRUMENTATION RUTHERFORD RESEARCH | CHOMMURY B | M 06 05/02/88 850,000 | ROSENSTEIN 88-ME-061 | |
| HIGH SYMMETRY COMPOSITES FABRICATED FROM RANDOM VGCF AND THERMOPLASTICS APPLIED SCIENCE, INC. | BRITO K | M 06 05/02/88 892,421 | ROSENSTEIN 88-ME-062 | |
| DEVELOPMENT OF A NEW BERYLLIUM/GRAPHITE-EPONY SANDWICH COMPOSITE ADVANCED COMPOSITE ENGINEERING, INC. | SUN C | M 06 05/02/88 849,280 | ROSENSTEIN 88-ME-063 | |
| HIGH SYMMETRY STRUCTURAL COMPOSITES: ANALYTICAL DESIGN TOOL CONCEPT ANALYSIS CORPORATION | GLANCE PAUL | M 06 05/02/88 850,000 | ROSENSTEIN 88-ME-064 | |
| HIGH SYMMETRY RANDOM AGGREGATE MICROLAMINATE (RAM) STRUCTURAL COMPOSITES UTILITY POWER GROUP | DESHPADEY CHANDRA | M 06 05/02/88 846,275 | ROSENSTEIN 88-ME-065 | |
| TETRAHEDRAL FRAMES FOR STRUCTURES AND COMPOSITES DBA JAG INDUSTRIES | MOLT ALBERT | M 06 23/02/88 850,000 | ROSENSTEIN 88-ME-107 | |
| SURFACE-MODIFIED TITANIUM-ALUMINIDE ALLOYS CASE WESTERN RESERVE UNIVERSITY | WELSCH GERHARD | M 36 24/02/88 8633,310 | ROSENSTEIN 88-ME-113 | |

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| TRANSFORMATION TOUGHENING OF CERAMICS ROGAWELL INTERNATIONAL | MARSHALL DAVID | R 36 09/03/88 8599,886 | ROSENSTEIN 88-NE-126 | |
| STRENGTHENING MECHANISMS, CREEP AND FATIGUE PROCESSES IN DISPERSION-STRENGTHENED NIOBIUM ALLOYS UNIV OF CALIFORNIA | MURHERJEE A | N 36 28/03/88 8540,000 | ROSENSTEIN 88-NE-130 | |
| LASER SURFACE MODIFICATION OF Ni(C) AND W(B) ALLOYS UNIV OF ILLINOIS | MAZUNDER J | N 36 18/04/88 8466,952 | A ROSENSTEIN 88-NE-146 | 8150,653 01/11/88 8466,952 |
| THE CORROSION RESISTANCE OF METAL MATRIX COMPOSITES MASSACHUSETTS INSTITUTE OF TECHNOLOGY | LATANISTON R | N 36 25/04/88 8321,977 | ROSENSTEIN 88-NE-153 | |
| QUANTUM MECHANICAL APPROACH TO UNDERSTANDING MICROSTRUCTURAL AND MECHANICAL PROPERTIES OF INTERMETALLICS NORTHWESTERN UNIVERSITY | FREEMAN A | N 36 25/04/88 8437,904 | A ROSENSTEIN 88-NE-154 | 8236,694 30/09/88 8437,904 |
| FUNDAMENTAL STUDIES ON HIGH TEMPERATURE DEFORMATION, RECRYSTALLIZATION AND GRAIN GROWTH OF TWO-PHASE MATERIALS UNIV OF MARYLAND | SREERAMAMURTHY | R 12 05/05/88 889,950 | ROSENSTEIN 88-NE-160 | |
| SYMPOSIUM ON ATOMISTIC MODELING OF MATERIALS: BEYOND PAIR POTENTIALS UNIV OF PENNSYLVANIA | VITEK V | N 09 13/05/88 86,000 | A ROSENSTEIN 88-NE-165 | 84,000 01/09/88 84,000 |
| TAILORED INTERFACES FOR METAL-MATRIX COMPOSITES-FUNDAMENTAL CONSIDERATIONS NORTHWESTERN UNIVERSITY | FINE MORRIS | N 36 18/05/88 8391,590 | A ROSENSTEIN 88-NE-167 | 8125,306 01/10/88 8391,590 |
| A FUNDAMENTAL UNDERSTANDING OF THE EFFECT OF ALLOYING ELEMENTS ON THE CORROSION RESISTANCE OF RAPIDLY SOLIDIFIED Ni ALLOYS JOHNS HOPKINS UNIVERSITY | KRUGER JEROME | N 12 24/05/88 830,000 | A ROSENSTEIN 88-NE-171 | 830,000 30/09/88 830,000 |

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| LARGE VOLUME CHANGE, TRANSFORMATION TOUGHENING IN COMPOSITE CERAMICS UNIV OF ILLINOIS | KRIVEN WALTRAUD | N 36 13/06/88 9345,000 | ROSENSTEIN 88-NE-186 | |
| INVESTIGATE & CHARACTERIZE DAMAGE PROCESSES IN FIBER COMPOSITES UNDER REPEATED LOAD CYCLES UNIV OF DENVER | HANSTAD MARVIN | N 36 21/06/88 9262,101 | ROSENSTEIN 88-NE-191 | |
| CRACK GROWTH PROCESSES AT ELEVATED TEMPERATURES IN ADVANCE MATERIALS SOUTHWEST RESEARCH INSTITUTE | LANKFORD JAMES | N 36 28/06/88 8556,000 | ROSENSTEIN 88-NE-194 | |
| PLASTICITY OF SINGLE CRYSTALLINE Al(3)X INTERMETALLIC COMPOUNDS UNIV OF PENNSYLVANIA | VITEK V | N 36 28/06/88 8455,827 | ROSENSTEIN 88-NE-195 | |
| NATO ADVANCED STUDY INSTITUTE DIFFUSION IN MATERIALS CLEMSON UNIVERSITY | LASKAR A | N 12 28/06/88 813,500 | ROSENSTEIN 88-NE-196 | |
| SUPERCONDUCTIVE ELECTRONICS - ASI NATIONAL SCIENCE FOUNDATION | PRODYNA MICHAEL | N 06 05/02/88 910,000 | A WEINSTOCK 88-NE-067 | 910,000 15/03/88 910,000 |
| ONE ANGSTROM RESOLUTION POSITIONING SYSTEM FOR MATERIAL AND PROCESS DIAGNOSTIC APPLICATION SATCON TECHNOLOGY CORPORATION | HOCKNEY RICHARD | N 06 05/02/88 959,966 | WEINSTOCK 88-NE-068 | |
| PULSED INTERFEROMETER FOR ACOUSTIC ATTENUATION AND VELOCITY MEASUREMENTS RITEC INC. | PETERSON GARY | N 06 05/02/88 952,400 | WEINSTOCK 88-NE-069 | |
| NOVEL NDE METHOD FOR ON-LINE MICROSTRUCTURAL QUALITY CONTROL OF HIGH PERFORMANCE FIBERS BAIRROSE CORP. OF AMERICA | ROSEMEIER RONALD | N 06 08/02/88 850,136 | WEINSTOCK 88-NE-070 | |
| ALL-OPTICAL MAGNETOMETER EMPLOYING DILUTED MAGNETIC INSULATOR (DMI) FOR NMR IMAGING SYSTEMS AMERICAN RESEARCH CORP OF VIRGINIA | MIZHURA MASANOBU | N 06 08/02/88 849,925 | WEINSTOCK 88-NE-071 | |

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| NEW SOLID-STATE IMAGING MEDIA FOR RADIOGRAPHIC INSPECTION JUANTEX CORPORATION | STORTI GEORGE | M 06 08/02/88 949,985 | WEINSTOCK 88-ME-072 | |
| RESEARCH INSTRUMENTATION - X-RAY COMPUTERIZED TOMOGRAPHY TERRA TEK INC | SHARER JOHN | M 06 08/02/88 950,000 | WEINSTOCK 88-ME-073 | |
| SUPERCONDUCTIVE DEVICES FOR NONDESTRUCTIVE TESTING PHYSICAL DYNAMIC INC | PODNEY WALTER | M 06 08/02/88 852,976 | A WEINSTOCK 88-ME-074 | 852,976 01/08/88 852,976 |
| A PUM-CONTACT METHOD OF ACCURATELY MEASURING CRITICAL TEMPERATURES (TCC), IN SUPERCONDUCTING MATERIALS: INSTRUMENT PROTOTYPE BELTRAN INC | SIMO CONSTANCE | M 06 11/02/88 950,000 | WEINSTOCK 88-ME-098 | |
| ATOMIC FORCE MICROSCOPE FOR SURFACE AND INTERFACE ANALYSIS INDUSTRIAL DETECTION TECHNOLOGY CORP. | LOWENSTINE MARK | M 06 11/02/88 859,861 | WEINSTOCK 88-ME-099 | |
| HIGH T(C) SUPERCONDUCTING FILMS ON SILICON SUBSTRATES ENERGY SCIENCE LABORATORIES, INC. | CLINTON JAMES | M 06 11/02/88 869,760 | WEINSTOCK 88-ME-101 | |
| ASSESSMENT OF JAPANESE RED ACTIVITIES ON HIGH TEMPERATURE OXIDE SUPERCONDUCTORS ADVANCED MATERIALS TECHNOLOGY | KIM Y | M 06 18/02/88 815,000 | A WEINSTOCK 88-ME-106 | 815,000 01/06/88 815,000 |
| DEVELOPMENT OF SUPERCONDUCTOR POLYMER COMPOSITES ELECTRO-KINETIC SYSTEMS, INC. | LEDERMAN BURTON | M 06 23/02/88 849,850 | WEINSTOCK 88-ME-108 | |
| THEORY OF SUPERCONDUCTIVITY IN Q:1DES PRINCETON UNIVERSITY | ANDERSON PHILLIP | R 24 24/02/88 8200,000 | A WEINSTOCK 88-ME-114 | 8100,000 15/08/88 8200,000 |

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| COMPUTER ORIENTED, MULTICHANNEL, DIRECT-CURRENT, SUPERCONDUCTING QUANTUM INTERFERENCE DEVICE APPLIED RESEARCH CORPORATION | DRUKIER A | N 06 13/04/88 855,160 | A WEINSTOCK 88-NE-143 | 855,160 01/08/88 855,160 |
| SUPERCONDUCTING WEISNER EFFECT BEARINGS FOR CRYOGENIC TURBOMACHINES CREARE INC. RESEARCH & DEVELOPMENT INC | STACY M | N 06 13/04/88 849,965 | A WEINSTOCK 88-NE-144 | 849,965 01/08/88 849,965 |
| ENHANCED J1(C) IN YBCA(2)C(C)O(7-X) CONDUCTORS USING DUAL-TEMPERATURE EXTRUSION PROCESSING SUPERCON, INC. | WONG JAMES | N 06 13/04/88 850,000 | A WEINSTOCK 88-NE-145 | 850,000 01/08/88 850,000 |
| PHYSICS OF ULTRASOUND SUPERCONDUCTING CIRCUITS YALE UNIVERSITY | PROBER DANIEL | N 24 22/04/88 839,953 | A WEINSTOCK 88-NE-151 | 819,886 01/08/88 839,953 |
| CREATION OF A CENTER FOR RESEARCH IN SUPERCONDUCTIVITY AND SUPERCONDUCTING ELECTRONICS AT STANFORD UNIVERSITY STANFORD UNIVERSITY | BEASLEY MALCOLM | N 36 25/04/88 82,987,562 | A WEINSTOCK 88-NE-152 | 8200,000 01/09/88 82,990,562 |
| A PROPOSAL CONCERNING SUPERCONDUCTING MICRONETWORKS: NONLINEAR NETWORK EQUATIONS AND CRITICAL CURRENTS UNIV OF CALIFORNIA | PINK HERMAN | N 36 27/04/88 8298,242 | D WEINSTOCK 88-NE-156 | |
| PREPARATION OF THE NEW HIGH TEMPERATURE SUPERCONDUCTOR BY EXTREME PRESSURIZATION COLORADO STATE UNIVERSITY | PATEL DINESH | N 12 06/05/88 887,235 | D WEINSTOCK 88-NE-162 | |
| ULTRASONIC WAVES INTERACTIONS WITH ADVANCED COMPLEX MATERIALS FOR NONDESTRUCTIVE EVALUATION APPLICATION UNIV OF CINCINNATI | MAYFEM ADMAN | R 36 06/05/88 8343,164 | WEINSTOCK 88-NE-163 | |
| PROCESSING OF AMORPHOUS SOFT-MAGNETIC POWDERS BY EDC FOR HIGH-EFFICIENCY MAGNETIC APPLICATIONS UNIV OF KENTUCKY | OKAJAKI KENJI | N 36 11/05/88 8342,380 | D WEINSTOCK 88-NE-164 | |
| ELECTROCHEMICALLY MODULATED SUPERCONDUCTIVITY MASSACHUSETTS INSTITUTE OF TECHNOLOGY | SADDMAY DONALD | N 13 24/05/88 8102,500 | A WEINSTOCK 88-NE-172 | 8102,500 01/19/88 8102,500 |

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| EXPERIMENTS ON LARGE SINGLE CRYSTALS OF THE SUPERCONDUCTING OXIDES YBa2Cu3O7, La2-BaCuO4, AND Bi-Ca-Sr-Cu PRINCETON UNIVERSITY | ONG NAI-PRUAN | M 20 27/05/88 \$100,601 | A WEINSTOCK 88-NE-177 | 825,601 01/09/88 \$100,601 |
| PULSED LASER DEPOSITION OF HIGH Tc SUPERCONDUCTING THIN FILMS HERX RESEARCH CENTER | BOYCE JAMES | M 12 17/06/88 \$50,600 | WEINSTOCK 88-NE-199 | |
| ULTRA HIGH PRECISION ISOTOPE ANALYSIS AND MALOGEN DERIVATIVES OF CERAMIC SUPERCONDUCTORS UNIV OF CALIFORNIA | DESTERREICHER JOHANN | M 36 21/06/88 \$489,087 | WEINSTOCK 88-NE-190 | |
| LOW-COST, HIGH TORQUE-TO-WEIGHT RATIO PERMANENT MAGNET ACTUATORS, ACTUATORS AND SENSORS ADVANCED MATERIALS CORPORATION | SANKAR S | M 24 21/06/88 \$493,180 | WEINSTOCK 88-NE-192 | |
| MOCVD GROWTH OF GaAs ON HIGH RESISTIVITY FLOAT ZONE SILICON SUBSTRATES FOR HIGH FREQUENCY DEVICES WESTINGHOUSE ELECTRIC CORPORATION | MESSHAM R. | M 36 27/01/88 \$600,378 | A WITT 88-NE-047 | |
| DEVICE FOR RECORDING AND DIGITIZING HIGH FIDELITY FILM IMAGES SILHOUETTE TECHNOLOGY, INC | OWYER EUGENE | M 06 08/02/88 \$49,976 | WITT 88-NE-075 | |
| INSTANTANEOUS AND INTEGRATING POWER MEASURING OSCILLOSCOPE INTERFACE ELECTRONIC DESIGN CONSULTANT | LEPPERSON PETER | M 06 08/02/88 \$47,436 | WITT 88-NE-076 | |
| DETECTION AND IMAGING OF SUBSURFACE DEFECTS ON SILICON INTEGRATED CIRCUIT WAFERS WITH A NONDESTRUCTIVE, REAL-TIME THERMAL WAVE TECH THERMA-WAVE, INC | SMITH M | M 06 08/02/88 \$50,000 | WITT 88-NE-077 | |
| VARIABLE ANGLE SPECTROSCOPIC ELLIPSOMETRY (VASE) FOR NONDESTRUCTIVE SEMICONDUCTOR SURFACE ANALYSIS J. A. WOOLLAM COMPANY | WOOLLAM JOHN | M 06 08/12/88 \$50,000 | WITT 88-NE-078 | |

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|---|--------------|-----------------------------------|---|-----------------------------------|
| MICROSTRUCTURAL CHARACTERIZATION OF NON-LATTICE MATCHED HETEROEPITAXIAL STRUCTURES BRIMROSE CORP. OF AMERICA | ROSEMEIER | N 06 08/02/88 850,136 | MITT 88-NE-079 | |
| EVALUATION OF HETEROJUNCTION INTERFACES USING ELECTRON BEAM ELECTROREFLECTANCE CHARLES EVANS L ASSOC. | HERMAN | N 06 08/02/88 849,608 | MITT 88-NE-080 | |
| NUMERICAL MODELING OF TWO-TERMINAL QUANTUM WELL DEVICES SCIENTIFIC RESEARCH ASSOCIATES INC | GRUBIN | N 06 09/02/88 856,197 | A MITT 88-NE-081 | 856,197 01/08/88 856,197 |
| NEW HIGH-EFFICIENCY SCINTILLATOR DEVICE FOR SEM'S QUANTEX CORPORATION | STORTI | N 06 09/02/88 849,985 | MITT 88-NE-082 | |
| A MONOLITHIC MICROWAVE NETWORK ANALYZER METRI WAVE INC. | WILLIAMS | N 06 11/02/88 849,725 | MITT 88-NE-094 | |
| RESEARCH INSTRUMENTATION MILLIMETER WAVE TECHNOLOGY, INC. | PORSYTHE | N 06 11/02/88 850,000 | MITT 88-NE-096 | |
| RESEARCH INSTRUMENTATION FOR NONDESTRUCTIVE EVALUATION OF SEMICONDUCTOR MATERIALS UNISOFT INC. | THOMPSON | N 06 11/02/88 851,000 | MITT 88-NE-097 | |
| DESIGN, FABRICATION, AND TESTING OF MILLIMETER POWER TRANSISTOR QUAMSCAN, INC. | WANG | N 06 17/02/88 857,693 | MITT 88-NE-102 | |
| SUBMILLIMETER WAVE SPECTROSCOPY OF HETEROJUNCTION SUPERLATTICES PRINCETON UNIVERSITY | TSUI | N 36 31/03/88 8402,285 | A MITT 88-NE-134 | 8129,374 15/07/88 8403,805 |
| NUMERICAL SIMULATION OF THE FUNCTION OF SCIENTIFIC INSTRUMENTATION FOR MEASURING THE SPEED OF ELECTRON DEVICES SCIENTIFIC RESEARCH ASSOCIATES, INC. | GRUBIN | N 24 01/04/88 8498,281 | A MITT 88-NE-136 | 8249,281 01/09/88 8498,281 |

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|--|--------------|-----------------------------------|---|-----------------------------------|
| STUDY OF QUANTUM MECHANICAL EFFECTS IN DEEP SUBMICRON, GRATING GATE FIELD EFFECT TRANSISTORS MASSACHUSETTS INSTITUTE OF TECHNOLOGY | ANTONIADIS | R 36 04/04/88 8609,094 | A MITT 88-NE-139 | 8300,000 30/09/88 8609,094 |
| EPITAXIAL MAGNETIC OXIDES CARNEGIE-MELLON UNIVERSITY | KRYDER | N 36 10/04/88 8636,469 | MITT 88-NE-167 | |
| A THEORY OF FERROELECTRIC THIN FILMS KRYSLIS CORPORATION | KINNEY | N 36 27/04/88 8394,779 | D MITT 88-NE-157 | |
| WORKSHOP ON QUANTUM DEVICES UNIV OF ILLINOIS | STILLMAN | N 12 24/05/88 819,000 | A MITT 88-NE-169 | 819,000 01/09/88 819,000 |
| 1988 INTERNATIONAL SYMPOSIUM ON GALLIUM ARSENIDE AND RELATED COMPOUNDS UNIV OF ILLINOIS | STILLMAN | N 12 24/05/88 812,460 | A MITT 88-NE-170 | 812,460 01/09/88 812,460 |
| FAULT MODELING AND TEST GENERATION FOR BEHAVIORAL DESCRIPTIONS OF DIGITAL DEVICES VIRGINIA POLYTECHNIC INST & STATE UNIV | ARMSTRONG | N 36 25/05/88 8540,962 | D MITT 88-NE-173 | |
| MULTIPLE QUANTUM WELL PHOTODETECTORS FOR LONG WAVELENGTH IMPRAED DETECTION CASE WESTERN RESERVE UNIVERSITY | LEE | N 24 25/05/88 9302,544 | D MITT 88-NE-175 | |
| THEORY OF CHARGE-CARRIER TRANSPORT IN SEMICONDUCTOR CORNELL UNIVERSITY | LIDOFF | N 36 06/06/88 9346,097 | D MITT 88-NE-182 | |
| FUNDAMENTAL STUDIES OF THE MECHANICAL BEHAVIOR OF MICROELECTRONIC THIN FILM MATERIALS STANFORD UNIVERSITY | NIX | N 36 08/06/88 8457,374 | MITT 88-NE-183 | |

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ULTRAFAST PHYSICS OF MICROSTRUCTURES
CITY COLLEGE - CUNY

INVESTIGATOR
ALFANO ROBERT

N 12
08/06/88
\$149,500

MITT
88-NE-184

CONTINUATION OF RESEARCH ON THE CONTIGUOUS DOMAIN OSCILLATOR
PURDUE RESEARCH FOUNDATION

COOPER JR JAMES

R 16
13/06/88
\$16,823

MITT
88-NE-187

A NEW APPROACH TO DESIGN OF ELECTRONIC WARFARE MULTIPLIERERS
UNIV OF ILLINOIS

CMEN MAI-KAI

N 24
17/03/88
\$159,004

MITTMANN
88-NE-120

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| PRINCIPLES OF CORTICAL FUNCTION | | PROPOSAL # | TOT AMT |
| UNIV OF CALIFORNIA | SHAW | BERRY | |
| | GORDON | 88-NL-054 | |
| BIOPHYSICAL AND BIOCHEMICAL MECHANISMS IN SYNAPTIC TRANSMITTER RELEASE | | A | 3100,499 |
| NEW YORK UNIVERSITY MEDICAL CENTER | LLINAS | BERRY | 01/10/88 |
| | RODOLFO | 88-NL-055 | 9322,608 |
| BIOMECHANICAL MECHANISMS CONTROLLING BIORREACTIVITY OF ADRENAL CHROMAFFIN CELLS | | A | 9105,736 |
| UNIV OF CALIFORNIA | VULLIET | BERRY | 01/08/88 |
| | PHILIP | 88-NL-066 | 8214,607 |
| MULTIELECTRODE SIGNAL PROCESSING | | A | 8214,607 |
| MENTOR TECHNOLOGIES, INC | BELZER | BERRY | |
| | MITCHELL | 88-NL-121 | |
| RESEARCH IN NEUROSCIENCE: DEVELOPMENT OF A CMS INDICANT OF NEURO-BIOLOGICAL FUNCTIONAL STATUS RELATED TO AGENTS, TREATMENT, & DISEASE | | A | 9105,736 |
| ESSER CORPORATION | KENNEDY | BERRY | 01/08/88 |
| | ROBERT | 88-NL-128 | 8214,607 |
| NONLINEAR SIGNAL EXTRACTION PROCEDURES FOR FUNDAMENTAL NEURAL SCIENCE RESEARCH | | A | 9105,736 |
| BUSINESS : TECHNOLOGICAL SYSTEMS, INC. | LARIMORE | BERRY | 01/08/88 |
| | WALLACE | 88-NL-132 | 8214,607 |
| MOLECULAR ASPECTS OF COMPENSATORY NEUROPLASTICITY IN STRESS | | A | 9105,736 |
| CORIELL INSTITUTE FOR MEDICAL RESEARCH | GILAD | BERRY | 01/08/88 |
| | GAD | 88-NL-165 | 8214,607 |
| SLEEP, ATTENTION AND LEARNING | | A | 9105,736 |
| HARVARD MEDICAL SCHOOL | HOBSON | BERRY | 01/08/88 |
| | J. | 88-NL-197 | 8214,607 |
| MEASUREMENT AND REGULATION OF CENTRAL NORADRENERGIC NEUROTRANSMISSION. | | A | 9105,736 |
| NEW YORK UNIVERSITY MEDICAL CENTER | STONE | BERRY | 01/08/88 |
| | ERIC | 88-NL-205 | 8214,607 |

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|---|---------------|-----------------------------------|---|-----------------------------------|
| PROTEIN PHOSPHORYLATION IN THE REGULATION OF NEURONAL SENSITIVITY COLLEGE OF STATEN ISLAND/CUNY | EHRlich | N 36 14/04/88 9643,807 | A BERRY 88-NL-208 | 8144,140 01/07/88 8410,653 |
| ELECTROPHYSIOLOGICAL/BIOPHYSICAL MECHANISMS OF POST-TETANIC AND LONG-TERM POTENTIATION UNIV OF TEXAS | BITTNER | N 36 19/04/88 8233,990 | BERRY 88-NL-214 | |
| PARALLEL PROCESSING AND LEARNING: VARIABILITY AND CHAOS IN SELF- ORGANIZATION OF ACTIVITY IN GROUPS OF NEURONS OREGON STATE UNIVERSITY | MPITSOs | R 36 21/04/88 8832,047 | BERRY 88-NL-215 | |
| MEASUREMENT OF INTRACELLULAR CA2+ CHANGES ASSOCIATED WITH LONG TER M POTENTIATION AND DEPRESSION IN MAMMALIAN NEURONS AT&T TECHNOLOGIES INC | CONNOR | R 36 11/05/88 8486,699 | BERRY 88-NL-234 | |
| CELLULAR ANALOGS OF OPERANT BEHAVIOR UNIV OF CALIFORNIA | STEIN | N 36 03/06/88 8630,459 | BERRY 88-NL-242 | |
| GLYCINE-MIMETICS AS MODULATORS OF MEMORY UNIV OF PITTSBURGH | KOZIKOWSKI | N 36 03/06/88 8654,407 | BERRY 88-NL-243 | |
| MECHANISMS OF PURROW FORMATION DURING CELL DIVISION NEW YORK ACADEMY OF SCIENCES | CONRAD | N 12 06/06/88 810,000 | D BERRY 88-NL-245 | |
| EMBRYONIC ORIGINS OF DEFECTIVE HEART DEVELOPMENT NEW YORK ACADEMY OF SCIENCES | BOCKMAN | N 12 06/06/88 810,000 | D BERRY 88-NL-246 | |
| INTERNATIONAL CONFERENCE ON PYRIDOXINE NEW YORK ACADEMY OF SCIENCES | DARSHINAMURTI | N 12 09/06/88 810,000 | D BERRY 88-NL-248 | |
| STRUCTURE, MOLECULAR BIOLOGY AND PATHOLOGY OF COLLAGEN NEW YORK ACADEMY OF SCIENCES | | N 12 29/06/88 810,000 | D BERRY 88-NL-257 | |

VIGAL

GEORGE

GEORGE

JOHN

LARRY

ALAN

GARY

DALE

KRISHNAMURTI

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| MICRONUTRIENT EFFECTS ON IMMUNE FUNCTION NEW YORK ACADEMY OF SCIENCES | | N 12 29/06/88 \$10,000 | D BERRY 88-NL-258 | |
| MOLECULAR ECOLOGY OF BACTERIAL POPULATIONS IN ENVIRONMENTAL HAZARDOUS CHEMICAL CONTROL UNIV OF TENNESSEE | SATLER GARY | N 36 16/02/88 \$433,986 | CERVENY 88-NL-061 | |
| FLOW CYTOMETRIC ANALYSIS OF HEPATOCYTES FROM NORMAL, PFOA, AND PH/DEN/PB-TREATED RATS OHIO STATE UNIVERSITY | TARR MELINDA | N 12 20/02/88 \$55,000 | A CERVENY 88-NL-069 | \$54,984 01/05/88 \$55,000 |
| ANAEROBIC MICROBIAL TRANSFORMATION OF AROMATIC HYDROCARBONS AND MIXTURES OF AROMATIC HYDROCARBONS AND HALOGENATED SOLVENTS STANFORD UNIVERSITY | DUNJA DUNJA | N 36 14/03/88 \$295,000 | A CERVENY 88-NL-085 | \$96,188 01/08/88 \$295,000 |
| MOLECULAR PROPERTIES AND FATE OF ORGANIC CHEMICALS UNIV OF WISCONSIN | ANDREN ANDERS | N 36 14/03/88 \$307,270 | A CERVENY 88-NL-086 | \$99,355 15/08/88 \$307,270 |
| ENVIRONMENTAL CONTAMINANT PROPERTY ESTIMATION USING QSARS IN AN EXPERT SYSTEM UTAH STATE UNIVERSITY | DOUCETTE WILLIAM | N 36 15/03/88 \$285,234 | CERVENY 88-NL-098 | |
| BIOAVAILABILITY OF VOLATILE ORGANICS AND OTHER HYDROCARBONS FROM ENVIRONMENTAL MEDIA: INGESTION IN DRINKING WATER GEORGIA UNIV RESEARCH FOUNDATION INC | BRUCKNER JAMES | N 36 16/03/88 \$305,735 | A CERVENY 88-NL-104 | \$102,150 15/08/88 \$305,735 |
| EVALUATION OF THE EFFICACY OF THE STRESS PROTEIN RESPONSE AS A BIOCHEMICAL WATER QUALITY BIOMONITORING METHOD NORTH TEXAS STATE UNIVERSITY | DICKSON KENNETH | N 24 17/03/88 \$118,446 | A CERVENY 88-NL-120 | \$98,301 01/08/88 \$188,446 |
| AN AMPEROMETRIC, BIOSENSOR DETECTOR UNIVERSAL SENSORS, INC. | LUBRANO GLENN | N 06 17/03/88 \$50,000 | CERVENY 88-NL-122 | |

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| SOLID-STATE X-RAY IMAGE SCANNER FOR MEASURING BONE MINERAL DENSITY & ASSESSING SKELETAL HEALTH PERS. IDENT. & ENTRY ACCESS CNTRL, INC. | COLBERT CHARLES | N 14 17/03/88 \$51,747 | CERVENY 88-NL-123 | |
| IN VITRO SYSTEM FOR STUDYING METABOLISM OF ENVIRONMENTAL CHEMICALS IN HUMAN CELLS SRI INTERNATIONAL | GREEN CAROL | N 36 19/03/88 \$466,195 | CERVENY 88-NL-146 | |
| THE MECHANISMS & EFFECTS OF THE PLANT ACTIVATION OF CHEMICALS IN T HE ENVIRONMENT UNIV OF ILLINOIS | PLENA MICHAEL | M 36 19/03/88 \$278,831 | A CERVENY 88-NL-147 | \$134,345 15/09/88 \$278,831 |
| REPONTOIC KINETICS AND TOXICITY AMONG FISH AND MAMMALS WASHINGTON STATE UNIVERSITY | HAYTON WILLIAM | N 36 21/03/88 \$283,296 | A CERVENY 88-NL-160 | \$145,446 15/09/88 \$289,296 |
| INFLUENCE OF LIPID COMPOSITION IN AMPLIFYING OR AMELIORATING TOXICANT EFFECTS ON PHYTOPLANKTON UNIV OF MICHIGAN | GOAD LINDA | N 36 21/03/88 \$223,169 | A CERVENY 88-NL-161 | \$109,543 01/09/88 \$223,169 |
| MOLECULAR TOXICOLOGY OF CHROMATIN SAN FRANCISCO STATE UNIV FOUNDATION INC | KUM ERNEST | N 60 23/03/88 \$3,317,658 | CERVENY 88-NL-170 | |
| DEVELOPMENT AND VALIDATION OF A FISH PHYSIOLOGICALLY-BASED PHARMACOKINETIC MODEL FOR USE IN ENVIRONMENTAL RISK ASSESSMENT EPA-ENVIRONMENTAL RESEARCH LAB | MCRIM JAMES | N 36 05/04/88 \$300,000 | CERVENY 88-NL-198 | |
| ATTENUATION OF SUBSURFACE POLLUTANT TRANSPORT: ELECTROSTATIC CONTRIBUTIONS EPA-ENVIRONMENTAL RESEARCH LAB | LOUX MICHAEL | N 36 29/04/88 \$296,600 | D CERVENY 88-NL-216 | |
| INTERACTION BETWEEN ENVIRONMENTAL TOXICANTS, G.I. MICROFLORA, G.I. ENZYME ACTIVITY AND CHEMICAL CARCINOGENESIS ENVIRONMENTAL PROTECTION AGENCY | CHADWICK ROBERT | N 36 02/05/88 \$182,100 | A CERVENY 88-NL-217 | \$30,350 01/08/88 \$182,100 |
| THE MECHANISM OF TRICHLOROETHYLENE OXIDATION BY TOLUENE DIOXYGENASE & IMPLICATIONS FOR BIOREMEDIATION GRAT FRESHWATER BIOLOGICAL INSTITUTE | WACKETT LAWRENCE | N 36 02/05/88 \$299,006 | CERVENY 88-NL-218 | |

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| ECLTORICOLOGIC FATE AND EFFECTS OF CRITICAL CHEMICALS BOYCE THOMPSON INSTITUTE AT CORNELL UNIV | MCCUNE DELBERT | N 36 02/05/88 8460,407 | D CERVENY 88-NL-219 | |
| METABOLISM, PHARMACOINETICS & IMMUNOTOXICOLOGY OF HEPTACHLOR, HEPTACHLOR EPOXIDE & DI (ETHYL HEXYL) PHTHALATE IN PRIMATES MRSU-PRIMATE RESEARCH INSTITUTE | COUCH RONALD | N 36 02/05/88 8299,806 | D CERVENY 88-NL-210 | |
| FATE OF JET FUEL AND CHLORINATED CHEMICALS IN THE SUBSURFACE ENVIRONMENT CCA BIOREMEDIATION SYSTEMS DIVISION | FOGEL SAM | N 36 02/05/88 8239,456 | D CERVENY 88-NL-221 | |
| DEVELOPMENT OF AN ISOLATED FISH HEPATOCTE MODEL FOR THE INVESTIGATION OF THE TOXICITY OF ENVIRONMENTAL CONTAMINANTS ENVIRONMENTAL PROTECTION AGENCY | BARSI SANDRA | N 36 02/05/88 8221,834 | D CERVENY 88-NL-222 | |
| ANALYTICAL COMPENDIUM OF TOXICOLOGICAL AND ENVIRONMENTAL FATE DATA FOR CHEMICALS OF INTEREST TO THE U.S. AIR FORCE MSI DETOXIFICATION INC. | MAOSEN EUGENE | N 36 02/05/88 8165,629 | D CERVENY 88-NL-223 | |
| PROPOSAL TO DEVELOP METHODOLOGY FOR INTERSPECIES EXTRAPOLATION E C JORDON COMPANY | MAGEE BRIAN | N 36 02/05/88 8237,498 | D CERVENY 88-NL-224 | |
| VAPOR PHASE PHOTOLYSIS OF MEDIUM WEIGHT ORGANIC COMPOUNDS UNIV OF NEVADA | MILLER GLENN | N 36 02/05/88 8276,532 | D CERVENY 88-NL-225 | |
| INVERTEBRATE IMMUNOTOXICOLOGY: A NOVEL APPROACH TO QUANTIFYING BIOLOGICAL EFFECTS OF XENOBIOTICS UNIV OF MARYLAND | ANDERSON ROBERT | N 36 02/05/88 8284,419 | D CERVENY 88-NL-226 | |
| THE INTERRELATIONSHIPS AMONG SEDIMENTS, WATER AND BIOTA IN AQUATIC SEDIMENTS IMPACTED BY TOXIC TRACE ELEMENTS FROM AIR OPERATIONS ACADEMY OF NATURAL SCIENCES | RIEDEL GERHARDT | N 48 02/05/88 8528,141 | D CERVENY 88-NL-227 | |

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| FACTORS AFFECTING THE DEGRADATION OF POLYCYCLIC AROMATIC HYDROCARBONS ECHOVA CORPORATION | MAJAFFE WILLIAM | N 24 02/05/88 \$191,703 | D CERVENY 88-NL-228 | |
| THE USE OF PLANT POLLEN AND FLOW CYTOMETRY IN EVALUATION OF ENVIRONMENTAL POLLUTION UNIV OF MISSOURI | CALDWELL CHARLES | N 36 02/05/88 \$303,057 | D CERVENY 88-NL-229 | |
| THE KEY INVOLVEMENT OF POLYCAOP-RIBOSYLATION) IN DEFENSE AGAINST TOXIC AGENTS: MOLECULAR BIOLOGY STUDIES GEORGETOWN UNIVERSITY | SMULSON MARK | R 36 10/05/88 \$103,551 | CERVENY 88-NL-233 | |
| AN INTEGRATED ASSESSMENT OF THE LONG TERM, CHRONIC EFFECTS OF A POLYCYCLIC AROMATIC HYDROCARBON (FLUORANTHENE) ON THE MURICHOOG (FUND) MIAMI UNIVERSITY | GUTTMAN SHELDON | N 36 03/06/88 \$298,702 | CERVENY 88-NL-244 | |
| A NEW SCIENTIFIC INSTRUMENT FOR BIOGENETIC TOXICITY TESTING NORTH STAR RESEARCH, INC. | BENJAMINSON M. | N 24 08/06/88 \$591,061 | CERVENY 88-NL-247 | |
| STRUCTURE-ACTIVITY INTERACTIONS OF SOIL COMPONENTS WITH MALOGLUMATE D AROMATICS AND PETROLEUM HYDROCARBONS UNIV OF MICHIGAN | SIMMONS MILAGROS | N 36 29/06/88 \$299,097 | CERVENY 88-NL-251 | |
| INVERTEBRATE/SULFUR BACTERIA SYMBIOSES: MECHANISTIC ANALYSIS OF C HEMAUTOTROPHY USING I'OLATED BACTERIOCYTES UNIV OF COLORADO | ANDERSON AMY | N 24 29/06/88 \$189,016 | CERVENY 88-NL-252 | |
| QUANTITATIVE STRUCTURE-ACTIVITY RELATIONSHIPS OF CHLORINATED ALICYCLIC COMPOUNDS MISSISSIPPI STATE UNIVERSITY | CHAMBERS JANICE | N 36 29/06/88 \$479,796 | CERVENY 88-NL-254 | |
| TOXICOLOGY OF PERFLUORODECANGIC ACID UNIV OF WISCONSIN | PETERSON RICHARD | R 48 29/06/88 \$946,231 | CERVENY 88-NL-256 | |
| THE ROLE OF CHEMICAL INHIBITION OF GAP-JUNCTIONAL INTERCELLULAR COMMUNICATION IN TOXICOLOGY MICHIGAN STATE UNIVERSITY | TROSKO JAMES | R 36 29/06/88 \$783,810 | CERVENY 88-NL-259 | |

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| RESEARCH COLLABORATIONS BETWEEN MSD AND TEXAS SCIENTISTS | | | | |
| AEROSPACE MEDICAL DIVISION | CULLEN | N 12 06/01/88 835,000 | A DISMUKES 88-NL-046 | 835,000 05/01/88 835,000 |
| OPERATIONAL TOURS FOR SET PERSONNEL | | | | |
| AEROSPACE MEDICAL DIVISION | CANTU | M 12 07/01/88 88,000 | A DISMUKES 88-NL-047 | 88,000 07/01/88 88,000 |
| XXIV INTERNATIONAL CONGRESS OF PSYCHOLOGY | | | | |
| AMERICAN PSYCHOLOGICAL ASSOCIATION INC | GOODSTEIN | N 12 20/01/88 85,000 | A FREGLY 88-NL-048 | 85,000 01/01/88 85,000 |
| EFFECTS OF ALTITUDE ON METALOGNITION AND ON THE RETRIEVAL OF INFORMATION FROM MEMORY AT MOUNT EVEREST UNIV OF WASHINGTON | NELSON | M 07 27/01/88 827,274 | A FREGLY 88-NL-057 | 827,274 13/03/88 827,274 |
| EVALUATION OF LIFE SCIENCES RESEARCH PROGRAM COMPENSABLE SOLICITATION | IDENTIFIED | N 36 08/02/88 8947,342 | A FREGLY 88-NL-060 | 881,834 24/09/88 8947,792 |
| NEUROCOGNITIVE PATTERN ANALYSIS SYSTEM SAM TECHNOLOGY, INC. | MORGAN | N 06 17/03/88 849,910 | FREGLY 88-NL-127 | |
| PSYCHO-PHYSIOLOGICAL PERFORMANCE FEEDBACK ANALYZER (P3FA) BK DYNAMICS, INC | WATKINS | N 06 17/03/88 850,000 | FREGLY 88-NL-133 | |
| BREAKING THE LANGUAGE CODE ALAN S. PIKE | PIKE | M 06 17/03/88 871,280 | FREGLY 88-NL-134 | |
| NONLINEAR PREDICTION OF EVOKED RESPONSE FROM PRESTIMULUS EEG DATA CMRP CORPORATION | ALTES | M 06 17/03/88 849,997 | FREGLY 88-NL-135 | |

| TITLE (CONT.) INSTITUTION | INVESTIGATOR | TYPE/MONTHS RECEIVED AMOUNT | STATUS PROGRAM PROPOSAL # | INITIATE START DATE TOT AMT |
|---|---------------------|-----------------------------------|---------------------------------|-----------------------------------|
| OPERATIONAL DECISION TRAINING KLEIN ASSOCIATES, INC. | KLEIN GARY | N 06 17/03/88 \$59,954 | FREGLY 88-NL-136 | |
| A KNOWLEDGE STRUCTURE APPROACH TO LEARNING AND TEACHING DECISION SCIENCE CONSORTIUM INC | LEDDO JOHN | N 06 18/03/88 \$59,991 | FREGLY 88-NL-137 | |
| ONTOLOGICAL INVESTIGATION INTO THE STATUS OF MENTAL MODELS SEARCH TECHNOLOGY, INC. | ROUSE WILLIAM | N 06 18/03/88 \$49,603 | FREGLY 88-NL-138 | |
| COGNITIVE STYLE AS A PREDICTOR TO SUCCESSFUL PERFORMANCE PROGRESSIVE LEARNING SYSTEMS | BASS MICHAEL | N 06 18/03/88 \$49,985 | FREGLY 88-NL-139 | |
| HANDWRITING ANALYSIS INDICATORS FOR THE DETERMINATION OF INMATE COGNITIVE ABILITIES IMPERIAL CONS. & ENGR. CO., INC. | ROGERS CYNTHIA | N 06 18/03/88 \$49,954 | FREGLY 88-NL-140 | |
| RETRIEVAL PROCESSING IN MEMORY NORTHWESTERN UNIVERSITY | RATCLIFF ROGER | N 60 04/04/88 \$848,333 | FREGLY 88-NL-196 | |
| ENERGETIC DIMENSIONS OF HUMAN RESOURCES: RELATIONSHIP BETWEEN ARO USAL MECHANISMS AND INFORMATION PROCESSING TECHNION-ISRAEL INST OF TECHNOLOGY | LAVIE PERETZ | N 36 10/05/88 \$214,619 | FREGLY 88-NL-231 | |
| SCHEMA-BASED THEORIES OF PROBLEM SOLVING SAN DIEGO STATE UNIVERSITY | REED STEPHEN | N 24 11/05/88 \$106,041 | A FREGLY 88-NL-236 | 848,222 01/11/88 8106,041 |
| MEASURES OF SUBJECTIVE VARIABLES IN VISUAL COGNITION UNIV OF ARIZONA | PETERSON MARY | N 24 31/05/88 \$85,070 | A FREGLY 88-NL-240 | 842,510 01/08/88 942,510 |
| STUDIES OF PERCEPTUAL MEMORY UNIV OF UTAH | JOHNSTON WILLIAM | N 60 29/06/88 \$444,599 | FREGLY 88-NL-255 | |

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|--|--------------|-----------------------------------|---|------------------------------------|
| PSYCHOPHYSICAL STUDIES OF VISUAL CORTICAL FUNCTION SMITH-KETTLEWELL EYE RESEARCH FOUNDATION | NAKAYAMA | M 36 23/01/88 \$624,679 | A TANGNEY 88-NL-051 | 8200,500 01/09/88 8612,900 |
| AUDITORY PERCEPTION UNIV OF CONNECTICUT | COMEN | M 60 23/01/88 \$285,347 | A TANGNEY 88-NL-052 | 879,586 01/09/88 8207,586 |
| VISUAL PROCESSING IN TEXTURE SEGREGATION UNIV OF OREGON | BECK | R 36 23/01/88 \$618,312 | A TANGNEY 88-NL-053 | 897,193 01/09/88 8230,093 |
| REAL AND APPARENT SPATIAL D-STORTIONS IN VISUAL PATTERNS STATE UNIVERSITY OF NEW YORK | DAVIS | M 60 23/01/88 \$527,515 | TANGNEY 88-NL-056 | |
| PERIPHERAL LIMITATIONS ON SPATIAL VISION UNIV OF ROCHESTER | WILLIAMS | R 36 03/02/88 \$351,110 | A TANGNEY 88-NL-058 | 883,300 01/08/88 8341,300 |
| INSTITUTE FOR THE STUDY OF HUMAN CAPABILITIES INDIANA UNIVERSITY FOUNDATION | WATSON | M 24 03/02/88 \$1,010,000 | A TANGNEY 88-NL-059 | 9504,840 01/06/88 81,004,840 |
| SPATIAL SELECTIVITY IN VISUAL CORTICES UNIV OF MASS MEDICAL CENTER | POLLEN | M 60 16/02/88 \$1,232,115 | TANGNEY 88-NL-064 | |
| THE VISUAL PERCEPTION OF STRUCTURE FROM MOTION BOSTON UNIVERSITY | TODD | M 36 16/02/88 \$288,087 | A TANGNEY 88-NL-065 | 887,700 01/03/88 8271,400 |
| SIGNAL PROCESSING AND RECOGNITION IN ADAPTIVE NEURAL NETWORKS UNIVERSITY OF MARYLAND | SHAMMA | M 36 19/02/88 \$425,964 | A TANGNEY 88-NL-068 | 8103,660 01/08/88 8331,387 |

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| FUNCTIONAL ROLE OF VESTIBULO-OCULAR REFLEX ADAPTATION SMITH-KETTLEWELL EYE RESEARCH FOUNDATION | SHERMAN KEITH | N 05 24/02/88 8692,943 | TANGNEY 88-NL-071 | |
| VISUAL PROCESSING OF OBJECT VELOCITY AND ACCELERATION SMITH-KETTLEWELL EYE RESEARCH FOUNDATION | MCKEE SUZANNE | R 36 26/02/88 8507,587 | TANGNEY 88-NL-073 | |
| COORDINATED NONINVASIVE STUDIES (CNS) PROJECT UNIV OF ARIZONA | LAUTER JUDITH | R 60 26/02/88 92,432,070 | A TANGNEY 88-NL-075 | 8145,700 01/09/88 8403,800 |
| COMPLEX AUDITORY SIGNALS UNIV OF FLORIDA | GREEN DAVID | R 36 29/02/88 8561,511 | A TANGNEY 88-NL-076 | 8170,000 30/09/88 9528,000 |
| USING THE SENTENCE VERIFICATION TECHNIQUES UNIV OF MASSACHUSETTS | ROYER JAMES | R 12 02/03/88 819,193 | TANGNEY 88-NL-078 | |
| RECEPTORAL AND NEURAL ALIASING UNIV OF NEW HAMPSHIRE | SMITH ROBERT | N 36 03/03/88 8540,397 | A TANGNEY 88-NL-082 | 8137,200 01/09/88 8325,569 |
| DEPENDENCE OF DYNAMIC VISUAL ACUITY ON GAZE STABILITY MONTEREY TECHNOLOGIES, INC. | MENNESSY ROBERT | N 06 17/03/88 840,002 | TANGNEY 88-NL-124 | |
| A COMPUTERIZED TEST BATTERY FOR IDENTIFYING INDIVIDUAL DIFFERENCES IN COGNITIVE ABILITY ESSEX CORPORATION | KENNEDY ROBERT | N 06 17/03/88 852,136 | TANGNEY 88-NL-125 | |
| VISUAL ACCOMMODATION AS DEPENDENT & INDEPENDENT VARIABLE INSIDE AND OUTSIDE THE COCKPIT ESSEX CORPORATION | KENNEDY ROBERT | N 06 17/03/88 851,756 | TANGNEY 88-NL-126 | |
| PROCESSING AND ADAPTING UNFAMILIAR VISUAL MOTION INFORMATION SMALL BUSINESS VENDOR | OLEZAL HUBERT | N 06 17/03/88 850,000 | TANGNEY 88-NL-129 | |

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|--|--------------------------|-----------------------------------|---|-----------------------------------|
| INFORMATION PROCESSING BY THE PERIPHERAL VISUAL SYSTEM SMALL BUSINESS VENDOR | DOLEZAL HUBERT | N 06 17/03/88 830,000 | TANGNEY 88-NL-130 | |
| EXTRARETINAL NEUROBIOLOGY OF LIGHT PAPYRUS SYSTEMS INC. | SIMANONOK KARL | M 06 17/03/88 849,918 | TANGNEY 88-NL-131 | |
| PATTERN DISCRIMINATION IN HUMAN VISION YALE UNIVERSITY SCHOOL OF MEDICINE | MIRSCH JOY | R 36 24/03/88 81,129,635 | TANGNEY 88-NL-167 | |
| AUDITORY PROCESSING OF COMPLEX SOUNDS ACROSS FREQUENCY CHANNELS LOYOLA UNIVERSITY | SHOFNER WILLIAM | M 36 25/03/88 828,333 | TANGNEY 88-NL-169 | |
| MONAURAL AND BINAURAL PROCESSING OF COMPLEX WAVEFORMS UNIV OF CONNECTICUT HEALTH CENTER | TRANIOTIS CONSTANTINE | N 36 04/04/88 8416,131 | TANGNEY 88-NL-195 | |
| MECHANISMS OF MOTION PERCEPTION: INTERGRATION OF DIRECTION, VELOCITY AND SPACE NORTHWESTERN UNIVERSITY | SRAULER ROBERT | R 36 12/04/88 8698,448 | TANGNEY 88-NL-206 | |
| 5TH INTERNATIONAL CONGRESS ON NOISE AS A PUBLIC HEALTH PROBLEM EUROPEAN OFFICE OF AERD RSCH AND DEVELOP | MCDUGAL JAMES | M 06 13/04/88 820,000 | A TANGNEY 88-NL-207 | 820,000 01/05/88 820,000 |
| ADAPTIVE CONTROL OF VISUALLY GUIDED GRASPING IN NEURAL NETWORKS NEUROGEN | KUPFERSTEIN MICHAEL | M 24 15/04/88 8198,000 | TANGNEY 88-NL-209 | |
| LISTENING TO THE EAR SIGNITION, INC. | ZWEIG GEORGE | M 42 15/04/88 849,700 | TANGNEY 88-NL-210 | |

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INTERPOLATION, HYPERACUITY, AND TIME-FREQUENCY ANALYSIS IN AUDITIO
N INVESTIGATOR
UNIV OF CALIFORNIA, SAN DIEGO ALTES RICHARD

CURVATURE ESTIMATION IN ORIENTATION SELECTION
MCGILL UNIVERSITY ZUCKER STEVEN

AUDITORY PATTERN MEMORY
UNIV OF FLORIDA SORRIN ROBERT

WORKSHOP IN COMPUTATIONAL NEUROSCIENCE
MARINE BIOLOGICAL LABORATORY EPSTEIN RAY

NEURONAL MULTIPLEXING
NATIONAL INSTITUTE OF HEALTH RICHMOND BARRY

SPATIO-TEMPORAL MASKING: HYPERACUITY AND LOCAL ADAPTATION
UNIV OF CALIFORNIA KLEIN STANLEY

ABILITY AND METACOGNITIVE DETERMINANTS OF SKILL ACQUISITION AND
TRANSFER UNIV OF MINNESOTA KANFER RUTH

DETECTION AND CONSTRUCTION OF VISUAL FORM
UNIV OF OREGON STEVENS KENT

NEUROPSYCHOLOGY OF BIRDSONG PERCEPTION
ROCKEFELLER UNIVERSITY CYNK JEFFREY

| TYPE/MONTHS RECEIVED AMOUNT | STATUS PROGRAM MANAGER PROPOSAL # | INITIATE START DATE TOT AMT |
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| N 18 10/05/88 8144,210 | TANGNEY 88-NL-230 | 863,591 01/09/88 6127,693 |
| N 36 10/05/88 8307,587 | TANGNEY 88-NL-232 | 820,000 01/08/88 820,000 |
| R 24 17/05/88 8127,693 | A TANGNEY 88-NL-237 | 880,000 01/07/88 880,000 |
| N 12 25/05/88 820,000 | A TANGNEY 88-NL-238 | 880,000 01/07/88 880,000 |
| N 3 26/05/88 8160,000 | A TANGNEY 88-NL-239 | 880,000 01/07/88 880,000 |
| N 36 31/05/88 8590,087 | TANGNEY 88-NL-241 | 880,000 01/07/88 880,000 |
| N 10 28/06/88 819,996 | TANGNEY 88-NL-249 | 880,000 01/07/88 880,000 |
| N 36 28/06/88 8453,333 | TANGNEY 88-NL-250 | 880,000 01/07/88 880,000 |
| N 60 29/06/88 8597,518 | TANGNEY 88-NL-253 | 880,000 01/07/88 880,000 |

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| NONLINEAR SUBSTRUCTURE AEROMECHANICS ANALYSIS WAYNE JOHNSON | JOHNSON WAYNE | M 06 05/01/88 \$41,493 | CROWLEY 88-NM-165 | 910,000 01/02/88 910,000 |
| CRAY II SUPPORT FOR OTHER 2304/A3 INSTRUMENTS AIR FORCE WEAPONS LAB | BURNETTE HOWARD | M 08 21/01/88 910,000 | A CROWLEY 88-NM-188 | 990,701 15/07/88 990,701 |
| PRACTICAL METHODS FOR ROBUST MULTIVARIABLE CONTROL UNIV OF SOUTHERN CALIFORNIA | SAFONOV MICHAEL | R 12 27/01/88 9125,763 | A CROWLEY 88-NM-190 | 972,502 15/08/88 9234,652 |
| ADAPTIVE & NONLINEAR CONTROL WASHINGTON UNIVERSITY | BYRNES CHRISTOPHER | M 36 27/01/88 9234,652 | A CROWLEY 88-NM-191 | 958,577 15/05/88 958,577 |
| MATHEMATICAL TECHNIQUES FOR SYSTEM REALIZATION AND IDENTIFICATION UNIV OF FLORIDA | KALMAN R.E. | R 12 27/01/88 884,567 | A CROWLEY 88-NM-198 | 958,577 15/05/88 958,577 |
| COMPUTATIONAL ALGORITHMS FOR IDENTIFICATION WITH INPUT OPTIMIZATION UNIV OF ARKANSAS | BREWER DENNIS | M 24 27/01/88 9115,137 | CROWLEY 88-NM-206 | |
| RESEARCH ON ALGORITHMS FOR PERSONAL MULTIPROCESSORS SCIENTIFIC SYSTEMS INC. | LESTER BRUCE | M 06 29/01/88 959,519 | CROWLEY 88-NM-214 | |
| PRIOR KNOWLEDGE IN IMAGE PROCESSING SCIENTIFIC SYSTEMS INC. | GUSTAFSON DONALD | M 06 29/01/88 959,499 | CROWLEY 88-NM-215 | |
| THE APPLICATION OF ADVANCED ALGEBRA TECHNIQUES TO SUPERCOMPUTERS ADVANCED TECHNOLOGY LABORATORIES | JENNINGS JACK | M 24 29/01/88 949,742 | CROWLEY 88-NM-216 | |

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| ERROR DETECTION, DIAGNOSIS, AND CORRECTION ADVANCED TECHNOLOGY LABORATORIES | JENNINGS JACK | N 06 29/01/88 849,742 | CROWLEY 88-MM-217 | |
| THE DYNAMIC ANALOG CODING OF MODERN ALGEBRA PROBLEMS ADVANCED TECHNOLOGY LABORATORIES | JENNINGS JACK | N 06 29/01/88 849,742 | CROWLEY 88-MM-218 | |
| CYBERTALK ADVANCED TECHNOLOGY LABORATORIES | JENNINGS JACK | N 06 29/01/88 849,742 | CROWLEY 88-MM-219 | |
| A GENERALIZED APPROACH TO THE APPLICATION OF PARALLEL PROCESSING TO PROBLEMS OF MODERN ALGEBRA ADVANCED TECHNOLOGY LABORATORIES | MUHL JR. JOSEPH | N 06 29/01/88 849,742 | CROWLEY 88-MM-220 | |
| AN APPROACH TO COMPUTER ARCHITECTURE FOR PARALLEL PROCESSING ADVANCED TECHNOLOGY LABORATORIES | MUHL JR JOSEPH | N 06 29/01/88 849,742 | CROWLEY 88-MM-221 | |
| INTEGRATING NUMERICAL SOFTWARE LIBRARIES WITH AN INTERACTIVE SCIENTIFIC COMPUTING ENVIRONMENT SCIENTIFIC COMPUTING ASSOCIATES INC | FOULSER DAVID | N 06 29/01/88 850,020 | CROWLEY 88-MM-222 | |
| DEVELOPING AN OUT-OF-CORE IMPLEMENTATION OF A CONJUGATE GRADIENT METHOD SCIENTIFIC COMPUTING ASSOCIATES INC | FOULSER DAVID | N 06 29/01/88 850,005 | CROWLEY 88-MM-223 | |
| EMPLOYING SPARSE SOLUTION TECHNOLOGY WITHIN AN INTERACTIVE SCIENTIFIC COMPUTING ENVIRONMENT SCIENTIFIC COMPUTING ASSOCIATES INC | FOULSER DAVID | N 06 29/01/88 850,020 | CROWLEY 88-MM-224 | |
| FAST ALGORITHMS FOR CONTROL PROCESS ROBOTICS SPACE TECH CORPORATION | ANDREWS MICHAEL | N 06 29/01/88 849,750 | CROWLEY 88-MM-225 | |
| MATHEMATICAL MODELLING OF MATERIAL DAMPING IN LARGE SPACE STRUCTURES SPARTA INC. | LEISIEUTRE GEORGE | N 06 29/01/88 849,995 | CROWLEY 88-MM-226 | |

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| ADAPTIVE NETWORK TECHNOLOGY FOR COUPLING SYSTEM EFFECTOR CONTROL Y SYSTEM CORPORATION | CAMPBELL HARDLO | N 06 29/01/88 853,141 | CROWLEY 88-NM-227 | |
| SYNTHETIC CALCULUS INDUCTIVE LEARNING LANGUAGES INT'L META SYSTEMS INC. | THAMES JOSEPH | N 06 29/01/88 851,767 | CROWLEY 88-NM-228 | |
| AUTOMATIC FINITE ELEMENT MESH GENERATION COMPUTER PERFECTION UNLIMITED (CPU) | WEISINGER RICHARD | N 06 29/01/88 849,985 | CROWLEY 88-NM-229 | |
| RESEARCH IN MATHEMATICS AND COMPUTER SCIENCE SM SYSTEMS & RESEARCH CORPORATION | MERSH GILBERT | N 06 29/01/88 849,870 | CROWLEY 88-NM-230 | |
| REAL-TIME EDGE/FEATURE DETECTURE THROUGH STOCHASTIC OPTIMIZATION D F IMAGING SYSTEMS INFORMATION & CONTROL SYSTEMS INC. | HALYO NESIM | N 06 29/01/88 855,955 | CROWLEY 88-NM-231 | |
| SYNTHETIC CALCULUS OPTIMIZATION RESEARCH ENVIRONMENT INT'L META SYSTEMS INC. | THAMES JOSEPH | N 06 29/01/88 851,767 | CROWLEY 88-NM-232 | |
| DECOMPOSITION OF LARGE SCALE MATHEMATICAL PROGRAMMING PROBLEMS THR OUGH THE APPLICATION OF THE INTERACTION BALANCE PRINCIPLE SYSTEMS APPLICATION INC. | MONMANTY BIDHU | N 06 29/01/88 849,512 | CROWLEY 88-NM-233 | |
| RESEARCH IN MATHEMATICS AND COMPUTER SCIENCES PLEX SYSTEMS INC. | COLEMAN RONALD | N 06 29/01/88 859,200 | CROWLEY 88-NM-234 | |
| RELATIVE ENTROPY APPLIED TO IMAGE PROCESSING ENTROPIC SPEECH INC. | SHORE JOHN | N 06 29/01/88 849,945 | CROWLEY 88-NM-235 | |

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NUMERICAL SOLUTION OF DIFFERENTIAL EQUATIONS
GENERAL ANALYTICS CORPORATION

SARAFYAN O.

N 06
29/01/88
\$50,000

CROWLEY
88-NM-236

ARTIFICIAL NEURAL SYSTEM FOR OPTIMAL MODELLING/CONTROL
MNC, UBC (HECHT-WIESEN NEUROCOMPUTER)

PALMER DOUGLAS

N 06
29/01/88
\$51,275

CROWLEY
88-NM-237

IMPROVEMENTS IN AUTOMATIC PARALLELIZATION TECHNOLOGY
NEW JERSEY ADVANCED TECHNOLOGY

KLAPPHOLZ AARON

N 06
29/01/88
\$46,972

CROWLEY
88-NM-238

SYNTHETIC CALCULUS ALGORITHMIC LEARNING ENGINES
INT'L META SYSTEMS INC.

THAMES JOSEPH

N 06
29/01/88
\$51,767

CROWLEY
88-NM-239

SYNTHETIC CALCULUS ARRAY NODE DIFFERENTIAL EMULATION
INT'L META SYSTEMS INC.

THAMES JOSEPH

N 06
29/01/88
\$51,767

CROWLEY
88-NM-240

LEARNING LAWS ARTIFICIAL NEURAL NETWORKS
MARTINGALE RESEARCH CORPORATION

DAMES ROBERT

N 06
29/01/88
\$55,621

CROWLEY
88-NM-241

PROPAGATIONAL WAVE EQUATION IN MILBERT SPACE
MARTINGALE RESEARCH CORPORATION

DAMES ROBERT

N 06
29/01/88
\$53,277

CROWLEY
88-NM-242

MATHEMATICAL MODELS OF COMPLEX LASER BEAM FOCUSING
JOSEPH TECHNOLOGY CORPORATION

OLIKER V.

N 06
29/01/88
\$56,445

CROWLEY
88-NM-243

RE-ENTRY VEHICLE STATE ESTIMATION USING QUADRATIC FILTERING TECHNIQUE
TECHNOLOGY SYSTEMS, INC.

PARUJI FARHAN

N 06
29/01/88
\$50,000

CROWLEY
88-NM-244

FRANES

KRITIKOS

N 06
29/01/88
\$50,000

CROWLEY
88-NM-245

TELEPHOS ASSOCIATED

MARALAMBOUS

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| SYNTHETIC CALCULUS ADVANCED NEURAL NETWORK INT'L META SYSTEMS INC. | THAMES JOSEPH | N 06 29/01/88 851,767 | CROWLEY 88-MM-246 | |
| QUATERNION ALGORITHMS FOR ROTATION PROBLEMS IN SPACE MADDAN SYSTEMS | SINGH MAHENDRA | N 06 29/01/88 849,868 | CROWLEY 88-MM-248 | |
| DIGITALLY BASED WORKSTATION FOR PERFORMING HIGHLY ACCURATE MEASURE MENTS ON LARGE ANALOG FILM IMAGERY VERCEL CORPORATION | LEBERI F. | N 06 29/01/88 849,950 | CROWLEY 88-MM-249 | |
| RESEARCH IN MATHEMATICS AND COMPUTER SCIENCE COMPUTER & INFORMATION SCIENCES, INC. | VIDE JOSEPH | N 06 29/01/88 849,061 | CROWLEY 88-MM-250 | |
| RESEARCH IN COMPUTER SCIENCE SOPTRON, INC | GENDRON ROBERT | N 06 01/02/88 847,476 | CROWLEY 88-MM-251 | |
| A NEW EXPERT SYSTEM-CASE BASED METHODOLOGY FOR REUSABLE SOFTWARE CONCEPT TECHNOLOGY | BESSEL DAVID | N 06 01/02/88 849,390 | CROWLEY 88-MM-252 | |
| SIMULATION METHODS FOR PARALLEL DISTRIBUTED PROCESSOR NETWORKS MARTINGALE RESEARCH CORPORATION | DAMES ROBERT | N 06 01/02/88 856,820 | CROWLEY 88-MM-253 | |
| INNOVATIVE STORAGE METHODS AND ITERATIVE SOLUTION TECHNIQUES FOR T HE FINITE ELEMENT METHOD MAINSTREAM ENGINEERING CORPORATION | BUCKMAN JAY | N 06 01/02/88 849,308 | CROWLEY 88-MM-254 | |
| PROBLEM ORIENTED CONSTRAINT DIRECTED SIMULATION SYNTHESIS MYESON (HELEN) CHU ZEMANY | ZEMANY PAUL | N 06 01/02/88 842,485 | CROWLEY 88-MM-255 | |

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| A KNOWLEDGE BASED EXPERT SYSTEM FOR SOFTWARE ENGINEERING MY BUSINESS INC. | YEE O. | N 06 01/02/88 850,778 | CROWLEY 88-MM-256 | |
| DEMONSTRATION OF ARRAY PIPELINE TLA RESEARCH INC. | CLARKE THOMAS | N 06 01/02/88 849,827 | CROWLEY 88-MM-257 | |
| NONLINEAR CONTROL OF HIGH ANGLE ATTACK FLIGHT DYNAMICS BUSINESS & TECHNOLOGICAL SYSTEMS, INC. | CARROLL JAMES | N 06 01/02/88 851,607 | CROWLEY 88-MM-258 | |
| NEURAL NETWORK RESEARCH FOR TRACK-WHILE-SCAN RADAR FACC PERCEPTRONICS, INC. | EMALSA DHARMA SINGH | N 06 01/02/88 849,626 | CROWLEY 88-MM-260 | |
| FINITE MEMORY TRACKING AND FILTERING ALGORITHM FACC PERCEPTRONICS, INC. | BANNETT ROGER | N 06 01/02/88 849,672 | CROWLEY 88-MM-261 | |
| SOFTWARE REUSE MANAGER CALIFORNIA ADVANCED INTEGRATION | KAHN MARTHA | N 06 01/02/88 849,994 | CROWLEY 88-MM-262 | |
| A COMPUTER SYSTEM TO IMPROVE THE EFFICIENCY AND TO OPTIMIZE ADA SC IDENTIFY AND ENGINEERING CODE APPLIED INNOVATION, INC. | DAVISON JOSEPH | N 06 01/02/88 848,566 | CROWLEY 88-MM-263 | |
| DEVELOPMENT OF NEURAL NETWORK SUPERCOMPUTER FOR IMAGE REPRESENTATI ON AND FEATURE EXTRACTION IMAGE CONVERSION DEVICES | BROOKES JOHN | N 06 01/02/88 850,000 | CROWLEY 88-MM-265 | |
| INVESTIGATION OF ORDER "N" ALGORITHMS FOR MULTIBODY DYNAMICS SIMUL ATION RESEARCH ASSOCIATES INC. | KEAT JAMES | N 06 12/02/88 849,615 | CROWLEY 88-MM-279 | |
| PERFORMANCE ANALYSIS FOR THE RECOGNITION OF TARGETS CALIFORNIA ADVANCED INTEGRATION | WEBSTER DAVID | N 06 12/02/88 854,152 | CROWLEY 88-MM-290 | |

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| RESEARCH IN MATHEMATICS AND COMPUTER SCIENCE IMAGE PROCESSING FOR CW PW RADAR SSDD RESEARCH CORPORATION | WOJCIECH KLIKIEWICZ | M 06 12/02/88 843,155 | CROWLEY 88-NM-281 | |
| VLSI/ASIC ARCHITECTURE FOR NONLINEAR EQUATION SOLVER IN REAL-TIME MILITARY APPLICATIONS DEVICE RESEARCH INSTITUTE | WANG CHENG | M 06 12/02/88 897,693 | CROWLEY 88-NM-282 | |
| AN INTEGRATED CONCEPT FOR SCHEDULING TRANSPORTATION NETWORKS COMPUTER AIDED PLAN & SCHEDULE INC. | LOGREN CHRISTOPHER | M 06 12/02/88 890,000 | CROWLEY 88-NM-283 | |
| ROBUST AND ADAPTIVE CONTROL OF DYNAMICAL SYSTEMS INTEGRATED SYSTEMS, INC. | KOSUT ROBERT | M 06 12/02/88 879,205 | CROWLEY 88-NM-284 | |
| RESEARCH IN MATHEMATICS AND COMPUTER SCIENCE NELSON ASSOCIATES | NELSON NORMAN | M 06 12/02/88 822,500 | CROWLEY 88-NM-285 | |
| AN INTELLIGENT MATHEMATICAL MODELLING SYSTEM-MATHMODEL COMPUTER COMMAND & CONTROL COMPANY | LOCK EVAN | M 06 12/02/88 850,000 | CROWLEY 88-NM-286 | 850,000 01/08/88 850,000 |
| RESEARCH IN MATHEMATICS AND COMPUTER SCIENCE: A UNIFIED STATISTICAL METHODOLOGY FOR REASONING ABOUT IMAGES DECISION SCIENCE CONSORTIUM INC | LASKEY KATHRYN | M 06 12/02/88 863,681 | CROWLEY 88-NM-287 | |
| ADAPTIVE KNOWLEDGE-BASED NETWORK ADVANCED DECISION SYSTEMS | GESAND PATRICE | M 06 12/02/88 849,977 | CROWLEY 88-NM-288 | |
| A KNOWLEDGE-BASED SYSTEM FOR DYNAMIC MODEL VERIFICATION INTELLIGENT SYSTEMS INTEGRATION INC. | ROSS TIMOTHY | M 06 12/02/88 897,366 | CROWLEY 88-NM-289 | |

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| RESEARCH IN MATHEMATICS AND COMPUTER SCIENCE VISTA RESEARCH CORPORATION | CALDWELL J. | N 06 19/02/88 950,000 | CROWLEY 88-NM-291 | |
| DESIGN AND IMPLEMENTATION OF HIGH PRECISION AND HIGH PERFORMANCE P PARALLEL SOFTWARE AND HARDWARE - PHASE II ARITHMETIKA, INC | DAVID CHUDNOVSKY | N 12 26/02/88 9500,000 | CROWLEY 88-NM-296 | |
| INCREASING THE MARGIN OF STABILITY OF ARBITRARILY FINITE MODES OF FLEXIBLE LARGE SPACE STRUCTURES WITH DAMPING UNIV OF VIRGINIA | IRENA LASTECKA | R 12 26/02/88 9134,596 | A CROWLEY 88-NM-299 | 9116,500 01/09/88 9116,500 |
| PARAMETER IDENTIFICATION ON TIME DELAY SYSTEMS BROWN UNIVERSITY | PEARSON ALLAN | N 36 26/02/88 897,000 | CROWLEY 88-NM-301 | |
| SINGULAR AND BANG-BANG STOCHASTIC CONTROL CARNEGIE-MELLON UNIVERSITY | SHREVE STEVEN | R 36 26/02/88 9242,660 | CROWLEY 88-NM-302 | |
| ON OBSERVABILITY OF SYSTEMS WITH COMPLICATED DYNAMICS ARIZONA STATE UNIVERSITY | S. TAYLOR THOMAS | N 24 26/02/88 882,755 | A CROWLEY 88-NM-303 | 815,077 15/07/88 830,927 |
| STABILITY AND CONTROL OF NONLINEAR SYSTEMS TEXAS TECH UNIVERSITY | MARTIN CLYDE | N 36 26/02/88 9416,334 | CROWLEY 88-NM-304 | |
| CPUS: OPTIMAL PROJECTION FOR UNCERTAIN SYSTEMS HARRIS CORPORATION | BERNSTEIN DENNIS | R 36 29/02/88 9289,910 | CROWLEY 88-NM-315 | |
| NONLINEAR FEEDBACK-CONTROL SYSTEMS UNIV OF FLORIDA | HAMMER JACOB | N 60 29/02/88 9210,368 | CROWLEY 88-NM-318 | |
| LINEAR CONTROLLER DESIGN VIA INFINITE DIMENSIONAL CONVEX OPTIMIZ ATION & SPECIAL PURPOSE ARCHITECTURES FOR LINEAR CONTROLLERS STANFORD UNIVERSITY | BOYD STEPHEN | N 24 18/03/88 9298,668 | CROWLEY 88-NM-343 | |

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INVESTIGATOR

RUSSELL

DAVIO

HOMOLOGY METHODS IN CONTROL SYSTEM ANALYSIS AND DESIGN
MARRS CORPORATION

RICHTER

STEPHEN

HOMOLOGY METHODS IN CONTROL SYSTEM DESIGN AND ANALYSIS
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WATSON

LAYME

ANALYSIS AND DESIGN OF MULTIMODE CONTROL SYSTEMS
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CMOM

JOE

COMPUTATIONAL METHODS FOR MODELING AND ACTIVE CONTROL OF DISTRIBUTED
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JOHN

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CONTROL OF PRIORITY QUEUES IN HEAVY TRAFFIC
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NEW TRENDS AND APPLICATION OF DISTRIBUTED PARAMETER CONTROL SYSTEM
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ESTIMATION AND CONTROL OF NON-LINEAR AND HYBRID SYSTEM WITH
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| N 36 22/03/88 9352,682 | A CROWLEY 88-NM-354 | 8110,134 30/09/88 8331,697 |
| N 24 25/03/88 8204,087 | CROWLEY 88-NM-361 | |
| N 36 25/03/88 8191,710 | CROWLEY 88-NM-362 | |
| N 36 18/04/88 9208,779 | CROWLEY 88-NM-372 | |
| N 36 25/04/88 8308,139 | A CROWLEY 88-NM-378 | 970,295 01/10/88 8255,551 |
| N 36 25/04/88 9150,000 | CROWLEY 88-NM-387 | |
| N 36 25/04/88 8175,280 | CROWLEY 88-NM-388 | |
| N 12 06/05/88 8108,000 | CROWLEY 88-NM-393 | |
| N 12 06/05/88 8110,000 | CROWLEY 88-NM-394 | |

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| THE EXISTENCE OF SMOOTH DENSITIES FOR THE PREDICTION FILTERING & SMOOTHING PROBLEM UNIV OF ALBERTA | ELLIOTT ROBERT | R 24 06/05/88 862,714 | A CROWLEY 88-MM-395 | 830,843 01/10/88 862,714 |
| ANALYTICAL AND NUMERICAL STUDIES OF SINGULAR INTEGRAL EQUATIONS AND SMOOTH CONTROL PROBLEMS ATLANTA UNIVERSITY | ROTA KOFF | M 36 11/05/88 8460,833 | M CROWLEY 88-MM-405 | |
| COMPLETE INTERGRABILITY OF INFINITE DIMENSIONAL HAMILTONIAN SYSTEMS EMORY UNIVERSITY | SCHMID RUDOLF | M 36 11/05/88 8152,988 | D CROWLEY 88-MM-407 | |
| OPTIMIZATION METHODS IN CONTROL OF ELECTROMAGNETIC FIELDS UNIV OF DELAWARE | ANGELL T. | R 36 07/06/88 8189,773 | CROWLEY 88-MM-634 | |
| NUMERICAL METHODS FOR CLOSED-LOOP CONTROL ROBUSTNESS UNIV OF CALIFORNIA | LAUB ALAN | M 36 10/06/88 8129,485 | CROWLEY 88-MM-639 | |
| ON CONTROL PROBLEMS GOVERNED BY FUNCTIONAL DIFFERENTIAL EQUATIONS ATLANTA UNIVERSITY | REDMIN M. | M 29 13/06/88 851,990 | CROWLEY 88-MM-440 | |
| ADAPTIVE CONTROL OF NONLINEAR AND STOCHASTIC SYSTEMS UNIV OF TEXAS | MARCUS STEVEN | R 36 13/06/88 8313,402 | CROWLEY 88-MM-445 | |
| ZEROS AND MODEL REDUCTION FOR INFINITE DIMENSIONAL SYSTEMS VIRGINIA POLYTECHNIC INST & STATE UNIV | LINDNER DOUGLAS | M 36 13/06/88 8122,116 | CROWLEY 88-MM-446 | |
| ROBUST STABILITY ANALYSIS OF LARGE SCALE SYSTEMS WITH CERTAIN STRUCTURED PERTURBATION MATRICES UNIV OF ILLINOIS | ESLAMI MANSOUR | M 12 13/06/88 863,999 | CROWLEY 88-MM-447 | |
| PARAMETER ESTIMATION IN MOVING BOUNDARY PROBLEMS AND OTHER NONLINEAR SYSTEMS UNIV OF NORTH CAROLINA | MURPHY KATHERINE | R 24 13/06/88 860,731 | CROWLEY 88-MM-448 | |

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| NONLINEAR SYSTEMS DESIGN: ADAPTIVE FEEDBACK LINEARIZATION WITH UHM ODLEO UNIV OF ILLINOIS | KOKOTOVIC PETER | M 24 27/06/88 8317,597 | CROWLEY 88-MM-463 | |
| USING QUALITATIVE PROCESS DIAGNOSTICS FOR THE RELIABLE ADAPTIVE CO NTROL OF NONLINEAR SYSTEMS UNIV OF CONNECTICUT | COOPER DOUGLAS | M 36 27/06/88 8227,886 | CROWLEY 88-MM-464 | |
| ON CONTROL PROBLEMS GOVERNED BY FUNCTIONAL DIFFERENTIAL EQUATIONS ATLANTA UNIVERSITY | MEDVIN N. | M 29 27/06/88 849,484 | CROWLEY 88-MM-465 | |
| ADAPTIVE HIGH-GAIN FEEDBACK CONTROL WASHINGTON STATE UNIVERSITY | SABERI ALI | M 24 29/06/88 8119,103 | CROWLEY 88-MM-466 | |
| ALGEBRAICALLY SPECIFIED COMBINATIONAL OBJECTS UNIV OF MASSACHUSETTS | ROSENBERG ARNOLD | M 36 05/01/88 8271,972 | D MILLER 88-MM-179 | |
| INTEGRATING INTERIOR POINT ALGORITHMS AND THE SIMPLEX METHOD PRINCETON UNIVERSITY | LUSTIG IRVIN | M 24 27/01/88 8222,956 | MILLER 88-MM-196 | |
| COMPLEMENTARITY PROBLEMS UNIV OF MARYLAND BALTIMORE COUNTY | CONDA MUDDAPPA | M 24 27/01/88 861,548 | D MILLER 88-MM-199 | |
| PARALLEL AND ROBUST OPTIMIZATION GEORGE MASON UNIVERSITY | NASH STEPHEN | M 36 27/01/88 8198,325 | D MILLER 88-MM-202 | |
| PAST ALGORITHMS FOR STRUCTURAL OPTIMIZATION, LEAST-SQUARES AND RELATED COMPUTATIONS NORTH CAROLINA STATE UNIVERSITY | PLEMHONS ROBERT | R 24 27/01/88 8167,679 | A MILLER 88-MM-207 | 882,335 01/08/88 8167,679 |

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| VULNERABILITY PROPERTIES OF CERTAIN CLASSES OF GRAPHS UNIV OF IDAHO | STURCKLE SAM | M 36 09/02/88 8209.431 | MILLER 88-NM-273 | 866,865 01/04/88 866,865 |
| CONTROL THEORY FOR DISTRIBUTED PARAMETER SYSTEMS AEROSPACE COMPANY | FLAMP DAVID | M 07 22/02/88 879,990 | MILLER 88-NM-232 | 869,899 15/06/88 8109,764 |
| ERROR CORRECTING CODES AND RELATED DESIGNS UNIV OF ILLINOIS | PLESS VERA | N 24 22/02/88 8109,764 | MILLER 88-NM-294 | 869,899 15/06/88 8109,764 |
| CYCLES AND PATHS IN GRAPHS - RESEARCH IN GRAPH THEORY WEST VIRGINIA UNIVERSITY | IMANG CUM-QUAN | M 12 26/02/88 845,781 | MILLER 88-NM-306 | 869,899 15/06/88 8109,764 |
| ASYMPTOTIC METHODS IN COMBINATORIAL THEORY UNIV OF GEORGIA | CAMPFIELD E. RODNEY | M 24 26/02/88 846,828 | MILLER 88-NM-307 | 869,899 15/06/88 8109,764 |
| NONLINEAR STOCHASTIC OPTIMIZATION: NUMERICAL PROCEDURES AND STATISTICAL THEORY UNIV OF CALIFORNIA | WETS ROGER J. B. | R 24 26/02/88 8112,371 | MILLER 88-NM-308 | 869,899 15/06/88 8109,764 |
| A RUTCOR PROJECT IN DISCRETE APPLIED MATHEMATICS RUTGERS - THE STATE UNIVERSITY | FRED S. ROBERTS PETER L. HAMMER | R 36 29/02/88 81,143,836 | MILLER 88-NM-321 | 869,899 15/06/88 8109,764 |
| NUMERICAL TECHNIQUES IN CONTROL AND OPTIMIZATION PENNSYLVANIA STATE UNIVERSITY | HAGER WILLIAM | N 03 29/02/88 840,000 | MILLER 88-NM-324 | 869,899 15/06/88 8109,764 |
| CODING FOR SPREAD-SPECTRUM CHANNELS IN THE PRESENCE OF JAMMING CALIFORNIA INSTITUTE OF TECHNOLOGY | MCELIECE ROBERT | R 24 29/02/88 8153,617 | MILLER 88-NM-327 | 869,899 15/06/88 8109,764 |
| LINEAR PROGRAMMING TOOLS FOR INTEGER PROGRAMMING RICE UNIVERSITY | BIXBY ROBERT | R 36 11/03/88 8260,781 | MILLER 88-NM-339 | 869,899 15/06/88 8109,764 |

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| THE SPACE-TIME COMPLEXITY OF THE ALGORITHMS IN COMBINATORIAL GROUP THEORY AND RELATED MATTERS QUEENS COLLEGE | OIPACLA ROBERT | M 24 21/03/88 \$337,981 | MILLER 88-MM-352 | \$100,000 01/09/88 \$100,000 |
| RESEARCH IN CONSTRAINED OPTIMIZATION RILE UNIVERSITY | DEMNIS JR. JOHN | R 12 24/03/88 \$100,000 | A MILLER 88-MM-357 | \$87,544 01/10/88 \$111,903 |
| METHODS OF OPTIMIZATION UNDER UNCERTAINTY UNIV OF WASHINGTON | ROCKAFELLAR RALPH | M 24 9/03/88 \$126,366 | A MILLER 88-MM-366 | \$56,736 01/09/88 \$56,736 |
| FLOW OPTIMIZATION ON MULTI-ATTRIBUTE TRANSPORTATION NETWORKS UNIV OF CALIFORNIA | MILLER RANDOLPH | M 12 06/05/88 \$33,892 | D MILLER 88-MM-392 | \$39,376 01/09/88 \$39,376 |
| METHODS AND CONVERGENCE ANALYSES IN LARGE SCALE NONLINEAR OPTIMIZATION UNIV OF NORTH CAROLINA | TOLLE JON | M 16 02/06/88 \$56,736 | A MILLER 88-MM-426 | \$56,736 01/09/88 \$56,736 |
| METHODS AND CONVERGENCE ANALYSES IN LARGE SCALE NONLINEAR OPTIMIZATION NATIONAL BUREAU OF STANDARDS | BOGGS PAUL | M 16 02/06/88 \$39,376 | A MILLER 88-MM-427 | \$39,376 01/09/88 \$39,376 |
| METHODS AND CONVERGENCE ANALYSES IN LARGE SCALE NONLINEAR OPTIMIZATION UNIV OF NORTH CAROLINA | TOLLE JON | M 36 06/06/88 \$321,654 | MILLER 88-MM-429 | |
| GENERALIZED MEASURES OF ROBUSTNESS IN STOCHASTIC PROGRAMMING JOHNS HOPKINS UNIVERSITY | ELLIS J. HUGH | M 36 07/06/88 \$132,186 | D MILLER 88-MM-433 | |
| CONTINUATION AND BIFURCATIONS INVESTIGATIONS IN CONSTRAINED OPTIMIZATION COLORADO STATE UNIVERSITY | POORE AUBREY | R 12 13/06/88 \$38,000 | MILLER 88-MM-449 | |

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| A STUDY OF ALGORITHMS FOR STRUCTURAL SHAPE OPTIMIZATION RICE UNIVERSITY | ARIN J. | M 24 13/06/88 6131,274 | MILLER 88-NM-430 | |
| CENTER FOR PARALLEL OPTIMIZATION UNIV OF WISCONSIN | MAMAGASARIAN OLVI | M 36 21/06/88 81,490,751 | MILLER 88-NM-458 | |
| SEQUENTIAL AND PARALLEL ALGORITHMS FOR NETWORK OPTIMIZATION MASSACHUSETTS INSTITUTE OF TECHNOLOGY | ORLIN JAMES | R 12 27/06/88 9105,029 | MILLER 88-NM-460 | |
| DESIGN OPTIMIZATION OF SYSTEMS GOVERNED BY PARTIAL DIFFERENTIAL EQUATIONS ECODYNAMICS RESEARCH ASSOCIATION INC | ROACHE PATRICK | M 06 05/01/88 858,200 | A NACHMAN 88-NM-166 | 950,000 01/08/88 950,000 |
| DIFFERENTIAL EQUATIONS AND CONTINUUM MECHANICS CALIFORNIA INSTITUTE OF TECHNOLOGY | COHEN DONALD | R 24 05/01/88 987,773 | A NACHMAN 88-NM-168 | 841,775 15/07/88 987,773 |
| SYMMETRY AND GLOBAL BIFURCATION IN NONLINEAR SOLID MECHANICS CORNELL UNIVERSITY | HEALEY TIMOTHY | R 24 05/01/88 851,996 | A NACHMAN 88-NM-174 | 843,304 01/08/88 943,304 |
| A FOURIER APPROACH TO THE ANALYSIS AND DESIGN OF NUMERICAL METHODS FOR DIFFERENTIAL EQUATIONS UNIV OF CALIFORNIA | CHAN T. | M 36 06/01/88 9266,473 | NACHMAN 88-NM-185 | |
| CHAOTIC BEHAVIOUR IN QUANTUM DYNAMICS CENTRO DI CULTURA SCIENTIFICA A VOLTA | CASATI GIULIO | M 12 22/01/88 816,900 | NACHMAN 88-NM-189 | |
| FAST ALGORITHMS FOR PARTIAL DIFFERENTIAL EQUATIONS BROOKHAVEN NATIONAL LABORATORY | PASCIAK JOSEPH | M 36 27/01/88 8538,700 | NACHMAN 88-NM-192 | |
| CHAOS IN CLASSICAL NONLINEAR FIELDS UNIV OF NEW HAMPSHIRE | SHEPARD HARVEY | M 36 27/01/88 9187,774 | A NACHMAN 88-NM-201 | 921,951 01/07/88 921,951 |

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| ITERATIVE ALGORITHMS FOR THE NUMERICAL SOLUTION OF THE MATRIX EQUATION AX=B WRIGHT STATE UNIVERSITY | MILLER DAVID | N 36 27/01/88 897,353 | NACHMAN 88-NM-204 | 822,500 01/06/88 822,500 |
| NONDESTRUCTIVE EVALUATION AND CHARACTERIZATION OF MEDIA WITH MICROSTRUCTURE UNIV OF DELAWARE | SANTOSA PADIL | N 36 27/01/88 8150,128 | NACHMAN 88-NM-208 | 855,772 01/05/88 8129,772 |
| MASSIVELY PARALLEL COMPUTATIONAL FLUID DYNAMICS UNIVERSITY OF MICHIGAN | CALAMAN DONALD | N 17 29/01/88 8154,956 | NACHMAN 88-NM-211 | 850,720 01/08/88 847,476 |
| SYSTEM IDENTIFICATION AND FILTERING OF NONLENER CONTROLLED MARKOV PROCESSES BY CANONICAL VARIATE ANALYSIS BUSINESS & TECHNOLOGICAL SYSTEMS, INC. | LARIMORE WALLACE | N 06 29/01/88 850,720 | NACHMAN 88-NM-247 | 849,505 01/08/88 849,505 |
| RESEARCH IN MATHEMATICS AND COMPUTER SCIENCES: CALCULATION OF THE PROBABILITY OF UNDETECTED ERROR FOR CERTAIN ERROR DETECTION CODES QUALCOMM, INC. | VITERBI ANDREW | N 06 01/02/88 849,505 | NACHMAN 88-NM-259 | 838,658 01/09/88 838,658 |
| THE EFFECT OF SYMMETRY ON THE HYDRODYNAMIC STABILITY OF AND BIFURCATION FROM PLANAR SHEAR FLOWS WORCESTER POLYTECHNIC INSTITUTE | BRIDGES THOMAS | N 12 03/02/88 835,604 | NACHMAN 88-NM-266 | |
| USE OF THE CRAY-2 FOR SCIENTIFIC COMPUTATION CALIFORNIA INSTITUTE OF TECHNOLOGY | FOX GEOFFREY | N 12 03/02/88 8255,500 | NACHMAN 88-NM-270 | |
| MULTIDIMENSIONAL DYNAMIC PROBLEMS IN PLASTICITY DUKE UNIVERSITY | SCHAEFFER DAVID | N 36 09/02/88 8643,578 | NACHMAN 88-NM-276 | |
| COMPUTATIONAL METHODS FOR PROBLEMS IN FLUID DYNAMICS DOWLING GREEN UNIVERSITY | CHOU SO-HSIANG | N 06 27/02/88 85,330 | NACHMAN 88-NM-293 | 85,330 01/07/88 811,171 |

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| THEORETICAL BIOLOGY AND BIOMATHEMATICS | | | | |
| GORDON RESEARCH CONFERENCES INC | OTHMER | N 12 25/02/88 \$116,367 | A NACHMAN 88-NM-295 | \$5,000 01/06/88 \$5,000 |
| GRADUATE STUDENT AND POSTDOCTORAL FELLOWSHIP PROGRAM IN NONLINEAR DIFFERENTIAL EQUATIONS | | | | |
| UNIV OF MARYLAND | ANTMAN | N 36 26/02/88 \$421,795 | NACHMAN 88-NM-297 | |
| FOURTH COPPER MOUNTAIN MULTIGRID CONFERENCE | | | | |
| UNIV OF COLORADO AT DENVER | HANDEL | N 12 26/02/88 \$39,976 | NACHMAN 88-NM-298 | |
| MATERIAL INSTABILITIES IN SOLIDS | | | | |
| SOUTHERN ILLINOIS UNIVERSITY | SPECTOR | N 17 29/02/88 \$20,385 | A NACHMAN 88-NM-312 | \$20,385 01/06/88 \$20,385 |
| ANALOG COMPUTATION IN NEURAL SYSTEMS: ARCHITECTURES AND COMPLEXITY | | | | |
| PRINCETON UNIVERSITY | DICKINSON | N 12 29/02/88 \$66,986 | A NACHMAN 88-NM-313 | \$66,986 01/08/88 \$139,206 |
| INTERDISCIPLINARY RESEARCH ON VISCOELASTICITY AND RHEOLOGY | | | | |
| UNIV OF WISCONSIN | NOHEL | N 12 29/02/88 \$40,500 | A NACHMAN 88-NM-314 | \$40,500 01/06/88 \$40,500 |
| PROBLEMS IN NONLINEAR CONTINUUM DYNAMICS | | | | |
| UNIV OF WISCONSIN | SLEMROD | R 12 01/03/88 \$76,387 | NACHMAN 88-NM-328 | |
| MATHEMATICAL TOOLS FOR IMAGE RECONSTRUCTION | | | | |
| UNIV OF CALIFORNIA | GRUNBAUM | N 36 01/03/88 \$277,731 | A NACHMAN 88-NM-331 | \$95,650 01/08/88 \$305,548 |
| PULSE PROPAGATION IN TEMPORALLY DISPERSIVE MEDIA | | | | |
| WAVE-PRO | KRIEGSMAN | N 12 09/03/88 \$25,000 | A NACHMAN 88-NM-334 | \$25,000 01/07/88 \$25,000 |
| APPLICATIONS OF MULTIPARAMETER BIFURCATIONS OF PERIOD FUNCTIONS | | | | |
| UNIV OF MISSOURI | CHICONE | N 24 18/03/88 \$225,778 | NACHMAN 88-NM-344 | |

| TITLE (CONT.) INSTITUTION | INVESTIGATOR | PROBLEMS IN FLAME-FLOW INTERACTION UNIV OF NEW YORK CITY | NUMERICAL AND ANALYTICAL STUDIES OF NONLINEAR WAVE PROPAGATION STATE UNIVERSITY OF NEW YORK | INSTABILITY AND TRANSITION IN COMPRESSIBLE BOUNDARY LAYERS EXETER UNIVERSITY | ASYMPTOTIC SOLUTION OF INVERSE PROBLEMS USING FOURIER INTEGRAL OPERATOR METHODOLOGY COLORADO SCHOOL OF MINES | SOME MATHEMATICAL PROBLEMS IN CONTINUUM MECHANICS CARNEGIE-MELLON UNIVERSITY | INVESTIGATIONS OF EQUILIBRIA, LATTICES, AND CHAOTIC DYNAMICS OF 2-D HAMILTONIAN POINT VORTICES UNIV OF CALIFORNIA | CONFERENCE ON NONLINEAR PHENOMENA IN FLUID MECHANICS PENNSYLVANIA STATE UNIVERSITY | ADVANCED EXPLICIT MARCHING SCHEMES FOR THE EULER AND NAVIER-STOKES EQUATIONS UNIV OF MICHIGAN | CAUSTICS IN INVERSE SCATTERING RILE UNIVERSITY | TYPE/MONTHS RECEIVED AMOUNT | STATUS PROGRAM MANAGER PROPOSAL # | INITIATE START DATE TOT AMT |
|------------------------------|--------------|---|--|---|---|---|--|---|--|---|-------------------------------|-----------------------------------|----------------------------------|
| | SIVASHINSKY | GREGORY | MAGSTROM | HALL | MAGIN | HRUSA | KROTKE | BONA | LEER | SYPES | M 36 18/03/88 \$253,391 | NACHMAN 88-NM-347 | 954,778 01/09/88 \$131,087 |
| | THOMAS | PHILIP | | | | | | | | | M 36 21/03/88 \$115,622 | NACHMAN 88-NM-349 | |
| | | | | | | | | | | | M 36 22/03/88 \$131,087 | NACHMAN 88-NM-355 | |
| | | | | | | | | | | | M 15 23/03/88 \$118,460 | NACHMAN 88-NM-356 | |
| | | | | | | | | | | | M 12 25/03/88 \$129,805 | NACHMAN 88-NM-358 | 840,473 30/09/88 \$129,805 |
| | | | | | | | | | | | M 24 29/03/88 \$196,528 | NACHMAN 88-NM-363 | 873,270 01/09/88 \$73,270 |
| | | | | | | | | | | | M 12 29/03/88 \$24,550 | NACHMAN 88-NM-365 | |
| | | | | | | | | | | | M 24 30/03/88 \$233,208 | NACHMAN 88-NM-367 | |
| | | | | | | | | | | | M 12 15/04/88 \$16,849 | NACHMAN 88-NM-371 | 816,849 01/09/88 \$16,849 |

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|---|--------------------|-----------------------------------|---|-----------------------------------|
| A COMBINED MULTIGRID/MINIMAL-RESIDUAL STRATEGY FOR SOLVING NONLINEAR PARTIAL DIFFERENTIAL EQUATIONS UNIV OF MICHIGAN | PORELL KENNETH | N 24 25/04/88 \$150,759 | NACHMAN 88-NM-374 | |
| RESEARCH AND DEVELOPMENT OF THE P-VERSION OF THE FINITE ELEMENT METHOD WASHINGTON UNIVERSITY | KATZ I. NORMAN | R 36 25/04/88 \$290,696 | D NACHMAN 88-NM-376 | |
| A TOOL-BASED SOFTWARE LABORATORY FOR DISTRIBUTED AND PARALLEL COMPUTING UNIV OF ARIZONA | ANDREWS GREGORY | N 36 25/04/88 \$1,263,729 | NACHMAN 88-NM-377 | |
| PROBLEMS IN NONLINEAR PARTIAL DIFFERENTIAL EQUATIONS UNIV OF MICHIGAN | SMOLLER JOEL | N 12 26/04/88 \$67,197 | NACHMAN 88-NM-389 | |
| A HYBRID DIFFUSING VORTEX-FINITE-DIFFERENCE METHOD FOR INCOMPRESSIBLE NAVIER-STOKES EQUATIONS INTELLIGENT SYSTEMS INTEGRATION INC. | YUN LU ZHI | N 12 28/04/88 \$29,673 | NACHMAN 88-NM-391 | |
| HYBRID SCATTERED DATA TECHNIQUES IN COMPUTATIONAL FLUID DYNAMICS LAWRENCE LIVERMORE LAB (CALIF UNIV) | KANSA EDWARD | N 36 06/05/88 \$115,015 | NACHMAN 88-NM-398 | |
| MATHEMATICAL MODELLING OF ADVANCED FUEL PROPERTIES UNIV OF GEORGIA | KING BRUCE | N 36 06/05/88 \$368,606 | NACHMAN 88-NM-399 | |
| GEOMETRY OF ENERGY MINIMIZING SURFACES RUTGERS - THE STATE UNIVERSITY | TAYLOR JEAN | R 12 06/05/88 \$39,773 | A NACHMAN 88-NM-600 | \$39,773 01/09/88 \$39,773 |
| UNIQUE THEOREMS AND NUMERICAL SOLUTION TO 3D INVERSE SCATTERING PROBLEMS KANSAS STATE UNIVERSITY | RAMM ALEXANDER | N 36 06/05/88 \$274,068 | NACHMAN 88-NM-601 | |
| COLLECTIVE PROPERTIES OF NEURAL SYSTEMS AND THEIR RELATION TO OTHER PHYSICAL MODELS CLARKSON UNIVERSITY | FOKAS A | N 12 06/05/88 \$41,952 | NACHMAN 88-NM-602 | |

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| EFFICIENT ALGORITHMS FOR STRUCTURED MATRICES AND KERNELS UNIV OF CONNECTICUT | KOLTRACHT ISRAEL | N 36 11/05/88 8194,041 | NACHMAN 88-NM-410 | |
| NUMERICAL AND ANALYTICAL STUDIES OF STEFAN PROBLEMS NORTH CAROLINA A AND T STATE UNIV | BORIN BOLINDRA | M 12 12/05/88 990,876 | A NACHMAN 88-NM-411 | 95,000 01/09/88 8182,044 |
| ULTIMATE UNSTRUCTURED GRID METHOD(UUGH) SCIENCE APPLICATIONS INTERNATIONAL CORP. | EIDELMAN SHMUEL | N 36 16/05/88 9427,858 | NACHMAN 88-NM-413 | |
| SYSTEM OF NONLINEAR CONSERVATION LAWS NORTH CAROLINA STATE UNIVERSITY | SWEARER MICHAEL | R 24 17/05/88 699,238 | NACHMAN 88-NM-416 | |
| ADVANCED STUDIES OF INTEGRABLE SYSTEMS CLARKSON UNIVERSITY | KAUP DAVID | R 12 17/05/88 872,560 | A NACHMAN 88-NM-417 | 872,560 01/10/88 872,560 |
| ADAPTIVE GRID FINITE ELEMENT TECHNIQUES FOR TRANSONIC FULL POTENTIAL FLOW PROBLEMS BOEING COMPUTER SERVICES INC | BIETERMAN MICHAEL | N 18 17/05/88 8141,702 | NACHMAN 88-NM-418 | |
| DYNAMICAL SYSTEMS THEORY WITH APPLICATIONS TO ARTIFICIAL INTELLIGENCE AND FORECASTING LOS ALAMOS SCIENTIFIC LAB (CALIF UNIV) | FARMER J DOYNE | M 12 24/05/88 950,000 | A NACHMAN 88-NM-424 | 950,000 15/07/88 950,000 |
| NUMERICAL STUDIES OF ABSORBING BOUNDARY METHODS CARNEGIE-MELLON UNIVERSITY | BIELAK JACOBO | M 24 06/06/88 8133,206 | NACHMAN 88-NM-430 | |
| CENTER FOR ANALYSIS OF HETEROGENEOUS AND NONLINEAR MEDIA NEW YORK UNIVERSITY | CAPLISCH RUSSEL | R 12 06/06/88 8534,000 | NACHMAN 88-NM-432 | |

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|---|-------------------|-----------------------------------|---|-----------------------------------|
| FREE BOUNDARY PROBLEMS FOR FLOWS WITH VORTICITY WICHITA STATE UNIVERSITY | ELCRAT ALAN | R 12 08/06/88 923,337 | NACHMAN 08-NM-435 | |
| SIGNET-SOFTWARE TOOLS FOR SIGNAL IDENTIFICATION USING NEURAL NETWO RES SAM TECHNOLOGY, INC. | GEVINS ALAN | N 24 08/06/88 9521,073 | NACHMAN 08-NM-437 | |
| NONLINEAR PARTIAL DIFFERENTIAL EQUATIONS FOR GAS DYNAMICS AND ELAS TICITY NEW YORK UNIVERSITY | LIU TAI-PING | N 36 10/06/88 8165,747 | NACHMAN 08-NM-438 | |
| STUDIES IN GLOBAL BIFURCATION AND SYMMETRY CORNELL UNIVERSITY | HOLMES PHILIP | N 24 13/06/88 9389,413 | NACHMAN 08-NM-443 | |
| STUDIES IN GLOBAL BIFURCATION AND SYMMETRY CORNELL UNIVERSITY | GUCKENHEIMER JOHN | N 24 27/06/88 9389,413 | NACHMAN 08-NM-459 | |
| THE DESIGN OF A FAULT-TOLERANT ENVIRONMENT FOR DATABASE APPLICATIO NS FLORIDA ATLANTIC UNIVERSITY | FERNANDEZ EDUARDO | N 24 05/01/88 8194,206 | WAKSMAN 08-NM-176 | |
| SOFTWARE MODULES FOR STEREO, TEXTURE AND PERCEPTUAL GROUPING IN EAR LY VISION UNIV OF ILLINOIS | AMUJA NARENDRA | N 12 05/01/88 865,000 | A WAKSMAN 08-NM-178 | 865,000 01/07/88 857,389 |
| INVESTIGATIONS IN NONMONOTONIC REASONING ARTIFICIAL INTELLIGENCE RESEARCH INSTITUTE | BROWN FRANK | N 36 27/01/88 9341,650 | WAKSMAN 08-NM-209 | |
| PARALLEL COMPUTING OF NUMERICAL FLOW FIELDS TEMPLE UNIVERSITY SCHOOL OF MEDICINE | LIN AVI | N 24 27/01/88 9285,962 | WAKSMAN 08-NM-210 | |
| NONMONOTONIC TEMPORAL REASONING STANFORD UNIVERSITY | SMOHAN TOAY | N 24 03/02/88 9586,186 | WAKSMAN 08-NM-269 | |

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|--|---------------------|-----------------------------------|---|-----------------------------------|
| RESEARCH OF PROGRAMMING LANGUAGES AND SOFTWARE ENGINEERING UNIVERSITY OF MARYLAND | BASIL VICTOR | N 11 04/02/88 9374,520 | A WAKSMAN 88-NM-271 | 8223,781 01/07/88 8223,781 |
| TEXTURE PERCEPTION AND SHAPE FROM TEXTURE UNIV OF ILLINOIS | AMUJA MARENORA | N 12 04/02/88 958,399 | A WAKSMAN 88-NM-272 | 885,468 15/05/88 958,399 |
| MACHINE TRACTABLE DICTIONARIES AS TOOLS AND RESOURCES FOR NATURAL LANGUAGE PROCESSING NEW MEXICO STATE UNIVERSITY | WILKS YORICK | N 24 26/02/88 9386,247 | WAKSMAN 88-NM-300 | |
| HARDWARE AND SOFTWARE INSTRUMENTATION FOR PERFORMANCE MONITORING A ND APPLICATION SUPPORT FOR PARTITIONABLE SIMD/MIMD PARALLEL COMPUT PURDUE RESEARCH FOUNDATION | DAN MARINESCU | N 36 26/02/88 9887,024 | WAKSMAN 88-NM-309 | |
| PARALLEL ARCHITECTURES DESIGN, VALIDATION, IMPLEMENTATION UNIV OF MASSACHUSETTS | ROSEMBERG ARNOLD | N 36 29/02/88 9594,235 | WAKSMAN 88-NM-320 | |
| SCALE SEGEMENTATION AND REASONING UNDER UNCERTAINTY UNIV OF PENNSYLVANIA | BAJCKY RUZENA | N 36 01/03/88 9109,474 | A WAKSMAN 88-NM-329 | 8109,474 01/08/88 8358,263 |
| THE DEVELOPMENT OF STRUCTURE FOR THE REPRESENTATION AND MANIPULAT ION OF SOPHISTICATED KNOWLEDGE IN INTELLIGENT SYSTEMS IOWA COLLEGE | YAGER DONALD | N 24 01/03/88 831,381 | A WAKSMAN 88-NM-330 | 831,380 01/04/88 863,862 |
| COLLABORATIVE PLANNING HARVARD UNIVERSITY | GROSS BARBARA | N 12 07/03/88 828,019 | A WAKSMAN 88-NM-333 | 828,019 01/09/88 828,020 |
| SOFTWARE TOOLS FOR THE DESIGN AND TUNING OF PARALLEL SUPERCOMPUTER APPLICATIONS INDIANA UNIVERSITY FOUNDATION | GANNON DENNIS | N 24 21/03/88 9665,636 | WAKSMAN 88-NM-330 | |

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| ARTIFICIAL INTELLIGENCE DATABASE MANAGEMENT PURDUE RESEARCH FOUNDATION | CHEM-TU SHEU PHILLIP | N 24 25/04/88 9112,396 | WAKSMAN 88-NM-373 | 950,541 01/09/88 9267,434 |
| PARALLEL ARCHITECTURES AND ALGORITHMS FOR IMAGE UNDERSTANDING UNIV OF SOUTHERN CALIFORNIA | NEVATIA R. | N 06 25/04/88 9267,434 | A WAKSMAN 88-NM-375 | 950,541 01/09/88 9267,434 |
| SPEECH CODERS: A FAULT DIAGNOSTIC DESIGN APPROACH UNIV OF FLORIDA | CHILDERS DONALD | N 24 25/04/88 9266,846 | WAKSMAN 88-NM-381 | |
| THE ACQUISITION AND UTILIZATION OF SPATIAL AND FUNCTIONAL KNOWLEDGE FOR IMAGERY ANALYSIS CARNEGIE-MELLON UNIVERSITY | MCKEOWN DAVID | N 36 06/05/88 9627,489 | A WAKSMAN 88-NM-396 | 886,715 01/10/88 9520,775 |
| QUALITATIVE THEORY FOR NEURAL NETWORKS: ANALYSIS AND SYNTHESIS UNIV OF NOTRE DAME | MICHEL A | N 24 06/05/88 9133,614 | WAKSMAN 88-NM-397 | |
| DEVELOPMENT OF PROBABILISTIC AND POSSIBILISTIC APPROACHES TO APPROXIMATE REASONING AND ITS APPLICATIONS UNIV OF CALIFORNIA | ZADEH LOTFI | N 12 10/05/88 9150,000 | A WAKSMAN 88-NM-404 | 950,000 30/09/88 9150,000 |
| COMPUTER AND MATHEMATICAL MODELLING OF MASSIVELY PARALLEL ARCHITEC TURES FOR SELF-ORGANIZING NEURAL PATTERN RECOGNITION MACHINES BOSTON UNIVERSITY | GROSSBERG STEVEN | R 36 16/05/88 9473,202 | WAKSMAN 88-NM-412 | |
| ADVANCED RESEARCH WORKSHOPS ON APPROXIMATE REASONING SR. INTERNATIONAL | RUSPINI ENRIQUE | N 05 16/05/88 821,394 | A WAKSMAN 88-NM-414 | 921,394 01/07/88 921,394 |
| ADVANCED CONCEPTS AND METHODS OF APPROXIMATE REASONING SR. INTERNATIONAL | RUSPINI ENRIQUE | N 12 16/05/88 9101,309 | A WAKSMAN 88-NM-415 | 950,695 30/09/88 950,695 |
| DEFENSE ADVANCED RESEARCH PROJECTS AGENCY BROWN UNIVERSITY | DEAN THOMAS | N 06 19/05/88 875,000 | A WAKSMAN 88-NM-419 | 975,000 01/09/88 9440,000 |

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| TOWARD DEFINITION OF GENERIC PERFORMANCE INDICATORS FOR ARTIFICIAL INTELLIGENCE SOFTWARE DYNAMICS COMPUTER CORPORATION | WHITE MILTON | N 12 19/05/88 934,856 | WAKSMAN 88-NM-420 | 950,000 30/09/88 9719,000 |
| MEMORY-BASED EXPERT SYSTEMS YALE UNIVERSITY | SCHANK ROGER | N 06 23/05/88 9100,000 | A WAKSMAN 88-NM-421 | 952,800 01/10/88 9108,400 |
| EVALUATION METHODOLOGY FOR SOFTWARE ENGINEERING JOHNS HOPKINS UNIVERSITY | BLUM BRUCE | N 15 24/05/88 952,800 | A WAKSMAN 88-NM-422 | 915,000 30/09/88 935,000 |
| COMMISSION ON PHYSICAL SCIENCES, MATHEMATICS, AND RESOURCES NATIONAL ACADEMY OF SCIENCES | BLUMENTHA M. S. | N 18 24/05/88 915,000 | A WAKSMAN 88-NM-423 | 915,000 30/09/88 935,000 |
| THE ASCRIPTION AND USE OF NESTED BELIEFS IN MULTIPLE AGENT INTERAC TILN NEW MEXICO STATE UNIVERSITY | WILKS YORICK | N 24 06/06/88 9296,328 | WAKSMAN 88-NM-431 | 915,000 30/09/88 935,000 |
| UNCERTAINTY MODELING IN COMPUTER VISION UNIV OF MISSOURI | KELLER JAMES | N 36 08/06/88 9283,350 | WAKSMAN 88-NM-436 | 915,000 30/09/88 935,000 |
| PARALLEL PROCESSING REAL-TIME CRITICAL MAIN MEMORY DATABASE SYSTEM S MICHIGAN STATE UNIVERSITY | PRAMANIK SAKTI | N 12 13/06/88 932,684 | D WAKSMAN 88-NM-441 | 915,000 30/09/88 935,000 |
| UNCERTAINTY MODELING IN COMPUTER VISION UNIV OF MISSOURI | KELLER JAMES | N 36 13/06/88 9283,350 | WAKSMAN 88-NM-442 | 915,000 30/09/88 935,000 |
| DATA COMPILATION: ITS DESIGN AND ANALYSIS INDIANA UNIVERSITY FOUNDATION | FRANCO JOHN | N 36 13/06/88 9612,423 | WAKSMAN 88-NM-451 | 915,000 30/09/88 935,000 |

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| CONNECTIONIST VLSI ARCHITECTURES | | M 12 16/06/88 850,000 | A WAKSMAN 88-NM-652 | 850,000 01/10/88 850,000 |
| OREGON GRADUATE CENTER FOR STUDY & RESCH | HAMMERSTROM | | | |
| DAN | | | | |
| IMAGE UNDERSTANDING AND INTELLIGENT PARALLEL SYSTEMS | BROWN | M 06 17/06/88 850,000 | A WAKSMAN 88-NM-653 | 850,000 01/10/88 8680,000 |
| UNIV OF ROCHESTER | CHRISTOPHER | | | |
| DEVELOPMENT OF THE ASPECT GRAPH REPRESENTATION FOR USE IN ROBOT VISION | BOWYER | M 12 17/06/88 857,236 | A WAKSMAN 88-NM-654 | 857,236 01/10/88 8161,918 |
| UNIV OF SOUTH FLORIDA | KEVIN | | | |
| MULTIVARIATE PROBLEMS OF STATISTICS AND INFORMATION THEORY | | M 12 05/01/88 857,500 | A WOODRUFF 88-NM-167 | 857,500 15/04/88 857,500 |
| COLORADO STATE UNIVERSITY | SRIVASTAVA | | | |
| JAYA | | | | |
| STATISTICAL METHODOLOGIES FOR NON GAUSSIAN NOISY ENVIRONMENTS | | M 36 05/01/88 8296,511 | A WOODRUFF 88-NM-169 | 871,000 30/09/88 8235,000 |
| BOSTON UNIVERSITY | TARQU | | | |
| MURAD | | | | |
| DESIGN AND ANALYSIS OF COMPUTATIONAL EXPERIMENTS | | M 06 05/01/88 875,000 | WOODRUFF 88-NM-170 | |
| OAK RIDGE NATIONAL LAB | MITCHELL | | | |
| TODY | | | | |
| STOCHASTIC MODEL IN RELIABILITY | | R 12 05/01/88 866,177 | A WOODRUFF 88-NM-172 | 851,000 01/08/88 851,000 |
| UNIV OF CALIFORNIA | ROSS | | | |
| SHELDON | | | | |
| LIMITS FOR SEQUENTIAL TESTING, CROSSING TIMES AND MARK SUMS | | M 36 06/01/88 8159,124 | WOODRUFF 88-NM-187 | |
| UNIVERSITY OF MICHIGAN | KEENER | | | |
| ROBERT | | | | |
| REGULAR VARIATION IN SEVERAL VARIABLES | | M 36 27/01/88 830,766 | D WOODRUFF 88-NM-193 | |
| ALBION COLLEGE | MEERSCHAERT | | | |
| MARK | | | | |
| RELIABILITY ASSESSMENT FOR ONE-SHOT DEVICES BASED ON REPEATED SAMP LES | | R 12 27/01/88 837,472 | D WOODRUFF 88-NM-200 | |
| UNIV OF MISSOURI | BAIN | | | |
| LEE | | | | |

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| THEORY AND APPLICATION OF RANDOM FIELDS TECHNION-ISRAEL INST OF TECHNOLOGY | ADLER | R 36 09/02/88 \$119,000 | WOODRUFF 88-NM-275 | 948,200 01/10/88 \$99,200 |
| HIGHER ORDER CROSSINGS UNIV OF MARYLAND | KEDEM | R 36 29/02/88 \$182,850 | A WOODRUFF 88-NM-310 | |
| SOME STRUCTURAL ASPECTS OF RANDOM FIELDS UNIV OF CINCINNATI | BYC | M 24 29/02/88 \$37,206 | WOODRUFF 88-NM-311 | |
| FAST SIGNAL PROCESSING ALGORITHMS WITH APPLICATIONS TO PASSIVE SUR VEILLANCE AND IDENTIFICATION UNIV OF MINNESOTA | TEMPIK | M 36 29/02/88 \$299,891 | D WOODRUFF 88-NM-319 | |
| RESEARCH IN STATISTICAL INFERENCE TEXAS A AND M RESEARCH FOUNDATION | CARROLL | M 24 29/02/88 \$136,295 | WOODRUFF 88-NM-322 | |
| SUPERCOMPUTING IN EXPERIMENTAL DESIGN UNIV OF ILLINOIS | SACKS | M 09 04/03/88 \$21,000 | A WOODRUFF 88-NM-322 | 930,000 15/03/88 \$30,000 |
| SYSTEM RELIABILITY ANALYSIS AND INFERENCE UNIV OF CALIFORNIA | BARLOW | M 12 09/03/88 \$106,000 | A WOODRUFF 88-NM-335 | 8106,000 01/08/88 \$106,000 |
| BASIC RESEARCH IN RELIABILITY FOR REAL SYSTEMS UNIV OF SOUTHERN CALIFORNIA (ELEC ENG) | LI | M 24 14/03/88 \$104,000 | A WOODRUFF 88-NM-336 | 851,500 15/07/88 \$104,000 |
| STUDIES IN STATISTICAL SIGNAL PROCESSING STANFORD UNIVERSITY | KAILATH | R 24 17/03/88 \$355,378 | A WOODRUFF 88-NM-341 | 889,330 01/09/88 \$182,930 |

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| SOME PROBLEMS IN NONPARAMETRIC REGRESSION SOUTHERN METHODIST UNIVERSITY | EUBANK RANDALL | N 24 18/03/88 9103.012 | WOODRUFF 88-MM-345 | |
| SELF-COHERENCE-EXPLOITING ALGORITHMS FOR SIGNAL DETECTION, PARAMETER ESTIMATION AND EXTRACTION UNIV OF CALIFORNIA | GARDNER WILLIAM | N 36 18/03/88 9506.219 | WOODRUFF 88-MM-346 | |
| WORKSHOP ON HIGHER-ORDER SPECTRAL ANALYSIS UNIV OF SOUTHERN CALIFORNIA | MEHDEL JERRY | N 12 18/03/88 919.430 | D WOODRUFF 88-MM-348 | |
| DYNAMIC PROGRAMMING FOR OPTIMAL DETECTION, CLASSIFICATION, ESTIMATION AND SPECTRAL ANALYSIS UNIV OF RHODE ISLAND | KAY STEVEN | N 36 21/03/88 9210.795 | WOODRUFF 88-MM-353 | |
| ALGEBRAIC ASPECTS OF NETWORK RELIABILITY PROBLEMS COLLEGE OF WILLIAM AND MARY | SMIER DOUGLAS | N 24 31/03/88 9111.908 | WOODRUFF 88-MM-368 | |
| RELIABILITY ASSESSMENT FOR SYSTEMS SUBJECT TO MAINTENANCE & REPAIR CITY COLLEGE - CUMY | BROWN MARK | R 12 31/03/88 935.667 | WOODRUFF 88-MM-369 | |
| PROBABILITY AND STATISTICS APPLIED TO THE THEORY OF ALGORITHMS PRINCETON UNIVERSITY | STEELE J | N 36 31/03/88 9211.620 | WOODRUFF 88-MM-370 | |
| EIGHTEENTH CONFERENCE ON STOCHASTIC PROCESSES AND THEIR APPLICATIONS UNIV OF WISCONSIN | KURTZ THOMAS | N 12 25/04/88 840.507 | WOODRUFF 88-MM-380 | |
| MORTE CARLO RELIABILITY ANALYSIS NORTHWESTERN UNIVERSITY | LEWIS ELMER | R 24 25/04/88 9130.713 | WOODRUFF 88-MM-383 | |
| EXACT & DIAGNOSTIC PROCEDURES FOR THE ANALYSIS OF MIXED LINEAR MODELS UNIV OF FLORIDA | KHURI ANDRE | N 24 25/04/88 9240.308 | WOODRUFF 88-MM-394 | |

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| FAULT-TOLERANT SIGNAL DETECTION PRINCETON UNIVERSITY | REIDMAN AMY | N 36 25/04/88 8159,960 | WOODRUFF 88-NM-385 | |
| COMPUTATIONAL METHODS IN THE ANALYSIS AND DESIGN OF STOCHASTIC NET WORKS UNIV OF NORTH CAROLINA | FISHMAN GEORGE | R 36 25/04/88 81,492,085 | WOODRUFF 88-NM-386 | |
| OPTIMAL REPLACEMENT USING A SINGLE REPAIRMAN TEXAS A AND M RESEARCH FOUNDATION | FELDMAN R. | N 24 26/04/88 8111,761 | WOODRUFF 88-NM-390 | |
| SMALL BUSINESS INNOVATION RESEARCH PROGRAM PK CORPORATION | AZAKOS P PAPANTONI- | N 12 06/05/88 841,200 | D WOODRUFF 88-NM-403 | |
| CONSTRAINED PROBLEMS IN SUBOPTIMAL DECISION THEORY UNIV OF WISCONSIN | KURTZ THOMAS | N 36 11/05/88 8357,457 | WOODRUFF 88-NM-408 | |
| ADAPTIVE ALGORITHMS FOR NONLINEAR FILTERING UNIV OF UTAH | MATHEWS V. JOHN | N 24 11/05/88 8174,612 | WOODRUFF 88-NM-409 | |
| BOARD ON MATHEMATICAL SCIENCE NATIONAL ACADEMY OF SCIENCES | GILPEATHER FRANK | N 03 02/06/88 870,000 | A WOODRUFF 88-NM-428 | 870,000 01/07/88 870,000 |
| CODING AND MODULATION FOR POWER AND BAND-LIMITED CHANNELS UNIV OF CALIFORNIA | BIGLIERI EZIO | N 12 13/06/88 875,000 | WOODRUFF 89-NM-444 | |
| DESIGN OF EXPERIMENTS AND RELIABILITY MODELS UNIV OF ILLINOIS | MEDAYAT A. | R 36 21/06/88 8239,135 | WOODRUFF 88-NM-455 | |

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|---|----------------------|-----------------------------------|---|-----------------------------------|
| APPLICATIONS OF THE LOGISTIC AND GENERALIZED LOGISTIC DISTRIBUTION S MEMPHIS STATE UNIVERSITY | GEORGE E. OLUSEGUN | N 12 21/06/88 954,100 | WOODRUFF 88-NM-456 | |
| ALGORITHMS AND OPERATIONS FOR RELIABILITY AND CONNECTIVITY OF MULT I-MOP DATA NETWORKS UNIV OF VIRGINIA | PAPANTONI-KAZAKOS P. | N 24 21/06/88 9301,759 | WOODRUFF 88-NM-457 | |
| ROBUST DETECTION OF SIGNALS FOR MULTISENSOR DATA USING LARGE DEVIA TION THEORY MITEC INC | KAZAKOS DEMETRIOS | N 24 21/06/88 980,000 | WOODRUFF 88-NM-461 | |
| STUDIES IN RELIABILITY, ESTIMATION, AND STOCHASTIC SEARCH COLUMBIA UNIVERSITY | ROBBINS HERBERT | N 24 21/06/88 9231,639 | WOODRUFF 88-NM-462 | |

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|---|--------------------|-----------------------------------|---|-----------------------------------|
| A TWO-STREAM PLASMA ELECTRON MICROWAVE SOURCE FOR HIGH POWER MILLIMETER WAVE GENERATION APPLIED MICROWAVE PLASMA CONCEPTS | GUEST GARETH | N 06 05/02/88 849,820 | A BARKER 88-NP-049 | 849,820 01/08/88 849,820 |
| NOVEL ELECTRON-BEAM DRIVEN DEVICES FOR THE GENERATION OF AMPLIFICATION OF MILLIMETER-WAVE RADIATION IRT CORPORATION | PHELPS DAVE | N 06 05/02/88 850,486 | BARKER 88-NP-051 | |
| DEVELOPMENT OF MMWAVE GYROTRON CENTER FOR REMOTE SENSING | GANGULY SUNAM | N 06 05/02/88 882,480 | BARKER 88-NP-052 | |
| INVESTIGATION OF STIMULATED EMISSION STRIPLINE TRAVELING WAVE AMPL IFIER FOR MILLIMETER WAVE AMPLIFICATION STAR MICROWAVE | PHILLIPS ROBERT | N 06 16/02/88 849,748 | BARKER 88-NP-082 | |
| HIGH GAIN, METAL GRATING FREE ELECTRON LASER IRVINE SCIENCE ASSOCIATES | WESSEL FRANK | N 06 16/02/88 849,993 | BARKER 88-NP-083 | |
| MILLIMETER-WAVE/MICROWAVE FREE-ELECTRON POWER TUBE FELTECH | ELIAS LUIS | N 06 16/02/88 857,330 | BARKER 88-NP-094 | |
| DEVELOPMENT OF THE AXIAL INJECTION ORBITRON MASER (AXIOM) BURKE TECHNOLOGIES INC. | BURKE JOHN | N 06 16/02/88 849,996 | BARKER 88-NP-085 | |
| ULTRA-SHORT PULSES OF MILLIMETER WAVE RADIATION VIA MODELOCKED QUA SI-OPTICAL GYROTRON PHYSICAL SCIENCES INC. | READ MICHAEL | N 06 18/02/88 849,997 | BARKER 88-NP-091 | |
| A SYSTEM FOR INTERFACING WITH BASIC PLASMA PHYSICS COMPUTATIONS JAYCOR | GLADD N | R 12 17/03/88 9100,488 | A BARKER 88-NP-106 | 826,488 01/07/88 9100,488 |

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|---|--------------|-----------------------------------|---|------------------------------------|
| A JOINT INDUSTRY-UNIVERSITY PROGRAM FOR COMPUTATIONAL PLASMA RESEARCH MISSION RESEARCH CORP | GOPLEN | N 12 18/03/88 \$99,561 | A BARKER 88-NP-107 | \$25,000 01/07/88 \$99,561 |
| EXPERIMENTAL RESEARCH ON HIGH GRADIENT ACCELERATION BY WAKEFIELDS TEXAS A AND M RESEARCH FOUNDATION | CHEM | R 12 04/04/88 \$110,000 | A BARKER 88-NP-113 | \$110,000 01/07/88 \$110,000 |
| LASER SWITCHED POWER LINAC UNIV OF ROCHESTER | MELISSIMOS | R 12 08/04/88 \$163,000 | BARKER 88-NP-119 | |
| NOVEL METHODS OF ACCELERATION CORNELL UNIVERSITY | MATION | R 16 21/04/88 \$204,500 | A BARKER 88-NP-126 | \$204,500 30/09/88 \$204,500 |
| MILLIMETER WAVE GENERATION BY RELATIVISTIC ELECTRON BEAMS AND ARTIFICIAL ATMOSPHERIC PLASMA POLYTECHNIC UNIVERSITY | KUO | N 24 26/04/88 \$286,425 | A BARKER 88-NP-129 | \$139,649 01/10/88 \$286,425 |
| NONLINEAR MICROWAVE EFFECTS IN THE ATMOSPHERE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN | HILL | N 12 11/05/88 \$66,905 | BARKER 88-NP-133 | |
| COMPUTER SIMULATIONS OF RADIATION GENERATION FROM RELATIVISTIC ELECTRON BEAMS UNIV OF CALIFORNIA | LIM | R 12 22/06/88 \$155,000 | A BARKER 88-NP-146 | \$155,000 01/10/88 \$155,000 |
| SO T X-RAY LASER RESEARCH IN A MAGNETICALLY CONFINED PLASMA COLUMN PRINCETON UNIVERSITY | SUCKEWEH | R 12 23/06/88 \$103,350 | A BARKER 88-NP-147 | \$103,350 01/10/88 \$103,350 |
| BASIC STUDIES IN PLASMA PHYSICS: STATISTICAL MECHANICS OF INTERACTING COULOMB SYSTEMS RUTGERS - THE STATE UNIVERSITY | LEBOWITZ | R 12 30/06/88 \$90,513 | A BARKER 88-NP-149 | \$90,513 01/11/88 \$90,513 |
| MICROWAVE EMISSION FROM RELATIVISTIC ELECTRON BEAMS MASSACHUSETTS INSTITUTE OF TECHNOLOGY | BEREFTI | R 12 30/06/88 \$95,000 | A BARKER 88-NP-150 | \$95,000 01/11/88 \$95,000 |

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|---|--------------|-----------------------------------|---|-----------------------------------|
| SPECTRALLY RESOLVED DETECTION OF RAPIDLY CHANGING IR SIGNATURES (PC-034A) PHYSICAL SCIENCES INC | KRECH | N 06 05/02/88 849,993 | KELLEY 88-NP-055 | 86,500 01/07/88 86,500 |
| 1988 GORDON CONFERENCE ON PLASMA CHEMISTRY GORDON RESEARCH CONFERENCE INC | GARSCADDEN | N 12 29/02/88 86,500 | A KELLEY 88-NP-096 | 86,500 01/07/88 86,500 |
| EXPERIMENTS WITH TRAPPED NEUTRAL ATOMS MASSACHUSETTS INSTITUTE OF TECHNOLOGY | PRITCHARD | N 12 02/03/88 855,000 | A KELLEY 88-NP-097 | 855,000 01/04/88 855,000 |
| TERMOLECULAR ASSOCIATION OF IONS IN GASES GEORGIA TECH RESEARCH CORPORATION | FLANNERY | N 12 16/03/88 899,311 | A KELLEY 88-NP-105 | 899,311 01/07/88 899,311 |
| FORTY-FIRST ANNUAL GASEOUS ELECTRONICS CONFERENCE: UNIV OF MINNESOTA | ERNIE | N 12 18/03/88 87,500 | A KELLEY 88-NP-108 | 87,500 01/07/88 87,500 |
| INELASTIC COLLISIONAL PROCESSES TO MOLECULES UNIV OF WISCONSIN | LIN | N 12 23/04/88 8159,838 | KELLEY 88-NP-124 | |
| STUDIES OF PHOTON-ATOM/MOLECULE COLLISIONS UNIV OF CENTRAL FLORIDA | SAMA | N 24 18/05/88 8196,419 | KELLEY 88-NP-136 | |
| ANTI-PROTON STUDIES IN PENNING TRAPS HARVARD UNIVERSITY | GABRIELSE | N 32 21/01/88 8764,347 | A PRINCE 88-NP-042 | 8239,054 01/08/88 8764,347 |
| NOVEL TECHNIQUES IN SEISMIC DETECTION POTOMAS SYNERGETIC INC. (PSI) | CORCORAN | N 06 08/02/88 849,548 | PRINCE 88-NP-063 | |

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INNOVATION THEORETICAL DISCRIMINANT FOR SEISMIC DETECTION AND
DIFFERENTIATION
MISSION RESEARCH CORP

INVESTIGATOR
STONE

TYPE/MONTHS
RECEIVED
AMOUNT

ULTRASENSITIVE STM-BASED SENSOR FOR DETECTING SEISMIC SIGNALS
QUANSCAN, INC.

INVESTIGATOR
WEST

N 06
09/02/88
\$50,576

MULTIVARIATE SIGNAL ANALYSIS NOVEL TECHNIQUES IN SEISMIC
DETECTION
TOR GEOPHYSICS CORPORATION

INVESTIGATOR
KON

N 06
11/02/88
\$49,995

INVESTIGATION OF IMPROVED PIEZOELECTRIC SEISMIC TRANSDUCERS
WILCORON RESEARCH

INVESTIGATOR
WILCORON

N 06
11/02/88
\$50,000

DEVELOPMENT OF FIBER OPTIC SEISMOMETER SYSTEM
EDGEWISE SENSOR PRODUCTS

INVESTIGATOR
CAROME

N 06
11/02/88
\$49,981

NOVEL TECHNIQUES IN SEISMIC DETECTION
PAL CONSULTANTS, INC.

INVESTIGATOR
PAL

N 06
11/02/88
\$49,985

SATELLITE-BORNE SEISMOMETER (SBS) FOR ESTIMATION OF YIELDS OF
UNDERGROUND NUCLEAR TESTS
EAGLE RESEARCH GROUP, INC.

INVESTIGATOR
SQUIRE

N 06
11/02/88
\$49,985

THE USE OF NONLINEAR SYSTEM IDENTIFICATION TECHNIQUES FOR
IMPROVED SEISMIC DETECTION
MULTISPEC CORPORATION

INVESTIGATOR
SHEBY

N 06
11/02/88
\$49,306

CORRELATION BETWEEN SUDDEN IONOSPHERIC DISTURBANCES AND
EARTHQUAKES
APPLIED CRYSTAL ENGINEERING, INC.

INVESTIGATOR
KEYSER

N 06
10/02/88
\$49,980

SEISMIC DETECTION BY USE OF SUPERCONDUCTIVE MAGNETIC LEVITATION
LBLM ASSOCIATES, INC.

INVESTIGATOR
CRAVENS

STATUS
PROGRAM MANAGER
PROPOSAL #

STEVE

PAUL

JOSEPH

M.

EDWARD

NICK

ROBERT

DAVID

EDDIE

DEMMIS

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|---|------------------|-----------------------------------|---|-----------------------------------|
| EXTREMELY SENSITIVE, RUGGED, AND DIRECTIONAL SEISMOMETER OPTIMA SYSTEMS, INC. | LEON EKCHIAN | N 06 18/02/88 950,000 | PRINCE 88-NP-087 | 915,000 01/10/87 915,000 |
| COMMISSION ON PHYSICAL SCIENCES, MATHEMATICS, AND RESOURCES NATIONAL SCIENCE FOUNDATION | JOSEPH BERG | N 12 05/04/88 915,000 | A PRINCE 88-NP-115 | |
| TO FUND TRAVEL EXPENSES FOR INVITED SCIENTIFIC/TECHNICAL GUEST SPEAKERS TO ADDRESS SYMPOSIA AT ABET SCHOOL OF ENGINEERING AIR FORCE INSTITUTE OF TECHNOLOGY | JAMES MILLS | N 12 07/04/88 912,000 | A PRINCE 88-NP-117 | |
| DESIGN STUDY P COOLING IN AGS BOOSTER UNIV OF MARYLAND | D. PEASLEE | N 12 13/04/88 968,516 | PRINCE 88-NP-120 | |
| COMMITTEE ON GEODESY NATIONAL ACADEMY OF SCIENCES | ROBERT LONG | N 12 26/04/88 97,000 | PRINCE 88-NP-127 | |
| DETERMINATION AND STOCHASTIC WAVE FIELDS IN THE NEAR-FIELD FROM EXPLOSIVE SOURCES/6 MRS CRAY TIME FOR SRU/AOSR 88-0016 AIR FORCE WEAPONS LAB | ROBERT RIENKE | N 04 31/05/88 96,000 | A PRINCE 88-NP-140 | 96,000 01/06/88 96,000 |
| DIAGNOSTICS OF MAGNETIC SUBSTORMS USING SATELLITE OBSERVATIONS OF MAGNETIC PULSATIONS SOUTHWEST RESEARCH INSTITUTE | LIN CHIN | N 36 27/01/88 8433,250 | A RADOSKI 88-NP-041 | 8140,340 01/10/88 9433,250 |
| GEOMAGNETIC PULSATIONS OF THE EARTH'S MAGNETOSPHERE ELECTRO MAGNETIC APPLICATIONS INC | NG PDM | N 06 05/02/88 850,064 | RADOSKI 88-NP-050 | |
| MAGNETIC PULSATIONS AS DIAGNOSTIC OF EARTH'S MAGNETOSPHERE SM SYSTEMS & RESEARCH CORPORATION | SOMAYAJULU T. | N 06 05/02/88 848,935 | RADOSKI 88-NP-053 | |

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|---|----------------------|-----------------------------------|---|-----------------------------------|
| MODELING OF THE GLOBAL IONOSPHERIC ENRICO LEVI, INC. | WMANG MICHAEL | M 06 05/02/88 848,783 | RADOSKI 88-NP-054 | 9348,074 01/10/88 8488,568 |
| PROBING COSMIC INFRARED SOURCES: A COMPUTER MODELING APPROACH RENSSELAER POLYTECHNIC INSTITUTE | LEUNG CHUM | M 36 09/02/88 8488,568 | A RADOSKI 88-NP-066 | 9348,074 01/10/88 8488,568 |
| GEOMAGNETIC PULSATIOMS AS DIAGNOSTIC TOOLS OF THE EARTH'S MAGNETOSPHERE AEROTECH SYSTEMS CORPORATION | PRASAD J. | M 06 16/02/88 849,565 | RADOSKI 88-NP-079 | |
| GEOMAGNETIC PULSATIOMS AS A DIAGNOSTIC OF THE EARTH'S MAGNETO- SPHERE TECHNIC RESEARCH LABORATORIES | RAUSCHER E. | M 06 16/02/88 849,555 | RADOSKI 88-NP-080 | |
| GEOMAGNETIC PULSATIOMS AS A DIAGNOSTIC OF THE EARTH'S FIELD: CORRELATION OF LAND BASED SOLAR DIAGNOSTICS WITH APGL-MAGNET DATA TOPIC TECHNOLOGY | GRAY ROBERT | M 06 16/02/88 848,000 | RADOSKI 88-NP-081 | |
| EQUILIBRIUM MODEL OF THE EARTH'S MAGNETOSPHERE AIR FORCE GEOPHYSICS LABORATORY | HEINEMANN MICHAEL | M 12 07/06/88 860,000 | A RADOSKI 88-NP-116 | 860,000 01/10/88 860,000 |
| THE SOLAR ACTIVITY CYCLE NEW JERSEY INSTITUTE OF TECHNOLOGY | GOODE PHILIP | M 36 26/06/88 8273,085 | A RADOSKI 88-NP-128 | 884,882 01/10/88 8273,085 |
| A SEARCH FOR LOW-LUMINOSITY OBJECTS UNIV OF ARIZONA | GENRELS TOM | R 36 12/05/88 8233,429 | A RADOSKI 88-NP-135 | 874,376 01/11/88 8233,429 |
| MATHEMATICAL MODELING OF SOLAR MAGNETO-DYNAMICS COLUMBIA UNIVERSITY | SPIEGEL EDWARD | M 36 06/06/88 8625,051 | A RADOSKI 88-NP-141 | 8200,667 01/10/88 8625,051 |
| FEASIBILITY STUDY OF LAGEOS SATELLITE EXPERIMENT AIR FORCE GEOPHYSICS LABORATORY | MILLER W. | M 12 12/01/88 835,000 | A SCHLOSSBER 88-NP-034 | |

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|---|--------------|-----------------------------------|---|------------------------------------|
| NONLINEAR OPTICAL PHASE CONJUGATION STUDIES CALIFORNIA INSTITUTE OF TECHNOLOGY | YARIV | M 24 14/01/88 9220,000 | A SCHLOSSER 88-NP-035 | 810,000 01/01/88 9220,000 |
| ORGANIZATION OF THE TOPICAL MEETING ON NONLINEAR OPTICAL PROPERTIES OF MATERIALS OPTICAL SOCIETY OF AMERICA | QUINN | M 12 29/01/88 915,000 | A SCHLOSSER 88-NP-043 | 915,000 01/01/88 915,000 |
| ORGANIZATION OF THE FOURTH TOPICAL MEETING ON SHORT WAVELENGTH COHERENT RADIATION: GENERATION AND APPLICATIONS OPTICAL SOCIETY OF AMERICA | QUINN | M 12 29/01/88 910,000 | A SCHLOSSER 88-NP-044 | 910,000 01/06/88 910,000 |
| PICOSECOND OSCILLOSCOPE AERODYNE RESEARCH INC | PUTNAM | M 06 29/01/88 949,969 | SCHLOSSER 88-NP-046 | |
| SYNTHETIC NONLINEAR MEDIA STANFORD UNIVERSITY | BYER | M 36 02/02/88 91,046,288 | A SCHLOSSER 88-NP-047 | 8107,317 01/06/88 91,030,288 |
| ULTRA-SENSITIVE ELEMENT ANALYSIS BY COMBINING LASER ATOMIZATION WITH RESONANCE IONIZATION SPECTROSCOPY ATOM SCIENCES, INC. | THOMARD | M 06 08/02/88 956,655 | SCHLOSSER 88-NP-058 | |
| OPTICAL SCATTER INSTRUMENT FOR HIGH PERFORMANCE OPTICS DEACON RESEARCH | G. DEACON | M 06 08/02/88 954,985 | SCHLOSSER 88-NP-059 | |
| DESIGN AND APPLICATION OF AN OPTICAL SCATTERMETER FOR SURFACE DIAGNOSTICS SANDIA LABORATORIES | JACOBSON | M 06 08/02/88 957,522 | SCHLOSSER 88-NP-060 | |
| (TEM)00 CONTINUOUS-WAVE ULTRAVIOLET LASER SANDIA LABORATORIES | YU | M 06 08/02/88 956,564 | SCHLOSSER 88-NP-061 | |

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|--|------------------------|-----------------------------------|---|------------------------------------|
| MICROWAVE CHARACTERIZATION OF NONLINEAR PROPERTIES OF MATERIALS LARGO SCIENTIFIC INC. | BLOCH SYLVAN | N 06 08/02/88 849,731 | SCHLOSSER 88-NP-062 | |
| CRYSTAL LASER BEAM MONITOR KUD & ASSOCIATES | MCCANN MICHAEL | N 06 16/02/88 950,000 | SCHLOSSER 88-NP-075 | |
| A MODULAR, NON-CONTACT ROUNDNESS MEASUREMENT SYSTEM: CONTROL SYSTEM & SENSOR CAPABILITIES LASER METRIC SYSTEMS, INC. | PAPURT DAVID | N 06 16/02/88 957,225 | SCHLOSSER 88-NP-076 | |
| ADVANCED PULSED NARROWBAND LASER LASER TECHNOLOGY ASSOCIATES | BROWN DAVID | N 06 16/02/88 849,976 | SCHLOSSER 88-NP-077 | |
| GEOMAGNETIC PULSATIONS AS A DIAGNOSTIC OF THE EARTH'S MAGNETOSPHERE E SYNETICS CORP | LAQUADRA GREGORY | N 06 16/02/88 950,166 | SCHLOSSER 88-NP-078 | |
| SINGLE CRYSTAL FIBERS OF MGO: LIMBO3 LASER GENICS CORPORATION | SCHLECHT RICHARD | N 06 18/02/88 849,838 | A SCHLOSSER 88-NP-088 | 849,838 01/08/88 849,838 |
| RESEARCH INSTRUMENTATION (RIPSODL) FOR FREE SPACE OPTICAL DATA LIN AS ENERGY OPTICS, INC. | COX TIMOTHY | N 06 18/02/88 952,107 | SCHLOSSER 88-NP-089 | |
| DEVELOPMENT OF A PORTABLE AUTOMATED DIRECTIONAL REFLECTOMETER SURFACE OPTICS CORPORATION | NEU JOHN | N 06 18/02/88 849,856 | SCHLOSSER 88-NP-090 | |
| UV/XUV FEL STORAGE RING AND LINAC DUKE UNIVERSITY | MADEY JOHN M. | N 36 18/02/88 97,219,584 | A SCHLOSSER 88-NP-092 | 800,000 01/07/88 \$3,600,000 |
| QUASI-CW EXCIMER LASER POTOMAC PHOTONICS INC. | CHRISTENSEN C. PAUL | N 06 24/02/88 848,836 | A SCHLOSSER 88-NP-093 | 824,981 01/09/88 849,893 |

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|---|-------------------|-----------------------------------|---------------------------------|-----------------------------------|
| RESEARCH ON ADVANCED SOURCE DEVELOPMENT AND APPLICATIONS DUKE UNIVERSITY | MADEY JOHN | N 112 24/02/88 8600,000 | A SCHLOSSER 88-NP-095 | 8390,000 01/07/88 8600,000 |
| VACUUM-ULTRAVIOLET FREE-ELECTRON LASER UNIV OF CALIFORNIA | BRAU C. | N 24 07/03/88 81,499,948 | SCHLOSSER 88-NP-099 | |
| SUBPICSECONDELECTRONIC SAMPLING AND DISTRIBUTED NONLINEAR ELECTRONICS STANFORD UNIVERSITY | BLOOM DAVID | N 36 11/03/88 8564,237 | A SCHLOSSER 88-NP-101 | 860,000 01/09/88 8564,237 |
| SIXTH ROCHESTER CONFERENCE ON COHERENCE AND QUANTUM OPTICS UNIV OF ROCHESTER | EBERLY JOSEPH | N 36 11/03/88 844,330 | A SCHLOSSER 88-NP-102 | 838,000 01/09/88 838,000 |
| STIMULATED SCATTERING AND PHASE CONJUGATION IN PHOTOREFRACTIVE MATERIALS UNIV OF SOUTHERN CALIFORNIA | FEINBERG JACK | N 36 14/03/88 8644,045 | A SCHLOSSER 88-NP-104 | 886,000 01/07/88 8644,045 |
| CM ULTRAVIOLET LASER EXCITED WITH AN ELECTRON BEAM COLORADO STATE UNIVERSITY | ROCCA JORGE | R 12 23/03/88 858,920 | A SCHLOSSER 88-NP-110 | 835,529 01/07/88 835,529 |
| DEVELOPMENT OF PHOTO-DEPOSITED DIAMOND FILMS DEACON RESEARCH | O'KEEF ANTHONY | N 06 30/03/88 849,970 | A SCHLOSSER 88-NP-112 | 854,833 01/08/88 849,968 |
| VUV AND UV SOURCES AND SPECTROSCOPIC APPLICATIONS UNIV OF ILLINOIS | EDEN J. | R 36 08/04/88 8749,964 | A SCHLOSSER 88-NP-118 | 8190,000 01/10/88 8570,000 |
| RESEARCH STUDIES ON EXTREME ULTRAVIOLET AND SOFT X-RAY LASERS STANFORD UNIVERSITY | HARRIS S | N 36 19/04/88 82,109,619 | A SCHLOSSER 88-NP-123 | 823,619 01/09/88 82,109,621 |

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| ACQUISITION OF A MOLECULAR-BEAM-EPIITAXY MACHINE FOR SEMICONDUCTOR PHYSICS AND OPTICAL COMPUTING RESEARCH UNIV OF ARIZONA | GIBBS MYATT | M 12 09/05/88 \$325,000 | SCHLOSSER 88-NP-131 | |
| STIMULATED SCATTERING AND PHASE CONJUGATION IN PHOTOREFRACTIVE MATERIALS UNIV OF SOUTHERN CALIFORNIA | FEINBERG JACK | R 36 11/05/88 \$644,045 | SCHLOSSER 88-NP-132 | |
| CRYSTAL GROWTH AND NOVEL DEVICE APPLICATIONS OF KND3 HUGHES AIRCRAFT CO | KLEIN M. | M 36 11/05/88 \$923,413 | SCHLOSSER 88-NP-134 | |
| OPTOELECTRONICS RESEARCH CENTER UNIV OF NEW MEXICO | BRUECK S | R 36 25/05/88 \$3,000,000 | A SCHLOSSER 88-NP-139 | 815,028 01/09/88 \$3,000,000 |
| CHAOS AND TURBULENCE IN LASERS - EXPERIMENT AND THEORY DREXEL UNIVERSITY | GILMORE ROBERT | M 36 10/06/88 \$327,585 | SCHLOSSER 88-NP-142 | |
| RESEARCH STUDIES ON EXTREME ULTRAVIOLET AND SOFT X-RAY LASERS STANFORD UNIVERSITY | HARRIS S. | R 36 10/06/88 \$2,109,619 | SCHLOSSER 88-NP-143 | |
| LASER HEATING OF SMALL CYLINDRICAL CAVITIES AND SOFT X-RAY LASERS LEHIGH UNIVERSITY | PARULA RICARDO | M 36 21/06/88 \$280,380 | SCHLOSSER 88-NP-144 | |
| INNOVATIVE SCIENCES TECHNICAL EXPERIMENTATION CENTER EASTERN SPACE & MISSILE CENTER | KENNEDY MICK | M 09 22/01/88 \$500,000 | A SMITH 88-NP-036 | \$500,000 01/01/88 \$500,000 |
| APPLICATION OF NONLINEAR OPTICAL TECHNIQUES TO COUPLING AND PHASING OF MULTIPLE LASER DEVICES AIR FORCE INSTITUTE OF TECHNOLOGY | ROH MON | M 08 22/01/88 \$50,000 | A SMITH 88-NP-037 | \$50,000 01/02/88 \$50,000 |
| OPTICALLY CONTROLLED SOLID STATE REPETITIVE OPENING SWITCHES: HIGH TC SUPERCONDUCTORS AND DIAMOND AND GRAPHITE UNIV OF MARYLAND | LEE CHI | M 40 29/01/88 \$489,600 | A SMITH 88-NP-045 | \$54,121 01/08/88 \$489,600 |

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| SDIO INNOVATIVE SCIENCE AND TECHNOLOGY: PARTICLE BEAMS LOS ALAMOS TECHNICAL ASSOCIATES INC | VOGEL HERBERT | M 12 04/02/88 \$50,000 | SMITH 88-NP-048 | |
| GRAND CHALLENGES TO COMPUTATIONAL SCIENCE LAWRENCE LIVERMORE LAB (CALIF UNIV) | NOMAK PAUL | M 08 08/02/88 \$10,000 | A SMITH 88-NP-056 | \$5,500 01/03/88 \$10,000 |
| MAGNETIC DEFLECTION OSCILLATOR, A HIGH POWER DEVICE TETRA CORPORATION | MOENY M. | M 06 08/02/88 \$59,424 | SMITH 88-NP-057 | |
| DISSOCIATIVE RECOMBINATION: THEORY, EXPERIMENT AND APPLICATION UNIV OF WESTERN ONTARIO | MITCHELL BRIAN | M 05 08/02/88 \$10,500 | A SMITH 88-NP-064 | \$10,500 01/05/88 \$10,500 |
| FLUCTUATIONS IN H SOURCES LOS ALAMOS SCIENTIFIC LAB (DOE) | GERMIN RICHARD | M 24 18/03/88 \$150,000 | SMITH 88-NP-109 | |
| THEORETICAL STUDIES OF THE ELECTRONICS AND RESONANCE STRUCTURE OF ATOMIC AND MOLECULAR NEGATIVE IONS UNITED TECHNOLOGIES RESEARCH CENTER | MICHELS M. | M 36 28/03/88 \$349,982 | SMITH 88-NP-111 | |
| ELECTRON PRODUCTION, ELECTRON ATTACHMENT, AND CHARGE RECOMBINATION IN HIGH PRESSURE GAS DISCHARGES SAN DIEGO STATE UNIVERSITY | LEE LONG | R 12 13/04/88 \$123,240 | SMITH 88-NP-121 | |
| PROPAGATION OF A NEUTRALIZED ION BEAM (PLASMOID) IN A TRANSVERSE MAGNETIC FIELD UNIV OF CALIFORNIA | ROSTOKER NORMAN | M 28 14/04/88 \$504,335 | A SMITH 88-NP-122 | \$65,000 01/08/88 \$504,335 |
| ELECTRON PRODUCTION, ELECTRON ATTACHMENT, AND CHARGE RECOMBINATION IN HIGH PRESSURE GAS DISCHARGES SAN DIEGO STATE UNIVERSITY | LEE LONG | R 12 21/04/88 \$114,450 | SMITH 88-NP-125 | |

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| INVESTIGATION OF HIGH EFFICIENCY HOMOGENEOUS MULTIJUNCTION SOLAR CELLS UNIV OF WASHINGTON | OLSEN LARRY | R 24 18/05/88 8272,259 | SMITH 88-NP-137 | 82,600,000 01/06/88 82,600,000 |
| INNOVATIVE SCIENCES TECHNICAL EXPERIMENTATION CENTER EASTERN SPACE & MISSILE CENTER | KENNEDY MIKE | N 16 19/05/88 92,600,000 | A SMITH 88-NP-138 | 82,600,000 01/10/88 82,600,000 |
| SURFACE PRODUCTION OF IONS STEVENS INSTITUTE OF TECHNOLOGY | SEIDL MILDS | R 10 22/06/88 8212,269 | A SMITH 88-NP-145 | 8212,269 01/10/88 8212,269 |
| PULSE POWER FORMULARY NORTH STAR RESEARCH CORPORATION | ADLER RICHARD | N 07 28/06/88 833,175 | A SMITH 88-NP-148 | 833,175 01/10/88 833,175 |