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March 31, 1992

Dr. Arthur K. Jordan (ONR Code 1114SE)
Department of the Navy
Office of the Chief of Naval Research
800 North Quincy Street
Arlington, VA 22217-5000

DTIC
ELECTE
APR 22 1992
S C D

Re: Contract N00014-90-J-1197 - Quarterly Progress Report

Dear Dr. Jordan:

Enclosed please find three copies of a brief *Quarterly Progress Report* for the above referenced contract, which covers the period from January 1 through March 31, 1992.

With best regards, I remain,

Respectfully yours,

Krzysztof A. Michalski, Ph.D.
Associate Professor

cc:

ONR Resident Representative
Director of NRL
Defense Technical Information Center ✓
TAMU Research Foundation

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AJ-AZ48 951

TITLE: Radiation, Scattering, and Guidance of Electromagnetic Fields by Arbitrarily Shaped Structures Embedded in Layered Dielectric Media

PRINCIPAL INVESTIGATOR: Professor K. A. Michalski

LOCATION: Texas A&M University
Department of Electrical Engineering
College Station, Texas 77843-3128

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GRANT NO: N00014-90-J-1197

R&T PROJECT CODE: 4143128-02

SCIENTIFIC OFFICER: Dr. Arthur K. Jordan

QUARTERLY PROGRESS REPORT
(January 1, 1992 — March 31, 1992)

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We have developed a technique for the computation of the radar cross-section (RCS) of loaded and unloaded microstrip patch antennas of arbitrary shape. (I will present a paper on this research in a joint AP-S/URSI session during the upcoming AP-S Symposium in Chicago.) We continued research into a related problem of an arbitrarily shaped microstrip patch antenna excited through an iris in a rectangular waveguide. We also continued to make progress in the analysis of three-dimensional microstrip discontinuities and in the analysis of single and coupled integrated dielectric waveguides.



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