REPORT DOCUMENTATION PAGE

Form Approved OMB NO. 0704-0188

1. REPORT DATE (DD-MM-YYYY)	2. REPORT TYPE	3. DATES COVERED (From - To)
19-01-2019	Final Report	15-Aug-2015 - 14-Aug-2016

4. TITLE AND SUBTITLE
Final Report: MRI Compatible EEG and Transcranial Current Stimulation for Brain Research

5a. CONTRACT NUMBER
W911NF-15-1-0339

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER
611103

6. AUTHORS

5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAMES AND ADDRESSES

Rutgers, The State University
249 University Avenue
Suite 206
Newark, NJ 07102 -1808

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS (ES)

U.S. Army Research Office
P.O. Box 12211
Research Triangle Park, NC 27709-2211

10. SPONSOR/MONITOR'S ACRONYM(S)
ARO

11. SPONSOR/MONITOR'S REPORT NUMBER(S)
66874-LS-RIP.1

12. DISTRIBUTION AVAILIBILITY STATEMENT

Approved for public release; distribution is unlimited.

13. SUPPLEMENTARY NOTES

The views, opinions and/or findings contained in this report are those of the author(s) and should not contrued as an official Department of the Army position, policy or decision, unless so designated by other documentation.

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	15. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			Bart Krekelberg
UU	UU	UU	UU		19b. TELEPHONE NUMBER: 973-353-3602

RPPR Final Report
as of 24-Jan-2019

Agency Code:

Proposal Number: 66874LSRIP **Agreement Number: W911NF-15-1-0339**
INVESTIGATOR(S):

Name: Bart Krekelberg
Email: bart@vision.rutgers.edu
Phone Number: 9733533602
Principal: Y

Organization: **Rutgers, The State University**
Address: 249 University Avenue, Newark, NJ 071021808
Country: USA
DUNS Number: 130029205 EIN: 226001086
Report Date: 14-Nov-2016 Date Received: 19-Jan-2019
Final Report for Period Beginning 15-Aug-2015 and Ending 14-Aug-2016
Title: MRI Compatible EEG and Transcranial Current Stimulation for Brain Research
Begin Performance Period: 15-Aug-2015 **End Performance Period:** 14-Aug-2016
Report Term: 0-Other
Submitted By: Bart Krekelberg Email: bart@vision.rutgers.edu
Phone: (973) 353-3602
Distribution Statement: 1-Approved for public release; distribution is unlimited.

STEM Degrees: 0 **STEM Participants:** 0

Major Goals: The primary goal of this project was to install state-of-the-art devices for transcranial current stimulation for use by several groups of cognitive neuroscience researchers at Rutgers University - Newark.

Accomplishments: We purchased a 256 channel device from Electrical Geodesics, Inc - this device can record and stimulate through each of its channels and thereby provides virtually unlimited opportunities for targeting and fine-tuning of transcranial stimulation protocols. The device was integrated into a human behavioral recording setup, and much effort has been put into assuring its safe operation, writing software to integrate its operation with behavioral control and audio-visual stimulus presentation. Several research groups at Rutgers University have contributed to this effort, in terms of troubleshooting EEG recordings, testing stimulation, and temporal synchronization with other devices. As one of our Center's goals is to maximize the cross-talk between animal and human experiments, we have also developed techniques to use this device with animals and purchased and installed a separate device for image-guided neurosurgical procedures. The latter is essential to validate the spatial targeting that the EGI device aims to achieve and is an active topic of research.

Training Opportunities: Trainees ranging from undergraduate to the postdoctoral level have now been trained to work with this new research instrument, mainly through one-on-one training provided by the company and, more recently, by experienced users within our Center. This is an ongoing effort and, given that three research groups are actively using the instrument, many students in our Neuroscience programs will continue to benefit.

Results Dissemination: Nothing to Report

Honors and Awards: Nothing to Report

Protocol Activity Status:

Technology Transfer: Nothing to Report

PARTICIPANTS:

Participant Type: PD/PI
Participant: Bart Krekelberg
Person Months Worked: 1.00 **Funding Support:**
Project Contribution:

International Collaboration:
International Travel:
National Academy Member: N
Other Collaborators:

Nothing to report in the uploaded pdf (see accomplishments)