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RPPR Final Report
as of 24-Jan-2019

Agency Code:

Proposal Number: 66874LSRIP

Agreement Number: W911NF-15-1-0339

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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

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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

Project Contribution:

Funding Support:

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

Nothing to report in the uploaded pdf (see accomplishments)