

**Cognition and Neuroergonomics (CaN)
Collaborative Technology Alliance (CTA)
All Hands Meeting 2015**

Date: NOVEMBER 18-19, 2015

Location: UC San Diego
San Diego Supercomputer Center
10100 Hopkins Drive
La Jolla, California 92093

AGENDA

Day 1 – November 18, 2015

08:00 **Arrival**

08:15 **Welcome**

08:30 **CTA Status: Overview, News and Meeting Objectives**

**Advanced Computational Approaches (ACA) science area project review
(15 min. per project):**

09:00 LSIE EEG Focused Analysis (ACA-LSIE-EEG)

09:15 Adaptive Time-frequency Methods for Non-stationary Signals (ACA-NS)

09:30 Deep Learning (ACA-DL)

09:45 Transfer Learning for real-world imaging (ACA-TL)

10:00 **Break – 15 mins.**

ACA project review continued (15 min. per project):

10:15 ACA ECoG / EEG Data Collection (ACA-EDC)

10:30 ECoG / EEG Source-Resolved Data Analysis (ACA-ESRDA)

10:45 Understanding Uncertainty in State-based Estimation (ACA-UCM)

11:00 Structure-Function Integration in Neural Systems (S-FINS)

11:15 Real-Time Distributed Source Reconstruction, Connectivity Analysis, and Prediction (ACA-RSC)

11:30 **Technology Transition Update**

12:00 **Lunch on your own**

**Brain Computer Interaction (BCI) science area project review (Conference Room)
(parallel sessions, 15 min. per project):**

13:30 Connectivity for Real-Time BCI (BCI-CRB)

13:45 Fuzzy Control Systems for Joint Human-Autonomy Image Analysis (BCI-FCS)

14:00 Multi-Aspect Calibration Tasking (BCI-MAC)

14:15 Online Fatigue/Lapse Detection for Adapting BCI Technologies (BCI-ABCI)

**Real-World Neuroimaging (RWN) area project review
(parallel sessions, 15 min. per project):**

13:30 Novel Approaches for Assessing Real-world Motion Artifact (RWN-NAARMA)

13:45 Dual Electrode Design for Artifact Removal (RWN-DEDAR)

14:00 Development of Benchmarks for Data Quality of RWN Required Technologies (RWN-DBQNS)

14:15 Interactions of Stress and Fatigue in the Classroom (RWN-SFC)

14:30 Comparison of Stress Responses under Laboratory, Ambulatory, and Real-World Environments (RWN-CSR-LAR)

14:45 Polymer electrode characterization (RWN-PEC)

15:00 Poster and demo session

15:00 CMC Meeting (Conference Room)

16:30 “Big Ideas” discussion and break-out session (Dr. Paul Sajda)

18:00 Adjourn

Day 2 – November 19, 2015

08:30 **Future Direction for ARL Research:**
Current and future directions of translation neuroscience at ARL

09:00 Taking neurophysiology from the lab to the real world to applications (Dr. Peter König)

10:00 Break – 15 mins.

10:15 Big-Data Repository Update with Q&A

11:15 Lessons Learned - IMAI

11:45 Lunch on your own

13:00 Syntrogi Tools & Technology

14:00 **Program Year 7 Project Development – ACA, BCI and RWN:**
Q&A review of Call for Proposals

15:00 **Poster and demo session**
Break-out meetings
Collaboration and proposal development

18:00 Adjourn

All presentation will be held in the main lecture hall unless otherwise noted. Posters will be distributed throughout the common areas of SCCN.