SEVENTEENTH INTERNATIONAL CONFERENCE ON COGNITIVE AND NEURAL SYSTEMS (ICCNS)

June 4 – 7, 2013

Boston University
677 Beacon Street
Boston, Massachusetts 02215 USA
http://cns.bu.edu/cns-meeting/conference.html

Sponsored by the Boston University
Center for Adaptive Systems,
Center for Computational Neuroscience and Neural Technology (CompNet),
and
Center of Excellence for Learning in Education, Science, and Technology (CELEST)
with financial support from the National Science Foundation

This interdisciplinary conference is attended each year by approximately 300 people from 30 countries around the world. As in previous years, the conference will focus on solutions to the questions:

HOW DOES THE BRAIN CONTROL BEHAVIOR?

HOW CAN TECHNOLOGY EMULATE BIOLOGICAL INTELLIGENCE?

The conference is aimed at researchers and students of computational neuroscience, cognitive science, neural networks, neuromorphic engineering, and artificial intelligence. It includes invited lectures and contributed lectures and posters by experts on the biology and technology of how the brain and other intelligent systems adapt to a changing world. The conference is particularly interested in exploring how the brain and biologically-inspired algorithms and systems in engineering and technology can learn. Single-track oral and poster sessions enable all presented work to be highly visible. Three-hour poster sessions with no conflicting events will be held on two of the conference days. Posters will be up all day, and can also be viewed during breaks in the talk schedule.

This year's conference will include, in addition to regular invited and contributed talks and posters, two workshops on the topics:

NEURAL DYNAMICS OF VALUE-BASED DECISION-MAKING AND COGNITIVE PLANNING
and
SOCIAL COGNITION: FROM BABIES TO ROBOTS

See the url above for the complete program of invited speakers.

CONFIRMED INVITED SPEAKERS

Todd Braver *(Washington University, St. Louis)*
Flexible neural mechanisms of cognitive control: Influences on reward-based decision-making

Marisa Carrasco *(New York University)*
Effects of attention on early vision

Patrick Cavanagh *(Université Paris Descartes)*
Common functional architecture for spatial attention and perceived location

Robert Desimone [Plenary Speaker] *(Massachusetts Institute of Technology)*
Prefrontal-visual cortex interactions in attention

Asif Ghazanfar *(Princeton University)*
Evolving and developing communication through coupled oscillations

Stephen Grossberg *(Boston University)*
Behavioral economics and neuroeconomics: Cooperation, competition, preference, and decision-making

Joy Hirsch *(Columbia University Medical Center)*
Neural circuits for conflict resolution

Roberta Klatzky *(Carnegie Mellon University)*
Multi-modal interactions within and between senses

Kevin LaBar *(Duke University)*
Neural systems for fear generalization

Randi Martin *(Rice University)*
Memory retrieval and interference during language comprehension

Andrew Meltzoff (*University of Washington*)
How to build a baby with social cognition: Accelerating learning by generalizing across self and other

Javier Movellan *(University of California, San Diego)*
Optimal control approaches to the analysis and synthesis of social behavior

Mary Potter (*Massachusetts Institute of Technology*)
Recognizing briefly presented pictures: Feedforward processing?

Pieter Roelfsema (*The Netherlands Institute for Neuroscience*)
Neuronal mechanisms for perceptual organization

Daniel Salzman *(Columbia University)*
Cognitive signals in the amygdala

Daniel Schacter [Plenary Speaker] (*Harvard University*)
Constructive memory and imagining the future

Wolfram Schultz *(University of Cambridge)*
Neuronal reward and risk signals

Helen Tager-Flusberg (*Boston University*)
Identifying early neurobiological risk markers for autism spectrum disorder in the first year of life

Jan Theeuwes *(Vrije Universiteit Amsterdam)*
Prior history shapes selection

James Todd (*Ohio State University*)
The perception of 3D shape from texture
Leslie Ungerleider (*National Institutes of Health*)
Functional architecture for face processing in the primate brain
Jeremy Wolfe (*Harvard Medical School and Brigham & Women's Hospital*)
How selective and non-selective pathways contribute to visual search in scenes

CALL FOR ABSTRACTS

Session Topics:

* vision
* image understanding
* audition
* speech and language
* unsupervised learning
* supervised learning
* reinforcement and emotion
* sensory-motor control
* cognition, planning, and attention
* spatial mapping and navigation
* object recognition
* neural circuit models
* neural system models
* mathematics of neural systems
* robotics
* hybrid systems (fuzzy, evolutionary, digital)
* neuromorphic VLSI
* industrial applications
* other

Contributed abstracts must be received, in English, by February 28, 2013. Email notification of acceptance will be provided by March 15, 2013.

Abstracts must not exceed one 8.5"x11" page in length, with 1" margins on top, bottom, and both sides in a single-column format with a font of 10 points or larger. The title, authors, affiliations, surface, and email addresses should begin each abstract. A separate cover letter should include the abstract title; name and contact information for corresponding and presenting authors; requested preference for oral or poster presentation; and a first and second choice from the topics above, including whether it is biological (B) or technological (T) work [Example: first choice: vision (T); second choice: neural system models (B)].

Contributed talks will be 15 minutes long. Posters will be displayed for a full day. Overhead and computer projector facilities will be available for talks. Copies of the accepted abstracts will be provided electronically to all registered conference participants and will be made publicly available via posting on the conference web site, in accordance with funding agency guidelines. No extended paper will be required.

A meeting registration fee must accompany each abstract. The fee will be refunded if the abstract is not accepted for presentation. Fees of accepted abstracts will be returned upon written request only until April 30, 2013.

Abstracts, cover letters, and completed registration forms with fee payment information should be submitted electronically to cindy@bu.edu using the phrase "17th ICCNS abstract submission" in the subject line.

Fax submissions of the abstract page will not be accepted. Fax or surface mail submissions of the registration form are acceptable (to Cynthia Bradford, using the contact information shown on the registration form below).

Student registrations must be accompanied by a letter of verification from a department chairperson or faculty/research advisor. Postdoctoral fellows and faculty members should register at the regular rate.