

**The Temporal Dynamics of Learning Center
An NSF-sponsored Science of Learning Center**

**First Annual All-hands Meeting
(as of January 6th, 4:30PM, 2007)**

January 7-9, 2007

**The Salk Institute Frederic de Hoffmann Auditorium & The Sea Lodge
La Jolla, CA 92093**

The first All-Hands meeting of the Temporal Dynamics of Learning Center will be essential for all senior personnel of the Center, as well as relevant students and post-doctoral researchers. The Advisory Board will also be in attendance. The purpose of this meeting is to get all participants on the “same page” as to the responsibilities and privileges of participation in the Center, and to make sure that we set the Center on the path to achieving an excellent result at the critical 18-month review in the Spring of 2008. A good result at this visit will ensure a large increment in funding at the original requested level of \$4M/year for the remaining three years, and the possibility of a five-year renewal after that.

NSF’s stated criteria for a successful 18-month review is whether our Center has “gelled” – that the whole is greater than the sum of its parts. Hence it is very important that **you** attend this meeting so that we can all engage in the kind of scientific discussion that only interdisciplinary interaction can provide. I look forward to seeing you all there!

The participants will be asked to complete the following activities in advance of the meeting:

- 1) Please read our Strategic and Implementation Plan. This is the operational plan for the first two years of the Center, and everyone should be aware of the scientific goals and the projects that will be funded in the first wave. The current plan is for this to be available January 1. It is now available on a crude website I put up, at <http://www.cse.ucsd.edu/users/gary/all-hands/>
- 2) Please read the original proposal for the Center. While our plans have morphed considerably from that time, this document provides the clearest motivation for our Center. I will include our “executive summary” for the administrators at our site visit if you don’t have time for the whole thing. This is also at the above web site.
- 3) Please investigate the resources available online concerning data sharing and collaboration issues. There are a number of resources available at:
<http://ori.dhhs.gov/education/products/> (see especially the sections on collaboration, conflicts, data, and authorship).
<http://www.apa.org/science/data/> (this one is mostly about data sharing)

Please note that you will need to keep all travel receipts in order to receive reimbursement for the meeting. This includes meal receipts per current UCSD policy. However, most meals will be provided at the meeting site except for Monday dinner. In particular, there will be a breakfast buffet each day and lunch served. Dinner will be on your own on the first full meeting day, but

there will be coffee and dessert-like items at the poster session. Dinner the second day is provided, and there will be a reception that evening with some snack-type foods.

If you are coming in from out of town, please plan to arrive on Sunday before the meeting, and to leave Wednesday morning. Each day is fully packed with activities, and leaving Tuesday afternoon means you will miss important meeting events. We realize this is a significant time commitment, and we appreciate your cooperation.

Directions, etc., have been provided in a separate email, and are on the website.

TLC All-Hands Meeting Agenda

Sunday, January 7th: The Sea Lodge (Acapulco Room)

7:00 – 9:00 PM Registration and Welcome reception. No host bar, munchies.

Monday, January 8th:

7:45AM: Shuttle leaves the Sea Lodge for the Salk: Don't miss it!

Morning: The Salk Institute (Frederic de Hoffman Auditorium)

8:00-8:45 Breakfast buffet (Foyer outside auditorium)

8:45-9:30 Gary Cottrell (UCSD): Welcome, Vision & Center overview

9:30-10:00 Isabel Gauthier (Vanderbilt): The Perceptual Expertise Network: a seed for the network-of-networks collaborative model

10:00-10:15 Isabel Gauthier: Competition between different domains of perceptual expertise

10:15-10:45: Brenda Turnbull, Policy Studies Associates: Evaluation

10:45-11:00 Coffee Break

11:00-12:00 The Data Sharing Facility

11:00-11:45 Mark Appelbaum (UCSD): Data Sharing: Cooperation or competition?

11:45-12:00 Discussion

12-1 Lunch (Foyer outside auditorium)

Afternoon: The Salk Institute (Frederic de Hoffman Auditorium)

1:00-1:08: Andrea Chiba (UCSD), Science Director: Introduction to the Initiatives

1:08-2:30 Initiative 1: Temporal dynamics of the world

1:08-1:15 Overview of Initiative 1: Dan Feldman (UCSD), Initiative Coordinator

1:15-1:30 Dan Feldman (UCSD): Temporal aspects of sensory processing in the rat whisker system.

1:30-1:45 David Sheinberg (Brown): Neural dynamics and visual recognition

1:45-2:00 Javier Movellan (UCSD): Bayesian Models of Real Time Social Interaction

2:00-2:30 Parallel Initiative meetings: Initiatives 1 & 4 (in Foyer, corners TBA)

2:30-2:45: Coffee Break

2:45-6:00 Initiative 2: Temporal dynamics of the brain

2:45-2:55 Overview of Initiative 2: Andrea Chiba (UCSD), Initiative Coordinator

Strand 2.1

3:55-3:10 Mu-ming Poo , Yang Dan & Tony Li (UCBerkeley): Modulation of STDP by cortical activity waves.

3:10-3:25 Howard Poizner (UCSD): Brain dynamics and motor control

Strand 2.2

3:25-3:40 April Benasich (Rutgers): Parsing the associations between temporal dynamics and emerging language in the developing brain

3:40-3:55 Janet Wiles (Queensland): Neurogenesis in dentate gyrus: a potential role in forming temporal clusters in memory

3:55-4:10 Bob Clark (UCSD): The temporal organization of long-term memory: Parallel studies in humans and rodents

4:10-4:25 Coffee break

4:25-4:40 Hal Pashler (UCSD) & Mike Mozer (Colorado): Improving human learning and retention via the temporal dynamics of study

4:40-4:55 Tim Curran (Colorado): ERP studies of visual expertise & memory

4:55-5:10 Tom Palmeri (Vanderbilt): Time course of visual object processing

5:10-5:25 Sean Montgomery (Buzsaki lab, Rutgers): Gamma oscillations couple Hippocampal networks during performance of a memory task

5:25-5:50: Parallel Initiative Meetings: Initiatives 2 & 3 (in Foyer, corners TBA)

5:50PM: Shuttle loads for trip to the Sea Lodge

6:00 Dinner (on your own, Advisory Board & Executive Committee working dinner)

8:00-10:00 PM: The Sea Lodge (The La Jolla Room)

Student/Postdoc poster session and reception (dessert, no-host bar)

Not sure what initiative you're in? Here's a cheat sheet:
Initiative 1: Feldman/Chiba/Tallal/Harris/de Sa/Sereno, Chiba/Buszaki/Harris/O'Reilly/Tallal/Bell, Curran/Sheinberg/Tarr
Initiative 2: Poo & Dan, Poizner/Makeig/Sejnowski, Benasich/Makeig/Sejnowski/Harris, Littlewort/Makeig/Reilly, Gage/Wiles/Chiba/Buzsaki/Squire/Clark, Buszaki, Clark & Squire, Benasich/Tallal/Chiba/Harris, Palmeri/Gauthier/Curran/Tanaka
Initiative 3: Cottrell/Palmeri, de Sa, Todorov/Movellan/Cottrell, Elman/Mozer/Tallal/Poizner
Initiative 4: PEN (Entire network), Bell, Bartlett/Deak/Movellan, Chiba/Bell/Tallal/Sejnowski

Tuesday, January 9th

7:45AM: Shuttle leaves the Sea Lodge for the Salk: Don't miss it!

Morning: The Salk Institute (Frederic de Hoffman Auditorium)

8:00-9:00 Breakfast buffet (Foyer outside auditorium)

9:00-10: Initiative 3/Strand 3.2: Temporal dynamics of movement and exploration

9-9:15 Overview of Initiative 3: Emo Todorov (UCSD), Initiative Coordinator

9:15-9:30 Emo Todorov (UCSD): A computational theory of active sensing

9:30-9:45 Virginia de Sa (UCSD): Computational transformations in the visual pathway

9:45-10:00 Gary Cottrell (UCSD): Eye movements, recognition, and memory

10:00-10:15 Discussion

10:15-10:30 Break

10:30-11:00 Initiative 4/Strand 4.1: Temporal dynamics of learning

10:30-10:45: Overview of Initiative 4: Terry Sejnowski (Salk & UCSD), Initiative Coordinator

10:45-11:00 Tony Bell (UC Berkeley): The math of learning at different scales

11:00-12:00 Motion Capture/Brain Dynamics Facilities

11:00-11:20 Emo Todorov (UCSD): Overview of equipment, support and policies

11:20-11:30 Emo Todorov (UCSD): Multi-joint movement estimation software

11:30-11:45 Marni Stewart Bartlett (UCSD): Face recognition and video processing software

11:45-12:00 Scott Makeig (UCSD): Mobile High-Definition EEG Brain Imaging

12:00-1:15 Lunch (Foyer outside auditorium)

1:15-1:30 Diversity initiatives: Gary Cottrell (UCSD)

1:30-2:45: Education & Outreach projects

1:30-1:40 Paula Tallal (Rutgers): Overview of the Education and Outreach Initiative

1:40-1:45 Paula Tallal (Rutgers): Corporate Partner Scientific Learning Corp.

1:45-2:00 Eric Jensen (Jensen Learning Corp):

2:00-2:15 Doris Alvarez (UCSD & Preuss)/Hal Pashler (UCSD)/Shana Carpenter (UCSD): The Preuss School: A learning laboratory

2:15-2:30 Jim Tanaka (Victoria) & Bob Schultz (Yale): Face recognition deficits in Autism: The Let's Face It computerized intervention

2:30-2:45 Javier Movellan (UCSD) & Kathryn Owen (Early Childhood Education Center): RUBI & ECEC

2:45-3:00 Break

3:00-4:40 Breakout sessions (Purpose: individual project discussions)
[More detailed schedule to be handed out at the meeting]

3:00-3:30 Breakout 1

3:35-4:05 Breakout 2

4:10-4:40 Breakout 3

4:45-5:15 Breakout reports/discussion

5:15: Gary Cottrell: Meeting closing

5:45PM: Shuttle loads to leave for Sea Lodge

6:00 Dinner (all-hands): The Sea Lodge (La Jolla Room)

7-11 Reception/party: The Sea Lodge (La Jolla Room)