

Neural Interfaces Conference 2010  
June 21-23, 2010 | Long Beach Convention Center | Long Beach, CA

AGENDA

<u>Pre-Conference</u>	<u>Sunday, June 20</u>	<u>Location</u>
8:00 am – 5:00 pm	Pre-conference workshop: Beyond Brain-machine Interface	Room 201 A&B
Noon – 4:00 pm	Exhibitor Set up	Exhibit Hall B
Noon – 4:00 pm	Registration Open	Lobby
<u>Day 1:</u>	<u>Monday, June 21</u>	<u>Location</u>
7:00 am – 6:00 pm	Registration Open	Lobby
7:00 am – 9:00 am	Poster and Exhibits setup	Exhibit Hall B
7:00 am – 9:00 am	Continental Breakfast	2 <sup>nd</sup> Floor Lobby
7:45 am – 9:00 am	DBS Consortium Meeting <i>Moderator: Dr. Jerrold Vitek</i>	Room 202 A,B,&C
9:00 am – Noon	Morning Sessions: <ul style="list-style-type: none"> <li>• 9:00 - 9:45 Welcome and Opening Address Terry Hambrecht, M.D. History of Neural Prostheses</li> <li>• 9:45 – 11:15 <b>Session 1:</b> DBS for Parkinson's: What is the Target? <i>Moderator: Dr. Jaimie Henderson</i> <i>Goal:</i> Review what is known about current and potential future targets for neurostimulation for Parkinson's disease <i>Speakers:</i> Clement Hamani, William Marks, Cameron McIntyre</li> <li>• 11:15 - 11:30 DBS User Perspective</li> </ul>	Grand Ballroom
11:30 am - Noon	Poster Blitz <i>Presenters:</i> Su-Youne Chang, Joseph O'Doherty, Noppasit Laotaveerungrueng, Yue-Loong Hsin, Vikash Gilja, Jonathon Viventi	Grand Ballroom
Noon – 2:00 pm	Lunch on your own. Posters and Exhibits open.	Exhibit Hall B
1:00pm – 2:00pm	Poster Session 1 (all presenters please be by your posters)	Exhibit Hall B
2:00 pm – 5:30 pm	Afternoon Sessions: <ul style="list-style-type: none"> <li>• 2:00 – 3:30: <b>Session 2:</b> Closed Loop Control of DBS <i>Moderator: Dr. Jaimie Henderson</i> <i>Goal:</i> Explore the potential of closed loop control of DBS – how much effort should we be putting toward this goal? <i>Speakers:</i> Martha Morrell, John Doyle, Jerrold Vitek</li> </ul>	Grand Ballroom
3:30 pm – 4:00 pm	Afternoon Break in Poster, Exhibits Area	Exhibit Hall B

- 4:00 pm - 5:30 pm **Session 3:** Neural Interfaces in Chronic Pain  
*Moderator:* Dr. Jaimie Henderson  
*Goal:* Address the myriad complexities of treating chronic pain with neural interface devices  
*Speakers:* Sean Mackey, Tipu Aziz, Robert Foreman

5:30 pm -7:00 pm Welcome Mixer in Posters, Exhibits Area Exhibit Hall B

**Day 2: Tuesday, June 22** **Location**

7:00 am – 4:30 pm Registration Open Lobby

7:00 am – 8:30 am Continental Breakfast Exhibit Hall B

7:30 am - 8:30 am Breakout Sessions:

- MRI Issues for Neural Implants  
*Speakers:* Frank Shellock, Steve Manker Room 201 A&B
- Micromotion and its Effects on Long-Term Viability of Brain-Machine Interfaces  
*Speakers:* Douglas McCreery, Jitendran Muthuswamy Room 202 A,B&C

8:30 am – Noon Morning Sessions: Grand Ballroom

- 8:30 – 10:00: **Session 4:** Retinal Prostheses  
*Moderator:* Dr. James Weiland  
*Goals:* To provide an update on clinical trials of retinal implants and state-of-the-art approaches to improve performance of retinal implants for patients suffering from retinitis pigmentosa.  
*Speakers:* Mark Humayun, Shelley Fried, Daniel Palanker

10:00 – 10:30: Morning Break in Poster, Exhibits Area Exhibit Hall B

- 10:30-noon: **Session 5:** Alternative Approaches for Visual Prostheses  
*Moderator:* Dr. Mark Humayun  
*Goals:* To examine novel neurotechnological approaches beyond retinal stimulation devices for restoration of vision for blind patients.  
*Speakers:* Bradley Greger, Robert Chow, Frank Werblin

Noon – 12:30 pm Poster Blitz Grand Ballroom  
*Speakers:* Patrick Nasiatka, Kevin Kilgore, Isaac Clements, Steven Bierer, Seung Woo Lee, Noah Ledbetter

12:30 pm – 2:30 pm Lunch on your own. Exhibits and Posters open. Exhibit Hall B

1:30 pm – 2:30 pm Poster Session 2 (all poster presenters please be by your posters) Exhibit Hall B

2:30 pm – 4:00 pm Afternoon Session: Grand Ballroom

- 2:30 – 4:00: **Session 6:** Challenges and Opportunities of Activity Dependent Plasticity

*Moderator:* Dr. Warren Grill

*Goals:* To review the available science on activity-dependent plasticity and to identify potential applications of this knowledge for the development on novel neural interfaces.

*Speakers:* John H. Martin, V. Reggie Edgerton, Edelle Field-Fote

4:00 – 5:00 pm Special Session for Students Rooms 202A,B,&C  
Getting hired in the medical device industry  
*Moderator:* Nathalie Gosset  
*Panelists:* Don Deyo (*Medtronic*), Mir Imran (*Incube Labs*)

7:00 pm – 10:00 pm Aquarium of the Pacific Event Aquarium of the Pacific

**Day 3: Wednesday, June 23** **Location**

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7:00 am – 1:00 pm Registration Open Lobby

7:00 am – 8:30 am Continental Breakfast Exhibit Hall B

7:30 am – 8:30 am Special Session: Future of NIC Room 202 A,B,&C  
*Moderator:* Hunter Peckham

8:30 am – 12:30 pm Morning Sessions: Grand Ballroom

- 8:30-10:00 **Session 7:** In Vitro Neural Interface Models  
*Co-Moderators:* Drs. Diane Hoffman-Kim and Naomi Kleitman  
*Goals:* To understand when the in vitro system is the best system for investigation, explore what are the in vitro system's advantages and limitations and when to advance in vitro finds to in vivo systems.  
*Speakers:* Guenter Gross, Monty Reichert, Jeffrey Urbach

10:00 am - 10:30 am Morning Break Exhibit Hall B

- 10:30 – noon **Session 8:** Modeling at the Neural Interface  
*Moderator:* Dr. Dominique Durand  
*Goals:* To explore the potential of modeling for understanding and designing systems at the interface between neuroscience and engineering  
*Speakers:* Theodore Berger, Dustin Tyler, Bin He
- Noon - 12:30 pm Special Report: Neural Interfaces for Prosthetic Limbs  
*Speaker:* Jacob Vogelstein

12:30 pm – 2:00 pm Box Lunch Provided. Exhibit Hall B

12:30 pm – 2:00 pm Breakout Sessions:  

- Energy and Power for Implantable Medical Devices Room 201 A&B  
*Speakers:* Mikito Nagata, Brian Dearden
- Facilities for microelectrode fabrication Room 202 A,B&C  
*Speakers:* Satinderpall Pannu, Daryl Kipke, Florian Solzbacher, Rahul Sarpeshkar

2:00 pm Posters and Exhibits Area Closes to Attendees

2:00 pm – 6:00 pm	Poster and Exhibit take down.	Exhibit Hall B
2:00 pm – 5:30 pm	Afternoon Sessions: <ul style="list-style-type: none"> <li>• 2:00- 3:30 <b>Session 9:</b> Epilepsy Detection and Control with Electrical Stimulation  <i>Moderator:</i> Dr. Dominique Durand  <i>Goals:</i> examine the latest finding on the success of recent clinical trials, and explore the limits of our understanding of the basic mechanisms involved in the control of seizure with epilepsy.  <i>Speakers:</i> Greg Worrell, Danielle Andrade, Leon Iasemidis</li> </ul>	Grand Ballroom
3:30 pm – 4:00 pm	Afternoon Break in 2 <sup>nd</sup> Floor Lobby <ul style="list-style-type: none"> <li>• 4- 5:30 <b>Session 10:</b> Electrocorticography (ECOG) - How Good Can It Be For BCI?  <i>Moderator:</i> Dr. Krishna Shenoy  <i>Goals:</i> Through a roundtable format, to discuss the invasiveness, robustness, bandwidth, and suitability for external device control of ECOG-based BCI.  <i>Speakers:</i> Eric Leuthardt, Dan Moran, Raj Rao</li> </ul>	Exhibit Hall B
5:30 pm	Meeting Adjourned – Thank You For Your Participation	