



***NSF IGERT on Video Bioinformatics
Third Fall Retreat 2012
UCLA Conference Center, Lake Arrowhead, CA
Final Technical Program***

FRIDAY, November 30, 2012

- 05:00pm CHECK IN
- 05:30pm – 06:30pm OPENING RECEPTION [IRIS Room]
- 06:30pm – 08:00pm DINNER
- 08:00pm – 08:15pm WELCOME AND INTRODUCTION
Bir Bhanu
- 08:15pm – 10:00pm KEYNOTE SPEECH
Badri Roysam, D.Sc., Hugh Roy and Lillie Cranz Cullen University Professor
Chair, Electrical & Computer Engineering, University of Houston
*Bio-image Analytics: Making sense of multi-dimensional images of complex and
dynamic biological tissues*
- 10:00pm – BREAK –Coffee & Tea, SOCIAL [IRIS Room]

SATURDAY, DECEMBER 1, 2012

- 07:45am – 08:45am: BREAKFAST
- 08:45am – 10:00am INVITED TALK
Steven Small, Ph.D., M.D., Professor and Chair, Neurology
School of Medicine, University of California at Irvine
fMRI in Brain Research: Ecology and neural context
- 10:00am – 10:10am BREAK – Coffee & Tea
- SELECTED IGERT FELLOW PRESENTATIONS**
- 10:10am – 10:30am Virginia Donovan
*Computational analysis reveals a window of vulnerability following repeated mild
traumatic brain injury*
- 10:30am – 10:50am Anthony Bianchi
Visual and contextual modeling for mTBI detection in MRI

- 10:50am – 11:10am Melissa Eberle, IGERT Fellow
Optical coherence tomography detects critical optical charges associated with PTZ induced seizure activity
- 11:10am – 11:30am Albert Cruz, IGERT Fellow
Facial emotion recognition with expression energy
- 11:30am – 11:45pm Linan Feng
Computer system for automated identification and retrieval of moth images
- 11:45am – 12:00pm Zhixing Jin
Analysis and Synthesis for tracking
- 12:00pm – 01:10pm LUNCH

IGERT VIDEO/POSTER COMPETITION

- 01:10pm – 01:15pm Bir Bhanu
NSF evaluation criteria
- 01:15pm – 01:22pm Jo-Hao Weng, IGERT Fellow
The role of P2X7 receptor in cell blebbing in human embryonic stem cells
- 01:23pm – 01:30pm Brett Bays, IGERT Fellow
Competing neural processes underlying statistical learning
- 01:31pm – 01:38pm Geoff Harlow, IGERT Fellow
Automated 3-dimensional time-lapse analysis of plant cells: dynamic gene comparisons
- 01:39pm – 01:46pm Jillian Larsen, IGERT Fellow
Capturing and identifying bacterial contaminants in blood
- 01:47pm – 01:54pm Katya Mkrtychyan, IGERT Fellow
Automated registration of live imaging stacks of Arabidopsis
- 01:55pm – 02:02pm Douglas Hill, IGERT Fellow
Early cancer/disease diagnosis by a novel component-based microfluidic imaging platform
- 02:03pm – 02:10pm Devin McBride, IGERT Fellow
Predicting when a TBI occurred in real-time
- 02:11pm – 02:18pm Stephanie Coffman, IGERT Fellow
*Identification and functional characterization of innate immunity genes in the animal model, *C. elegans**
- 02:19pm – 02:26pm Ilva Cabrera, IGERT Fellow
*Video Bioinformatics applications in studying polarized growth in *Neurospora crassa**
- 02:27pm – 02:34pm Anthony Bianchi & Virginia Donovan, IGERT Fellows
Automated detection of mild traumatic brain injury
- 02:35pm – 02:42pm Erica Freeman, IGERT Fellow
*Decoding receptors in *Drosophila**
- 02:43pm – 02:50pm Juan Leon, IGERT Fellow
Inverse dynamics models for motion capture of bipedal running lizards for directional transition analysis
- 02:51pm – 02:58pm Nolan Ung, IGERT Fellow
Dissecting the early endosome using bioactive compounds

02:59pm – 03:14pm An Le
On Super-resolution of images

03:15pm – 03:30pm Nan Luo
Image analysis of pollen tube: focus on the tip

03:30pm – 05:30pm BREAK – Team Activity

05:30pm – 06:30pm PRE-DINNER SOCIAL [IRIS Room]

06:30pm – 08:00pm DINNER

08:00pm – 8:20pm Hyle Park
Neuroscience applications of optical coherence tomography

08:20pm – 09:20pm FACULTY MEETING [IRIS Room]
STUDENT MEETING [Skyview Room]

09:20pm SOCIAL [IRIS Room]

SUNDAY, DECEMBER 2, 2012

07:45am – 08:45am BREAKFAST

08:45am – 09:05am Albert Cruz
Quantifying pavement cell shape morphology

09:05am – 09:25pm Douglas Hill
Software for analysis of MRI images for determination of phagocytic activity of monocytes/lymphocytes and cigarette smoke absorption of stem cells.

09:25am – 09:50am Ninad Thakoor
Software Library

09:50am – 10:30am Faculty & Student Discussions

10:30am – 10:40am BREAK – Coffee & Tea

10:40am – 11:10am Results of the Poster Competition & Feedback

11:10am – 11:35am Action Items

11:35am - 12:00am IGERT Evaluation
Lisa Kohne

Meeting Adjourned

12:00pm CHECK-OUT

12:00pm – 01:00pm LUNCH