NSF IGERT on Video Bioinformatics
Fourth Fall Retreat 2013
UCLA Conference Center, Lake Arrowhead, CA

Program

FRIDAY, December 6, 2013

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 1 Scott Acton, Director of Virginia Image & Video Analysis and Professor of Electrical and Computer Engineering and Biomedical Engineering University of Virginia *Image analysis challenges in the Drosophila Neurome*
10:00pm –	BREAK – Coffee & Tea, SOCIAL [IRIS Room]

SATURDAY, DECEMBER 7, 2013

07:45am – 08:45am:	BREAKFAST
08:45am – 10:30am	KEYNOTE 2 Alfred Hero, R. Jamison and Betty Williams Professor of Engineering University of Michigan *Extraction of bio-molecular expression patterns from massive data: From hyperspectral imaging to personalized medicine*
10:30am – 10:40am	BREAK – Coffee & Tea
	SELECTED IGERT PRESENTATIONS BY FELLOWS & FACULTY
10:40am – 10:55am	Atena Zahedi & Vincent On, IGERT Fellows *Regulating cofilin transport using optogenetic modulation and live cell video analysis*
10:55am – 11:10am	Devin McBride, IGERT Fellow

An automatic, real-time symmetry-based algorithm for the detection and analysis of TBI using T2 MRI

11:10am – 11:25am	Anthony Bianchi, IGERT Fellow *Analysis of mild traumatic brain injury in MRI*
11:25am – 11:40am	Geoffrey Harlow, IGERT Fellow *Visualizing actin-mediated vesicle transport trajectories at the plant cell edge*
11:40am – 11:55am	Albert Cruz, IGERT Fellow *Microsimilarities for facial emotion recognition*
11:55am – 12:00pm	Group Photograph
12:00pm – 01:10pm	LUNCH
01:10pm – 01:25pm	Andre Obenaus, IGERT Faculty *A novel model of closed brain injury*
01:25pm – 01:40pm	Dimitrios Morikis, IGERT Faculty *Molecular dynamics simulations reveal ligand-specific conformational changes in chemokine receptor 7 (CCR7) coupled to selecting intra-cellular signaling pathways*
01:40pm – 01:55pm	David Carter, IGERT Faculty *Imaris bitplane and contagious software: Its not what it can do, but what it does that counts, so make your code useful with a friendly interface*
01:55pm – 02:05pm	BREAK – Coffee & Tea

IGERT VIDEO/POSTER COMPETITION

02:05pm – 02:10pm	Bir Bhanu *NSF evaluation critieria*
02:10pm – 02:17pm	Jo-Hao Weng, IGERT Fellow *Dynamic bleb retraction can be used for cell health prediction*
02:18pm – 02:25pm	Ilva Cabrera, IGERT Fellow *Prediction of gene functions using phenomics and video bioinformatics in the model filamentous fungus, Neurospora crassa*
02:26pm – 02:33pm	Carissa Reynolds, IGERT Fellow *Detecting optical changes in the cerebral cortex caused by edema*
02:34pm – 02:41pm	Asong Tambo, IGERT Fellow *Integrated model for understanding pollen tube growth dynamics in video*
02:42pm – 02:49pm	Michael Oliveira, IGERT Fellow *High speed optical imaging using graphics processing units*
02:50pm – 02:57pm	Nolan Ung, IGERT Fellow *Automatic quantitative discovery of bioactive compounds*
02:58pm – 03:05pm	Melissa Eberle, IGERT Fellow *Development of visualization tools of volumetric data for studying the spatiotemporal progression of seizures*
03:06pm – 03:13pm	Atena Zahedi & Vincent On, IGERT Fellow *Video analysis of optogenetic modulations in synapsis*

03:14pm – 03:21pm	Brett Bays, IGERT Fellow *What is the relation of alpha band activity in human EEG to perceptual and contextual learning?*
03:22pm – 03:29pm	Virginia Donovan, IGERT Fellow *Repeated experimental concussion results in white matter damage*
03:30pm – 03:37pm	Erica Freeman, IGERT Fellow *The combinatorial and cross-modality functions of sweet taste receptors in Drosophila*
03:38pm – 03:45pm	Juan Leon, IGERT Fellow *Analysis of muscle moments for lizard agility and maneuverability using inverse dynamics*
03:45pm – 06:00-pm	BREAK – Team Activity
06:00pm – 06:30pm	PRE-DINNER SOCIAL [IRIS Room]
06:30pm – 08:00pm	DINNER
08:00pm – 09:30pm	KEYNOTE 3 Michelle Digman, Assistant Professor, Laboratory for Fluorescence Dynamics, Department of Biomedical Engineering University of California, Irvine *Spatial-temporal Maps of the Nuclear Architecture in living cells using the Pair Correlation Function (pCF)*
09:30pm –	FACULTY MEETING [IRIS Room] STUDENT MEETING [Skyview Room]

SUNDAY, DECEMBER 8, 2013

07:45am – 08:45am	BREAKFAST
08:45am – 09:30am	Demonstrations by IGERT Fellows Albert Cruz – *Quantifying pavement cell shape morphology software* Vincent On – *Stem cell analysis software* Asong Tambo – *Pollen tube analysis software* Michael Oliveira – *MI-VIS: A 3D visualization application for Spatial Frequency Domain Imaging (SFDI) data*
09:30am – 09:50am	Ninad Thakoor *Video bioinformatics databases*
09:50am – 10:50am	Results of the Poster Competition & Feedback by Faculty
10:50am – 11:00am	BREAK – Coffee & Tea
11:00am – 11:30am	Student & Faculty Discussions
11:30am – 11:40am	Action Items
11:40am - 12:00am	IGERT Evaluation Lisa Kohne

Meeting Adjourned

12:00pm	CHECK-OUT
12:00pm – 01:00pm	LUNCH