



NSF IGERT on Video Bioinformatics

Fifth Fall Retreat 2014

UCLA Conference Center Lake Arrowhead, CA

Program

FRIDAY, October 10, 2014

05:00pm	CHECK IN
05:30pm – 06:30pm	OPENING RECEPTION [PINEVIEW ROOM]
06:30pm – 08:00pm	DINNER
08:00pm – 08:15pm	WELCOME AND INTRODUCTION Bir Bhanu
08:15pm – 09:45pm	KEYNOTE 1 Dmitry Goldgof, Professor of Computer Science and Engineering, University of South Florida <i>Image Analysis and Data Mining in Support of Radiomics</i>
10:00pm –	BREAK – Coffee & Tea, SOCIAL

SATURDAY, October 11, 2014

08:00am – 09:00am BREAKFAST

09:00am – 10:15am KEYNOTE 2 [PINEVIEW ROOM]

Mark Cohen, Professor, Departments of Psychiatry & Biobehavioral Sciences, Neurology, Radiological Sciences, Psychology, Biomedical Engineering and Biomedical Physics, David Geffen School of Medicine, University of California, Los Angeles

Towards a New Science of Images

SELECTED IGERT PRESENTATIONS BY FACULTY & FELLOWS

10:25am – 10:45am Andre Obenaus, IGERT Faculty

Computational Analysis of Brain Vasculature after TBI

10:45am – 11:05am Anthony Bianchi, IGERT Fellow – Graduated

Multi Modal Specific Features for Detection of Mild Traumatic Brain Injury

11:05am – 11:25am Virginia Donovan, IGERT Fellow – Graduated

TREM2 Deficiency or Systemic Inflammation at the time of TBI Reduces Acute Hemispheric Swelling

11:25am – 11:50am Albert Cruz, IGERT Fellow – Graduated

Unconstrained Facial Emotion Recognition

11:50am – 12:00pm Group Photo

12:00pm – 01:30pm LUNCH

IGERT VIDEO/POSTER COMPETITION

01:30pm – 01:45pm Bir Bhanu

NSF Evaluation Criteria

01:46pm – 01:54pm Ilva Cabrera, IGERT Fellow

Quantitative Analyses during Growth and Development in the Filamentous Fungus Neurospora Crassa

01:55pm – 02:03pm Reed Harrison, IGERT Fellow

Role of Dynamics in Predicting Physiological Binding Sites in Protein Complexes

02:04pm – 02:12pm Carissa Rodriguez, IGERT Fellow
Using Optical Coherence Tomography to Detect Cerebral Edema in Vivo

02:13pm – 02:21pm Katya Mkrtchyan, IGERT Fellow
Optimal Landmark Selection for Registration of 4D Confocal Image Stacks

02:22pm – 02:30pm Melissa Eberle, IGERT Fellow
Localization of Attenuation Changes during Seizure Activity in vivo with Optical Coherence Tomography

02:31pm – 02:39pm Erica Freeman, IGERT Fellow
Tracking the Feeding Behaviors of Drosophila Melanogaster

02:40pm – 02:48pm Asong Tambo, IGERT Fellow
Segmentation of Bright field Images Using Template Matching and Seam Carving

02:49pm – 02:57pm Nolan Ung, IGERT Fellow
Quantifying Plant Cell Dynamics Using a Novel User-Friendly Image Analysis

02:58pm – 03:06pm Jo-Hao Weng, IGERT Fellow
Rapid Evaluation of Human Embryonic Stem Cell Health through Video Bioinformatics Analysis

03:07pm – 03:15pm Atena Zahedi & Vincent On, IGERT Fellows
StemCellQC: A Smart-Detection Multiplexing Toolkit for Predicting Cell Processes and Health

03:16pm – 03:24pm Careen Khachatoorian, IGERT Fellow
Investigation of Electronic Cigarette Exhaled Residue

03:25pm – 03:33pm Stephanie Coffman, IGERT Fellow
Image Analysis of Phenotypes to Study Antiviral Immunity in C. Elegans

03:34pm – 03:42pm Jillian Larson, IGERT Fellow
Dipole Mediated Rectification of Charge Transfer and Optical Tools for Molecular Mechanics

03:43pm – 03:51pm Brett Bays, IGERT Fellow
Classifying EEG Patterns of Visual Learning Processes

03:52pm – 06:00pm BREAK – Team Activity

06:00pm – 06:30pm PRE-DINNER SOCIAL [PINEVIEW ROOM]

06:30pm – 08:00pm	DINNER
08:00pm – 09:30pm	KEYNOTE 3 [PINEVIEW ROOM] Justin Haldar, Assistant Professor, Ming Hsieh Department of Electrical Engineering, University of Southern California <i>Magnetic Resonance Image Sequences: Acquisition, Reconstruction, and Analysis</i>
09:30pm –	FACULTY MEETING [SKYVIEW] STUDENT MEETING [PINEVIEW]

SUNDAY, October 12, 2014

08:00am – 09:00am	BREAKFAST
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09:00am – 09:20am	Ninad Thakoor [PINEVIEW] <i>Big Data and Cloud Computing for Video Bioinformatics</i>
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IGERT DEMONSTRATIONS

09:20am – 09:35am	Albert Cruz, IGERT Fellow – Graduated <i>Facial Emotion Recognition as a Motor Trend Driver Metric</i>
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09:35am – 09:50am	Anthony Bianchi, IGERT Fellow – Graduated <i>Detection of m-TBI</i>
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09:50am – 10:05am	Melissa Eberle & Carissa Rodriguez, IGERT Fellows <i>Demonstrations of real-time multifunctional spectral domain OCT at 1300nm</i>
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10:05am – 10:20am	Asong Tambo, IGERT Fellow <i>Segmentation of Bright field Images Using Template Matching and Seam Carving</i>
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10:20am – 10:35am	Nolan Ung, IGERT Fellow <i>EndoQuant: An Image Analysis Tool for Endomembrane Quantification</i>
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10:35am – 10:45am	Atena Zahedi & Vincent On, IGERT Fellows <i>StemCellQC</i>
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10:45am – 11:20am	Results of the Poster Competition & Feedback by Faculty
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11:20am – 11:40am	Student & Faculty Discussions
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11:40am – 12:00pm	IGERT Evaluation Lisa Kohne
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Meeting Adjourned

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