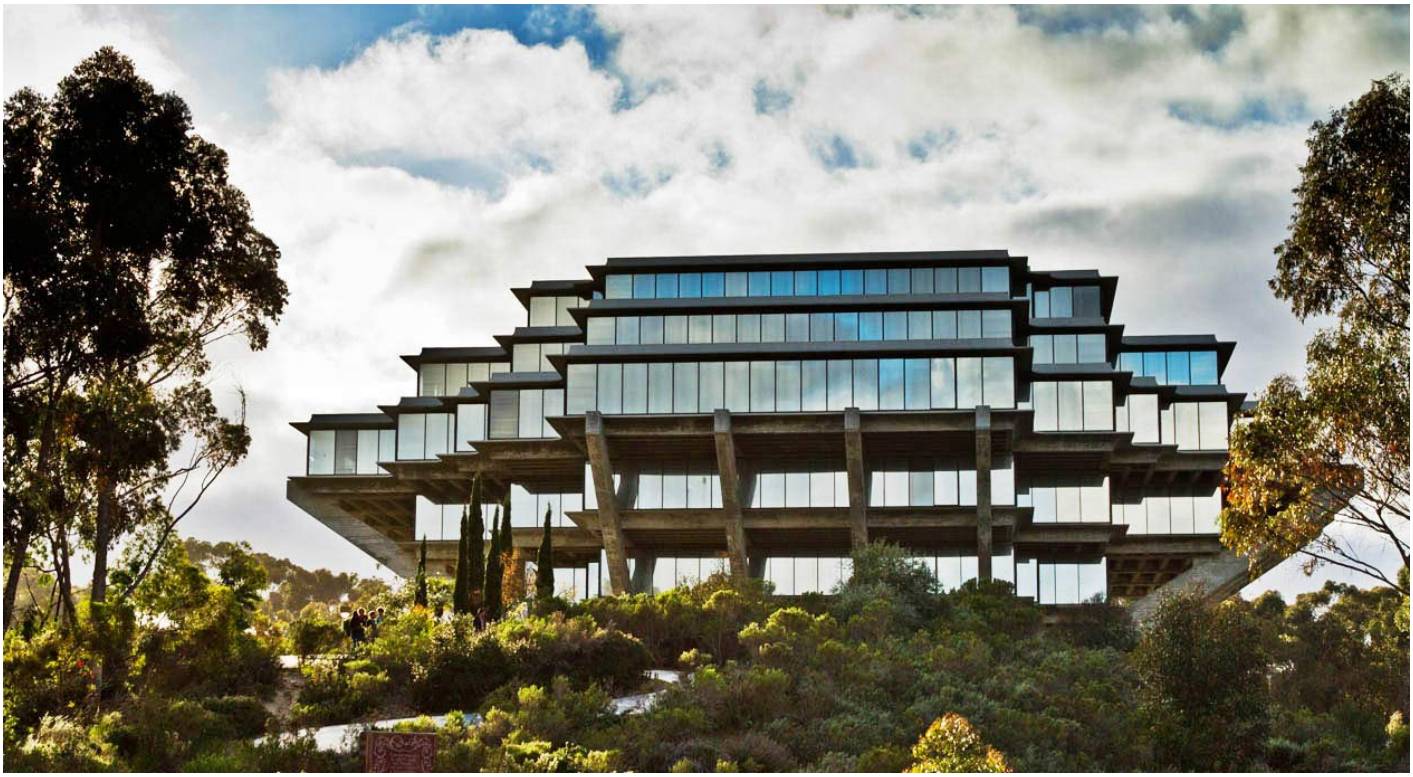
CMRR

Center for Memory and Recording Research

University of California – San Diego

La Jolla, California 92093-0401

Research Review & Advisory Council Meeting



June 2 – 3, 2016

Website: http://cmrr.ucsd.edu

Research Review Schedule

Thursday, June 2, 2016

8:30 AM - Continental Breakfast at CMRR		
8:55 AM - Welcome and Introduction		
9:00 AM – Tribology and Mechanics ***Professor Frank E. Talke***		
1	Effect of Voltage Biasing on the Head Disk Interface	*Karcher Morris*
2	Air Bearing Stimulation and Experimental Study of the Effect of Voltage Biasing on the Slider Flying Height	*Tan D. Trinh*
3	Experimental Study of the Effect of Hydrocarbon Adsorption on the Disk Surface	*Young W. Seo*
4	Tip-enhanced Raman Spectroscopy for the Study of Near-filed Radiation Effects in HAMR Drives	*Benjamin Suen*
10:00 AM - 10 Minute Break		
10:10 AM – Tribology and Mechanics ***Professor Frank E. Talke***		
5	Simulation and Experimental Investigations of Ramp Wear	*Youyi Fu*
6	Design and Manufacturing of a 3-D Printable, Disposable Endoscope	*Anay Pandit*
7	Development of an Optical Pressure Sensor for Glaucoma Management	*Alex Phan*
8	Image Processing of Interferometric Intraocular Pressure Data	*Phuong Truong*
11:10 AM – Magnetic Films and Nanostructures ***Professor Eric E. Fullerton***		
9	High Speed IV Loop Measurement and Monte Carlo Simulation for Resistive Switching	*Tyler Hennen*
10	Temperature Dependent Ferromagnetic Resonance of MTJ Films and Devices	*Richard Choi*
11	Anisotropic Magnetoresistance Properties of Skyrmions in Amorphous Fe\Gd Multilayers	*Sergio Montoya*
12	Spatially-resolved Multiscale Dynamics of the Helicity-dependent All Optical Switching of Magnetization in a Ferromagnetic Co/Pt Multilayer	*Raj Medapalli*

12:10 PM -- Lunch		
1:10 PM – Special Session ***Professor Kai Liu/ UC Davis***		
13	Magneto-Ionic Control of Metal/Oxide Interfaces	*Kai Liu*
2:00 PM – Electrokinetic Phenomena at the Head-Disk Interface ***Dr. Fred Spada***		
14	Electrokinetic Phenomena at the Head-Disk Interface	*Fred Spada*
2:30 PM – Low –Dimensional Materials ***Professor Oscar Vazquez Mena***		
14	Novel Architectures for Graphene and Quantum Dot Photovoltaic Devices	*Oscar Vasquez*
3:00 PM - 10 Minute Break		
3:10 PM – Micromagnetic Modeling & Recording Physics ***Professor Vitaliy Lomakin***		
15	New FastMag Features Powered by GPU	*Sidi Fu*
16	Accounting for Eddy Currents in Micromagnetic Simulations	*Simon Couture*
17	Coupling Landau-Lifshitz-Gilbert Equation and Circuit Solvers	*Iana Volvach*
18	Machine Learning Applied to Scientific Computing	*Philippe Scheid*
19	Simulations of Optical Switching in Granular Media	*Marco Menarini*
19	Parallelization of the Granular Media (Voronoi) Code	*Marco Menarini*
5:10 PM - Poster Session/Schultz prize announcement		
6:00 PM - Advisory Council Meeting		

Friday, June 3, 2016		
8:30 AM - Continental Breakfast at CMRR		
8:55 AM - Welcome and Introduction		
9:00 AM - Signal Processing & Coding ***Professor Paul H. Siegel***		
20	Performance Analysis of Data Shaping Codes for Flash Memory	*Yi Liu*
21	Performance of Multilevel Flash Memories with Different Binary Labelings: A Multi-User Perspective	*Pengfei Huang*
22	Channel Models for Multi-Level Cell Flash Memories Based on Empirical Error Analysis	*Veeresh Taranalli*
23	Optimal Row-by-Row Code Design for 19nm MLC NAND Flash Memory	*Osamu Torii*
24	Consecutive Switch Codes for Network Switches	*Sarit Buzaglo*
10:45 AM - 10 Minute Break		
10:55 AM – Non-Volatile Solid State Memory ***Professor Steven Swanson***		
25	NOVA: A Log-structured File System for Hybrid Volatile/Non-Volatile Main Memories	*Andiry Xu*
25	KAML: A Flexible High-Performance Key-Value SSD	*Yanqin Jin*
11:35 AM – Lunch/Lab visit		