CMRR
Center for Magnetic Recording Research

Research Review Schedule -- Wednesday, October 12, 2011

8:00 AM -- ***Continental Breakfast at CMRR***

8:40 AM -- ***Welcome and Introduction***

8:45 AM -- Tribology and Mechanics
Professor Frank E. Talke

A1	Contact Between a Thermal Asperity on a Disk and a Flying Height Control Slider	*Wenping Song*
A2	Dynamic Simulation of Active Flying Height Control Slider	*Pablo Salas Mendez, PhD*
A3	Simulation of HAMR/Thermal Flying Height Control Sliders	*Hao Zheng*
A4	Contact and Temperature Rise of Thermal Flying Height Control Sliders in Hard Disk Drives	*Liane Matthes*

9:45 AM -- 15 MINUTE BREAK

10:00 AM -- Dynamic Modeling and Servo Technology
Associate Professor Raymond A. deCallafon

B1	Suppression of Cross-track Vibrations Using a Self-sensing Micro-actuator in Hard Disk Drives	*Liane Matthes*
B2	Structured Uncertainty Modeling of LTO Servo Actuator Dynamics	*Longhao Wang*
B3	Spindle Control in Servo Control Block with HDD Controller Soc	*Qiyun Zhao*

10:45 AM -- 15 MINUTE BREAK

11:00 AM -- SPECIAL SESSION

C1	Advances and Recording Physics of Magnetic Tape Media	*Pierre-Olivier Jubert/IBM*

12:00 PM -- Lunch at CMRR

1:00 PM -- Design and Fabrication of NanoMagnetic Materials ***Professor Sungho Jin***		
D1	Fabrication and Magnetic Properties of Ion Implanted Co/Pd bit Patterned Media	*Edward Choi*
D2	Magnetically Vectored Nanocapsules for Remote On-Off Switchable Drug or Chemical Release	*Caleb Kong*
D3	Tactile Shear Sensing Using Magnetically Aligned Chain-of-Spheres Array in Elastomer Matrix	*Leon Chen*
1:45 PM -- Magnetic Films and Nanostructures ***Professor Eric E. Fullerton***		
E1	Characterization of BPM with Composite Structures	*Nasim Eibagi*
E2	Enhanced Magnetic Anisotropy in MgO/FM Thin Films	*Jimmy Kan*
E3	Tunable Surface Plasmons in Ag Composite Films	*Dylan Lu*
E4	Lens-less X-ray Imaging of Magnetic Nanostructures	*Oleg Shpyrko*
2:45 PM -- Nanomagnetics ***Professors Ami E. Berkowitz & Sungho Jin***		
F1	MnBi High Hc Particles Made by Spark Erosion	*Phi Nguyen*
3:00 -- 15 MINUTE BREAK		
3:15 PM -- Micromagnetic Modeling and Recording Physics ***Associate Professor Vitaliy Lomakin***		
G1	Micromagnetics and Recording Physics at CMRR	*Prof. Vitaliy Lomakin*
G2	Non-uniform FFT Algorithm for Magnetostatic Field Evaluation in FASTMAG	*Shaojing Li*
G3	Accurate Evaluation of Exchange Fields in Finite Element Micromagnetic Solvers	*Ruinan Chang*
G4	Micromagnetic Analysis of Write Head Dynamics using FASTMAG	*Marco Escobar*
G5	Micromagnetic Study of Granular Recording Media	*Marko Lubarda*
G6	Adaptive Cut Generation for Improved Linear Programming - Decoding of Binary Linear Codes	*Javier Espigares Martin*
4:45 PM -- Poster Session		
5:30 PM -- Advisory Council Meeting		

Research Review Schedule --Thursday, October 13, 2011

8:00AM -- *Continental Breakfast at CMRR*

8:30 AM -- *Welcome and Introduction*

8:35 AM -- Signal Processing and Coding
Professor Paul H. Siegel

H1	Data Reconstruction from a Specially Formatted Hard Drive	*Vasu Kanekal*
H2	Error Floors of LDPC Codes in AWGN Channel	*Brian Butler*
H3	Quantized Belief Propagation Decoders with Low Error Floor for LDPC Codes	*Xiaojie Zhang*
H4	Analysis and Application of Stochastic Decoding of LDPC Codes	*Aman Bhatia*
H5	Windowed Decoding of LDPC Convolutional Codes Over ISI Channels	*Aravind Iyengar*

10:15 AM -- 15 Minute Break

10:30AM -- Non-Volatile, Solid-State Memory
Associate Professor Steven Swanson and Professor Paul H. Siegel

I1	Error-Correcting Codes for TLC Flash	*Eitan Yaakobi*
I2	Optimized Cell Programming for Flash Memories with Quantizers	*Minghai Qin*
I3	Correcting Inter-Cell Interference in Flash Memory with LDPC Codes	*Scott Kayser*
I4	Extracting Unique Fingerprints From Flash Memory Devices	*Steven Swanson*

12:10 PM -- Lunch at CMRR

1:00 PM-- Storage Systems
Associate Project Scientist Gordon F. Hughes

J1	Improved Effective Over-provisioning Using SSD Trim Commands	*Tasha Frankie*

1:30 PM-- Tape-Head Interface
Associate Researcher Frederick E. Spada

K1	Influence of Polarity and Magnitude of MR Bias on Deposit Formation and Pole Tip Recession in Tape Heads	*Fred Spada, PhD*

2:30 PM -- SPECIAL SESSION, II

L1	Memory Effects in Nanoscale Systems: Fundamentals and Applications	*Massimiliano Di Ventra*

3:30 PM -- POSTER SESSION / LAB VISIT/ADJOURNMENT