Monday, January 28, 2013

8:00 – 8:30  Coffee and Rolls
8:30 – 8:45  Director David Boggy

•  WELCOME AND 2012 ANNUAL REPORT

Session I  Servos and Actuators  Professor Tomizuka
8:45 – 9:45

• Transient control in vibration-rejection schemes for HDD systems  Xu (Max) Chen

• Multi-rate control for enhancing the servo performance of HDD systems  Minghui Zheng

• Neural-network based automatic PID tuning in the presence of plant uncertainty and large disturbances  Liting Sun

• 2013 RESEARCH PROPOSALS

9:45 – 10:15  Break

Session II  Servos and Actuators  Professor Horowitz
10:15 – 11:00

• Robust track-following controller design for hard disk drives with irregular sampling  Behrooz Shahsavari

• Limits of performance in hard disk drives with irregular sampling  Fu Zhang

• 2013 RESEARCH PROPOSALS

Session III  Head/Media Tribology  Professor Komvopoulos
11:00 – 12:00

• Carbon Deposition Studied by Molecular Dynamics Simulations  Na Wang

• Structural Stability of Ultrathin Amorphous Carbon Films Used in Heat-Assisted Magnetic Recording Studied by Rapid Thermal Annealing  Na Wang

• RF sputtering and characterization of amorphous carbon overcoat and Cr interlayer for magnetic heads  Jun Xie

• 2013 RESEARCH PROPOSALS

12:00– 1:00  Lunch catered to Banatao Auditorium (CITRIS Building)
Session IV  
**Head/Media Tribology Testing and Numerical Simulation I**

1:00 – 2:30  
*Professor Bogy*

- Lubricant flow behavior on a slider’s air bearing surface  
  Alejandro Rodriguez
- Air Bearing Dynamics Modeling for HAMR Under Thermal Flying-Height Control and Laser Induced Protrusion  
  Joanna Bechtel
- Lubricant Flow and Evaporation Model for Heat Assisted Magnetic Recording Including Reactive End-Group Effects and Thin-Film Viscosity  
  Joanna Bechtel
- Multi-Body Operational Shock Model for Hard Disk Drives  
  Liping Li
- Head Disk Interface Response During Operational Shock with Disk-Ramp Contact  
  Liping Li

2:30 – 3:00  
**Break**

Session V  
**Head/Media Tribology Testing and Numerical Simulation II**

3:00 – 4:45  
*Professor Bogy*

- Dynamics of the slider at touchdown and the wear at light contact  
  Yung-Kan Chen
- A Thermo-Mechanical Finite Element analysis of light sliding contact at the Head-Disk interface  
  Yuliang Liu
- CML codes’ speed optimization, migration to GPU  
  Tholfuqar (Dolf) Madan
- Magnetic Readback signal processing and head positioning  
  Shaomin Xiong
- Experimental study of lubricant in HAMR  
  Shaomin Xiong
- On the lifetime of plasmonic transducers in HAMR  
  Dr. Bair Budaev
- 2013 RESEARCH PROPOSALS

4:45 – 5:15  
**Open Forum Discussion and Industry Feedback**  
*Banatao Auditorium*

5:15 – 6:30  
**Posters session and Buffet reception**  
*Banatao Auditorium*

6:00 – 6:30  
**Advisory Council Meeting**  
FANUC Room – 6th Floor, Etcheverry Hall

6:30 – 7:30  
**Lab Tours and Discussions**  
5119, 5121, 5147, 5149 & 5151 Etcheverry Hall