Monday, January 25, 2016

7:30 – 8:00     Coffee and Rolls
8:00 – 8:15     Director David Bogy
                • WELCOME AND 2015 ANNUAL REPORT

Session I     Servos and Actuators

8:15 – 9:30     Professor Tomizuka
                • Vibration suppression based on adaptive feedforward control with
                  infinite impulse response filter  Shiying Zhou
                • Adaptive identification and compensation for varying resonances and
                  excitations in dual-stage HDDs  Minghui Zheng
                • Resonance compensation based on adaptive notch filter in dual-stage
                  HDDs – a direct adaptive approach  Liting Sun
                • An LMI based synthesis for anti-windup compensation and its
                  application to dual-stage HDDs  Shiying Zhou
                • 2015 RESEARCH PROPOSALS

09:30  –  10:00     Break

Session II     Servos and Actuators

10:00 – 11:00     Professor Horowitz
                • Improved feed-forward control in track seeking using model predictive
                  control  Omid Bagherieh
                • Triple-stage track-following servo design for hard disk drives using mu-
                  synthesis  Jinwen Pan
                • Triple-stage track-Adaptive RRO Compensation in Dual-Stage BPMR
                  HDDs: Theories, Simulations and DSP Implementations for Rejecting
                  Frequency Contents from 100Hz to 20KHz  Behrooz Shahzavari, given by
                  Jinwen Pan
                • 2015 RESEARCH PROPOSALS
### Session III  
**Head/Media Tribology**

**11:00 – 12:15**  
*Professor Komvopoulos*

- The effect of Argon ion beam irradiation on the thickness and structure of ultrathin amorphous carbon films  
  *Jun Xie*
- Bilayer amorphous carbon overcoats for magnetic recording hard disks  
  *Jun Xie*
- Molecular Dynamics Simulations of Argon Ion Etching of Ultrathin Amorphous Carbon Films  
  *Jipeng Qi*
- Microstructure of Thin Amorphous Carbon Overcoats for Magnetic Recording Heads  
  *Josef Matlak*
- Surface Characterization of Ultrathin Amorphous Carbon Films  
  *Shengxi Wang*
- **2015 RESEARCH PROPOSALS**

**12:15 – 1:15**  
*Lunch catered to Banatao Auditorium (CITRIS Building)*

### Session IV  
**Head/Media Tribology Testing and Numerical Simulation I**

**1:15 – 2:30**  
*Professor Bogy*

- Lubricant de-wetting on the slider's air bearing surface  
  *Alejandro Rodriguez*
- Lubricant Viscoelasticity under HAMR Conditions  
  *Soroush Sarabi*
- Experimental study of transient thermal mechanical response in head disk interface at contact proximity  
  *Yuan Ma*
- CMLAir Dynamic code speed improvement using GPU hardware  
  *Tholfaqar (Dolf) Mardan*
- **2015 RESEARCH PROPOSALS**

**2:30 – 3:00**  
*Break*
Session V

Head/Media Tribology Testing and Numerical Simulation II - HAMR

3:00 – 4:30

Professor Bogy

• Experimental methods for nanoscale thermal metrology
  Prof. Chris Dames

• A New Figure-of-Merit for the Evaluation of Near-Field Transducer Performance
  Sean Hooten

• Experimental study of back heating in heat assisted magnetic recording
  Haoyu Wu

• The modelling of back heating in HAMR
  Dr. Bair Budaev

• Heat transfer in nano-scale structures with application to HAMR
  Amin Ghafari

• Controlled heat flux measurement across a closing nanoscale gap between two bodies at different temperatures
  Yuan Ma

• 2015 RESEARCH PROPOSALS

Open Forum Discussion and Industry Feedback (Banatao Auditorium)

4:30 – 5:00

Posters session and Buffet reception (Banatao Auditorium)

5:00 – 6:30

Advisory Council Meeting

6:00 – 6:30

FANUC Room – 6th Floor, Etcheverry Hall

Lab Tours and Discussions

6:30 – 7:30

5119, 5121, 5147, 5149 & 5151 Etcheverry Hall