

## Advanced Storage Technology Consortium Launch Event

January 31 – February 1, 2011, Hilton Hotel, Santa Clara, CA

### Monday, January 31, 2011

- 8:30            **Working group meetings** (ASTC members only-Yosemite Room)
- 9:30am        **ASTC Kickoff** Mark Geenen, Chairman, IDEMA  
**Future Storage Technologies and ASTC: A New Approach**  
Mark Re, Senior Vice President, Seagate Technology  
Bill Cain, Vice President and CTO, Western Digital  
Pantas Sutardja, Vice President and CTO, Marvell  
Pete Goglia, Senior Vice President and CTO, Xyratex  
Currie Munce, Senior Vice President, Hitachi GST
- 10:15am      **Steering Committee Presentation** Gerardo Bertero, Western Digital
- Further details of ASTC structure and operation
  - Introduction of technical committee groups and leaders
- 10:45am      Coffee Break
- 11:00am      **Recording System Session**  
Session Chair: Edward Gage, Seagate Technology  
Speakers:  
Prof. Jimmy Zhu and Yiming Wang, Carnegie Mellon University: "Recording Processes and System Requirements for HAMR"  
Prof. S. Greaves, H. Muraoka and Y. Kanai, Tohoku University: "Modeling of Heat Assisted Magnetic Recording"  
Prof. Randall Victora, Yan Dong, Eunyoung Cho, and Yao Wang, University of Minnesota: "System Modeling for 4 Tbps Bit Patterned Magnetic Recording"
- 12:00pm      Lunch
- 1:30pm        **Parallel sessions for each functional area**  
**Media Session, Sierra Ballroom (Tahoe & Trinity Rooms)**  
Session Chairs: Dieter Weller, Olav Hellwig, Hitachi GST  
Speakers:  
Prof. Chih-Huang Lai, National Tsing Hua University, Taiwan: "Fabrication of small grain size HAMR media"  
Dr. Yukiko Takahashi & Prof. Kazuhiro Hono, NIMS, Japan: "L10-ordered FePtAgC Granular Thin Film for Thermally-Assisted Magnetic Recording Media"  
Prof. Katayun Barmak, Carnegie Mellon University: "Quantitative Kinetic Experiments and Models of L10 Formation in FePt, CoPt and Related Alloy Films"  
Prof. Vitaliy Lomakin and Prof. Eric E. Fullerton, UC San Diego: "Control of SFDs in Bit Patterned Media by Lateral and Vertical Exchange" and "Interplay of reversal field and thermal stability in composite patterned media"  
Prof. Thomas P. Russell, University of Massachusetts: "Self-Assembly of Block Copolymers for Extremely High Density Arrays"  
Prof. MSM Saifullah, Institute of Materials Research & Engineering & C. Singh Bhatia, National University of Singapore: "Fabrication of nanoscale ferromagnetic metallic dots for next generation 4 Tb/inch<sup>2</sup> memories using nanoimprint lithography"

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## Heads Session, Mendocino Room

Session Chair: Tim Rausch, Seagate Technology

Speakers:

Prof. Eli Yablonovitch, Electrical Engineering & Computer Science, UC Berkeley: "Optical Antenna Focusing of Energy onto Magnetic Media"

Prof. Xianfun Xu, Purdue University: "Design of Near Field Transducer for HAMR"

Prof. Jimmy Zhu, Ed Schlesinger, Yi Luo, and James Bain, Data Storage Systems Center, Carnegie Mellon University: "Fabrication and Testing of PSTO for MAMR and A Novel HAMR Transducer Design and Fabrication"

## Head-Disk Interface Session, Big Sur Room

Session Chair: Yiao-Tee Hsia, Western Digital

Speakers:

Prof. David Bogy, Dept. of Mechanical Engineering, UC Berkeley: Summary of two projects, "Slider Dynamics on Partially Planarized Bit Patterned Media in Hard Disk Drive" and "Lubricant Study in Heat-Assisted Magnetic Recording (HAMR)"

Prof. Frank Talke, Center of Magnetic Recording Research, UCSD: "HAMR Lubricant Studies"

Dr. Uwe Boettcher, Ray de Callafon and Frank Talke, UCSD: "Active Flying Height Control Using TFC Sliders"

## Servo/Control, Yosemite Room

Session Chair: Guoxiao Guo, Western Digital

Speakers:

Prof. Roberto Horowitz, Dept. of Mechanical Engineering, UC Berkeley, two presentations: "H2 Guaranteed Cost and H Infinity Control Synthesis for Track-Following Servos" and "Head-Based Microactuation"

Prof. Mark Bedillion, South Dakota School of Mines: "Issues in Dual-Stage Control"

Prof. Bill Messner, Carnegie Mellon University: "Survey of Servo Research at DSSC: Actuation, Sensing, and Controller Design"

Dr. Uwe Boettcher, UC San Diego: "Reference Signal Shaping and Active Flying Height Control"

## Signal Processing Session, Monterey Room

Session Chair: Fatih Erden, Seagate Technology

Speakers:

Prof. J.R. Cruz, University of Oklahoma: "Updates on BPM Detection Methods"

Prof. Bane Vasic and William Ryan, U. of Arizona: "Updates on BPM Write Synch Code Designs"

Prof. V. Bhagavatula, Carnegie Mellon Univ.: "Updates on HAMR Detection and Code Designs"

Prof. Paul Siegel, UC San Diego

3:40pm

Coffee Break

4:00pm

**ASTC Proposal Submission Guidelines** Martin Chen, Hitachi GST

4:30pm

## The Supply Chain View

Session Chair: Pete Goglia, Xyratex

Speakers:

Axel de la Soujeole, Texas Instruments

Randy Cheng, Heraeus

Dan Fisher, LSI

Bob Oates, Veeco

6:00pm

**No-Host Cocktails**

7:00pm

**Dinner**

7:40pm

**Panel Discussion – "Where Does HDD Technology Go From Here?"**

Bill Cain, Vice President and CTO, Western Digital

Pete Goglia, Senior Vice President & CTO, Xyratex

Currie Munce, Senior Vice President, Hitachi GST

Mark Re, Senior Vice President, Seagate Technology

Pantas Sutardja, Vice President and CTO, Marvell

## Tuesday, February 1, 2011

- 8:30am      **ASTC Roadmap Activity**  
(open to all IDEMA members, open to all universities)
- 9:45am      Coffee Break
- 10:00am     **Functional Area Leads summary from parallel sessions\***  
Session Chair: Giora Tarnopolsky, Xyratex  
Speakers:  
Dieter Weller, Hitachi GST  
Tim Rausch, Seagate Technology  
Yiao-Tee Hsia, Western Digital  
Guoxiao Guo, Western Digital  
Fatih Erden, Seagate Technology
- 11:00am     **Joint Steering/Technology Committee Meeting\***
- 12:00pm     **Adjourn**

\* Restricted to ASTC member company personnel