

UNIVERSITY OF HOUSTON  
CULLEN COLLEGE OF ENGINEERING  
Center for Integrated Bio and Nano Systems  
**SPEAKER SERIES**

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**PRESENTS**

## Heat Assisted Magnetic Recording Feasibility:

*An Agile Development Adventure*



**Dr. Cynthia Hipwell**

TEES Distinguished Research Professor at Texas A&M University

**Friday, February 16, 11:15 am**

**Classroom and Business Building, Room 122**

### LECTURE ABSTRACT

The incredible pace of areal density growth has fueled the hard disk drive industry for the more than 30 years. With 10s of companies 30 years ago to just 3 today, the competitive industry has not been for the faint of heart. Aggressive areal density growth enabled new capacity points and new products for customers, but interestingly, has also been the most significant cost reduction opportunity for the business. With the pace of technology growth driving economics for the industry, aggressive technical competition arose. How does a company get and stay ahead in this environment? How do innovators in a large company not get bogged down by large company business processes?

Dr. Cynthia Hipwell will discuss the technical and business drivers for area density growth in the data storage industry. She will explain the technical drivers leading to the need for Heat Assisted Magnetic Recording as well as some of the published nanoscale technology accomplishments and challenges. Most importantly, she will discuss using Lean Startup and Agile technology development practices to increase the pace of technology development to match business need requirements.

### SPEAKER BIOSKETCH

Dr. Hipwell has been working in the area of technology development based upon nanoscale phenomena for over 20 years. She received her B.S.M.E. from Rice University and her M.S. and Ph.D. in Mechanical Engineering from the University of California, Berkeley. Upon graduation, she went to work at Seagate Technology's Recording Head Division in Bloomington, Minnesota to develop test equipment to characterize the interface between the head and the disk in hard disk drives. During her time at Seagate, Dr. Hipwell held various individual and leadership positions in the areas of reliability, product development, and advanced mechanical and electrical technology development. In these various roles, she established new business processes and an organizational culture that focused on developing innovative solutions from root cause understanding, improved pace of learning, and discipline in experimentation and configuration management. She was recently inducted into the National Academy of Engineering for her leadership in the development of technologies to enable areal density and reliability increases in hard disk drives. Dr. Hipwell is currently a Distinguished Research Professor at Texas A&M University where she is teaching classes on innovation and technology development as well as leading a research team in the areas of tools for innovation acceleration and entrepreneurial nanotechnology.

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