Advances in Information Storage Systems

Selected Papers from the International Conference on Micromechatronics for Information and Precision Equipment (MIPE '97)
Volumes 9 & 10

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Advances in Information Storage Systems *(AISS)*, volumes 9 & 10, are special volumes which contain selected papers regarding not only information storage but also information equipment in general and related technologies. The papers were presented at the International Conference on Micromechatronics for Information and Precision Equipment (MIPE '97). MIPE '97 was held in Tokyo, Japan, from 20 to 23 July 1997, as one of the memorial events of the Centennial Grand Congress of the Japan Society of Mechanical Engineers.

Information and precision equipment is fast-changing high technology, and is necessary for the development of an international multimedia society and essential for the innovation of conventional machines as well as the creation of new sophisticated machines for future medical, biological and cosmic industries in the 21st century. Information and precision equipment can improve their performances by analyzing, designing, fabricating, controlling and then utilizing a smaller and smaller world in space and time. Micromechatronics is not only a major interdisciplinary engineering but also the principle of innovation in such machines.

In the light of this, the scope of MIPE '97 ranged from the micromechanics and micromechatronics of information storage, input/output devices, and precision equipment to microtechnologies related to information equipment. The papers in *AISS* special volumes are mainly related to information storage, particularly magnetic recording storage. But some of them are related to printer, paper-feeding-mechanism and micromachine technologies, which will directly or indirectly contribute future information devices. The papers contained in this series are of international archival quality and are refereed according to rigorous journal standards.

Volume 9 contains papers on the mechanics and tribology of magnetic recording storage systems (mainly hard disk drives), while papers on the micromechatronics of the head-positioning system in magnetic disk storage are compiled in Volume 10 together with papers on optical disk storage and others.

Contents:

- Vibrations in Contact Magnetic Recording System: Basic Features, Analytical Solution and Novel Numerical Method *(G Sheng et al.)*
- Contact Stress Analysis in Layered Magnetic Media with a Rough Surface *(T Nogi & T Kato)*
- and other papers

- Present and Future Technologies of Ultraprecision Positioning in Japan *(J Otsuka)*
- Carriage Acceleration Feedback Multi-Sensing Controller for Sector Servo Systems *(M Kobayashi et al.)*
- A Robust Stability Analysis on Learning Control for Hard Disk Drives *(J Ishikawa et al.)*
- Comparison of Robust Track-Following Control Systems for a Dual Stage Hard Disk Drive *(T Suzuki et al.)*
- Optimum Damping Factor Design of the Actuator in Optical Disk Drive *(S J Kim et al.)*
- A Review of Computer Simulation Models for Sheet Transport through a Copier *(R C Benson et al.)*
- Numerical Simulation of Compression of a Toner Layer in Electrophotography Process *(N Nakayama & H Mukai)*
- Integrated Fast Atom Beam (FAB) Processes for Fabricating Micro Diffractive Grating Structures and Micro Textured Surfaces *(M Hatakeyama et al.)*
- and other papers

Readership: Students of electronic & mechanical engineering and people in the computer industry.