

Registration

Industry attendees who are invited to attend this symposium are considered guest members and are charged a registration fee. These persons may attend a maximum of two ICAT meetings before being required to join the ICAT Consortium. No fee will be charged to ICAT member companies. The maximum number of participants from each member company is two; additional persons *must* pay the registration fee.

Lodging

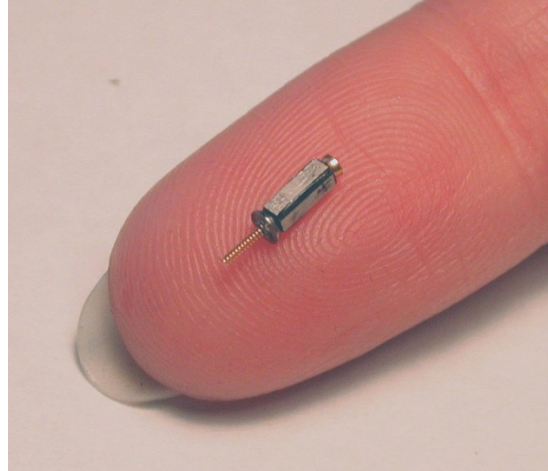
A block of rooms has been reserved at The Penn Stater Conference Center Hotel for the nights of October 8, 9, and 10, 2007. The hotel provides complimentary shuttle service transportation to and from the University Park Airport, State College, PA; please request this service when reserving your room. The reservation number for this symposium is **ICA 1008**. All meetings and meals associated with the symposium will be held on-site at The Penn Stater.

Attendees

A symposium registration form and a lodging information sheet are enclosed. *Please read these items carefully and follow the instructions, respecting the indicated deadlines.* Please direct all registration and lodging questions to Susie Sherlock, ICAT Director, as follows:

Susie Sherlock
ICAT Coordinator
Telephone: 814-865-3225
FAX: 814-863-6734
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CURRENT RESEARCH PROJECTS



1.5 mm ϕ compact ultrasonic motor with maximum Torque of 0.1 mNm, which will be applied for medical micro surgery. [2007 SPIE Smart Product Implementation Award]



Integrated Optical Fiber Alignment Package (IFAP) with a delta-shape 2D-freedom piezoelectric ultrasonic motor. [2007 R&D 100 Award product]

ICAT

International Center for
Actuators and Transducers

50th ICAT/JTTAS Joint International Smart Actuator Symposium

October 9-10, 2007
(Tuesday and Wednesday)

Location/Lodging:

*The Penn Stater Conference Center Hotel
215 Innovation Boulevard
State College, PA 16803
(814) 863-5000 (Local)
(800) 233-7505 (Toll-free Reservations)
(814) 865-8501 (Fax)
<http://www.pshs.psu.edu>*

Deadlines:

*Symposium Registration: September 29, 2007
Lodging Reservations: September 10, 2007*

PENNSTATE



Tentative Agenda

About the Symposium

The development of micromechatronic systems with actuators/motors combined with sensors, exhibiting high mechanical output and efficiency is the key to 21st century technologies. Recently developed piezoelectric positioning devices, ultrasonic micro motors, and piezoelectric energy harvesting systems are essential to so-called nano-, bio- and energy technologies, respectively. Also, market research done for electronic component companies suggests that one of the most required components for IT technologies over the next 10 years will be 3 - 8 mm diameter motors with relatively high torque.

The International Center for Actuators and Transducers (ICAT) at Penn State will hold a two-day international symposium on smart actuators, emphasizing compact and simple structured solid state actuators and integrated sensors.

For further information on the scientific content of this symposium, please contact:

Dr. Kenji Uchino, ICAT Director
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134 Materials Research Laboratory Building
The Pennsylvania State University
University Park, PA 16802, USA

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Tuesday, October 9, 2007

- 8:00-8:30 On-site Registration; Gathering and Refreshments
- Session Chair: Kenji Uchino**
8:30-8:40 Welcome Remarks: C. Pantano, Director of MRI
8:40-9:15 Annual Report of the ICAT: K. Uchino, Director of ICAT
9:15-9:30 LTCC Cofired Optical Fiber Alignment Device: S.-H. Park, MRI
9:30-9:45 High Power Piezoelectric ML Transformers: S. Ural, MRI
9:45-10:00 Multi-functional Micro Motors: S. Tuncdemir, MRI
10:00-10:30 **Refreshment Break**
- Session Chair: Susan Trolier-McKinstry**
10:30-10:55 New Piezoelectric Actuators: B. Andersen, Noliac, Denmark
10:55-11:20 Vibration Speakers: K. Yamato, NAMIKI Precision Jewel, Japan
11:20-11:45 Piezoelectric Positioners: R. Gloess, Physik Instrumente, Germany
11:45-13:00 **Lunch Break**
- Session Chair: Clive Randall**
13:00-13:25 Applications of Amplified Piezoelectric Actuators: F. Claeysen, Cedrat, France
13:25-13:50 Piezoelectric Camera Module: R. Lee, Sunnytec, Taiwan
13:50-14:15 Shape Memory Alloy Actuators: D. Homma, Toki Corp., Japan
14:15 -14:40 Multiferroic Alloys: Y. Furuya, Hirotsuki Univ., Japan
14:40-15:10 **Refreshment Break**
- Session Chair: R. E. Newnham**
15:10-15:35 Ultrasonic Motors for a Low Temperature Application: S. Dong, Virginia Tech
15:35-16:00 Piezoelectric Inkjet Printer: S. Kato, Seiko Epson, Japan
16:00-16:25 Piezo-Thin Films and USM: S.J. Yoon, KIST, Korea
16:25-16:50 Micro Motors: D. Henderson, New Scale
18:00-18:30 **Bar Service**
18:30-20:00 **Dinner Banquet**

Wednesday, October 10, 2007

- 7:30-8:00 On-site Registration: Gathering and Refreshments
- Session Chair: Alfredo Vazquez Carazo**
8:00-8:15 Piezoelectric Loss Mechanisms: A. Rajapurkar, MRI
8:15-8:30 Piezoelectric Pump: J.-K. Kang, MRI
8:30-10:30 **Exhibition & Poster/Refreshment Break**
8:40-10:30 **Optional Laboratory Tour of ICAT and MRL Facilities**
- Session Chair: Eric Cross**
10:30-10:55 New Applications of Piezoelectric Transformers: A. Vazquez Carazo, Micromechatronics, Inc.
10:55-11:20 Remote Sensing and Failure Analyses of Bridges: A. Dogan, Anadolu University
11:20-11:45 Metal Actuators: A. Flatau, Univ. of Maryland
11:45-13:00 **Lunch Break**
- Session Chair: Alfredo Vazquez Carazo**
13:00-13:25 Piezoelectric Films: S. Trolier-McKinstry, MRI
13:25-13:50 Non-Pb Piezoelectrics: S. Nahm, Korea Univ.
13:50-14:15 Nano Composites and MEMS: S. Priya, Virginia Tech
14:15-14:40 Piezoelectric Thin Film Actuators: K. Wasa, Yokohama City Univ., Japan
14:40-15:10 **Refreshment Break**
- Session Chair: Shashank Priya**
15:10-15:35 ATILA New Version Explanation: J.-C. Debus and/or P. Mosbah, ISEN, France
15:35-16:00 Piezoelectric Actuators: T. Ezaki, Cerasec
16:00-16:25 Drive/Control Circuits: G. Knowles, QorTek
16:25-16:50 High Voltage Power Supply: B. Maryniak, Trek, Inc.
16:50-17:00 Closing Remarks: K. Uchino, ICAT Director
Questionnaire Completion and Collection
- 17:30 Closing Reception at the home of Kenji Uchino
Shuttle cars will leave from the HOTEL for Uchino's house