

MEMS INNOVATION FEST 2007

MEMS Course & Conference

**“BRIDGING THE GAP BETWEEN DESIGN & PRODUCT
THROUGH INNOVATION”**

“Derive Value by Implementing MEMS”

Programme Schedule

DAY 1 – 9th December 2007

0800 - 0900 : Registration.

0900 - 0905 : Invocation.

0905 - 0915 : Welcome Address

Dr. K. Venkatesh, Center for Emerging Technologies, SBMJCE, JGI.

0915 - 0925 : Need for the Conference

Prof. E. S. Dwarakadasa, CEO & MD, Karnataka Hybrid Micro Devices Ltd.

0925 - 0935 : Inauguration & Address by Chief Guest

Dr. Kota Harinarayana, Programme Director (Retd), ADA.

0935 - 0945 : Release of Souvenir and Address by Guest of Honour

Dr. K. N. Shankara, Director, ISRO Space Applications Center.

0945 - 0950 : Message from Dr. R. Chidambaram

Principal Scientific Advisor to the Government of India.

0950 - 1000 : Address

Mr. R. Chenraj Jain, Chairman, Jain Group of Institutions.

1000 - 1010 : Presidential Address

Dr. A. K. Tripathy, Director General, Central Power Research Institute.

1010 - 1015 : Vote of Thanks

Mr. V. Janardhana, Managing Director, Step Electronics Pvt Ltd.

1015 - 1030 : Tea Break

Day 1 - 9th December (contd...)

1030 - 1130 Hrs: Technical Papers Session A, Session Chair - Prof.E.S.Dwarakadasa

A1: Application & Challenges For RFMEMS in Avionics.

Dr. D. V. K. Sastry,

Director- Department of MicroSystems, Research Center Imarat, DRDO, Hyderabad.

A2: High-Resolution Micromachined Accelerometers.

Dr. G. K. Ananthasuresh,

Associate Professor, Mechanical Engineering, Indian Institute of Science, Bangalore

A3: Integrated Microsystems Packaging – Reliability Considerations.

Prof. G H Sarma

Si2 Microsystems, Bangalore &Professor, Nitte Meenakshi Inst of Technology, Bangalore

1130 - 1300 Hrs: Course Session – CS1

MEMS Workshop Tutorial by Dr. Chengkuo Lee Vincent PART - I

1300 - 1345 Hrs: Lunch

1345 - 1530 Hrs: Course Session – CS2

MEMS Workshop Tutorial by Dr. Chengkuo Lee Vincent PART - II

1530 - 1545 Hrs: Tea Break

1545 - 1700 Hrs:Course Session – CS3

MEMS Workshop Tutorial by Dr. Chengkuo Lee Vincent PART - III

DAY 2 – 10th December 2007

0900 - 1100 Hrs: Technical Papers Session B, *Session Chair* - Dr. K. Venkatesh

B1: MEMS Design for Commercialization.

Parag Thakre, Aveek Chatterjee

General Electric Global Research Center, Bangalore, India

Abhijeet Sathe

General Electric Sensing, Fremont, USA

B2: Conference Core Theme : Bridging the gap between Design & Product through Innovation

V. Janardhana

Step Electronics Pvt Ltd, Bangalore

Dr. Sayanu Pamidhighantam, Shrish Krishnamurthy, Dr. K. Venkatesh

Center for Emerging Technologies, SBMJCE, JGI, Bangalore

B3: Applications of Diamond in Micro and Nano fabrication.

N. Balashanmugam, P. V. Shashikumar

*Micro Engineering and Nano Technology Department,
Central Manufacturing Technology Institute, Tumkur Road, Bangalore.*

B4: Deep Reactive Ion Etching for MEMS .

Mr. B. D. Pant

MEMS Laboratory, Central Electronics Engineering Research Institute, Pilani.

B5: Mighty Midget Microbrushless Motors, from prototype to developed markets.

N. Chandrashekhar

DC Enterprises, Bangalore

B6: Micromachining Using FIB.

Mr. Jaypal

Tessolve Services Pvt Ltd, Bangalore.

B7: Variable Width Electrostatic Microactuators with Extended Travel Range.

Manish M. Joglekar, Dnyanesh N. Pawaskar

Department of Mechanical Engineering, Indian Institute of Technology Bombay.

B8: Development of capabilities and other selected microscale activities at Suman Mashruwala Advanced Microengineering laboratory (SMA μ L) at IIT Bombay.

Suhas Deshmukh, Prasanna Gandhi, U.V. Bhandarkar, Himani Shah

*Suman Mashruwala Advanced Microengineering Laboratory,
Mechanical Engineering Department, IIT, Bombay.*

1100 - 1115 Hrs: Tea Break

Day 2 - 10th December (contd....)

1115 - 1300 Hrs: Technical Papers Session C, Session Chair - Dr. D. Subramanian

C1: III-V Structures for OPTO & RF - A review.

K. Vijaya Kumar Gupta BSc(Mumbai) BE(IISc1997)

MD, Kwalify Photonics P Ltd, Hyderabad

Member DSIR NMITLI(White LEDs)

Past president ELCINA, ELIAP

C2: Design and Development of Imaging and non-Imaging Optical Systems .

P. V. Ramana, and V. Janardhana

Step Electronics Private Limited, , Bangalore .

C3: Overview of FA Methods for Semiconductor Devices.

C. Ramachandra

TESSOLVE Services Private Limited, Bangalore .

Dr. S. K. Dass

ISRO Satellite Center, , Bangalore .

C4: Development of High Dielectric Constant BZN Thin Films on Low K Quartz Substrates and Their Microwave Characteristics for RF MEMS Switches.

K. Sudheendran, and K. C. James Raju

School of physics, University of Hyderabad, Hyderabad.

C5: MEMS Micro Structures: The Coming Generation Sensing Elements.

Anuj Kumar Goel

N. C. College of Engineering, Israna, Panipat. Haryana.

Mr. B. D. Pant. (Scientist 'F')

Central Electronics Engineering Research Institute, Pilani, Rajasthan.

C6: Static and Dynamic Analysis of Tunable RF MEMS Resonator using Analytical model .

Vaishali B. Mungurwadi,

B.V.B. College of Engineering and Technology, Hubli Karnataka

Dr. Uday V.Wali

K.L.E. College of Engineering and Technology, Belgaum, Karnataka

C8: The Potential of MEMS Sensors in Indian Automotive Sector.

Sayanu Pamidighantam, K. Gopala Krishna,

Center for Emerging Technologies, SBMJCE, Bangalore Rural District.

Sayanu Pamidighantam , Sri Hari.H.S

Step Electronics Private Limited, Bangalore

Narendra Babu

Advanced Forming Technology Center, Bangalore

K, S. Raghavan, and E. S. Dwarakadasa

Karnataka Hybrid Micro Devices Limited, Bangalore

Day 2 - 10th December (contd...)

1300 - 1345 Hrs: Lunch

1345 - 1515 Hrs: Technical Papers Session D, Session Chair - Group Captain K. K. John

D1: Inertial Sensors.

Shiva Prasad

Research Center Imarat, DRDO, Hyderabad.

**D2: Optimization of the Process Parameters for Microstereolithography System .
to Achieve High resolution microstructures.**

Rahul Ramtekkar, Suhas Deshmukh, Prasanna Gandhi

*Suman Mashruwala Advanced Microengineering Laboratory,
Mechanical Engineering Department, IIT, Bombay*

**D3: Real-Time Monitoring Of The Fetus Movement and
Measurement Of Uterine Contraction Using MEMS Acoustic Sensor.**

Sharvan Pahuja

ICE Department, Dr B R Ambedkar NIT Jalandhar, Punjab.

Sneh Anand

Centre of Biomedical Engineering, IIT Delhi,

Dr. V. K. Dwivedi , Chandra Shekhar

Central Electronics Engineering Research Institute Pilani, Rajasthan.

D4: The Role of MEMS and Sensors in Energy Harvesting and Smart Systems.

Sayanu Pamidighantam

Center for Emerging Technologies, SBMJCE, Bangalore Rural District.

Step Electronics Private Limited, Bangalore.

Mark G. da Silva

Exponent Failure Analysis Associates, 21 Strathmore Road, Natick, MA 01760, USA

Dr. S. Seetharamu

CPRI, Bangalore

D5: Company Presentation.

Mr. Ashok Dhar

Applied Microstructures Inc USA

1515 - 1530 Hrs: Tea Break

Day 2 - 10th December (contd...)

1530 - 1615 Hrs: Technical Papers Session E Session Chair - Mr. V. S. R. Kirty

E1: Micro-channel Cooling for 3-D IC's & Complex Multi-Level Interconnects:

Qualitative Thermal Analysis

Mr. K. Srinivasa Reddy,

M.S.Ramiah School of Advanced Studies, Bangalore

E2: Systematic Inventive Thinking – Tool for MEMS .

Group Captain K. K. John, Vice President,

HAL-EDGEWOOD Technologies, Bangalore

E3: Bio Sensor For Effective Fertilization by Knowing the Health of The Plant.

Mr. Chaitanya J. Diwan,

Manager, Mahindra & Mahindra, Mumbai.

1615 - 1700 Hrs: Technical / Clinical Session