



MicroTech 2009

Bio-Sensors and MEMS Packaging

"Everything in Electronics from the Chip to the System"

Featuring

A Tutorial on Low Temperature Co-fired Ceramic Technology for MEMS and a tour of the Heriot Watt LTCC facility
Commercialisation of Microfluidic Based Devices
Optimising Wirebonding for MEMS Assembly
Medical Sensor Applications

**Edinburgh Conference Centre at Heriot-Watt
University, Edinburgh, Scotland**
Monday 2nd March 2009 and Tuesday 3rd March 2009

Technical Conference and Table-Top Exhibition



Edinburgh Conference Centre at Heriot-Watt University



MicroTech 2009 is technically co-sponsored by IEEE-CPMT-UK&RI



MicroTech 2009

Programme - Day 1

Monday 2nd March 2009

Venue: Earl Mountbatten Building Heriot-Watt University

13.30 – 15.30 Tutorial: Introduction Low Temperature Co-fired Ceramic Technology for MEMS followed by a visit to the Heriot-Watt LTCC facilities.

Heriot-Watt University, Earl Mountbatten Building Room 2.33

Outline: This tutorial will give a gentle introduction to Low Temperature Co-fired Ceramic technology with emphasis on the use of this technology for microsystems. Activities from research groups worldwide will be highlighted. A visit to the new LTCC facilities at Heriot-Watt will also be provided. The attendants will have the possibility to interact with researchers involved in this field.

Tutor: Prof. Marc Desmulliez

Please note: This Tutorial is **free** to those attending MicroTech 2009 on Tuesday March 3rd. A fee of £60.00 plus VAT is payable by those not registering for MicroTech 2009.

IMAPS-UK (AGM)

1600 – 1730 Heriot-Watt University, Earl Mountbatten Building, Room 2.33

Dinner in Edinburgh (optional) 1900 –2100

Please note that the cost of the dinner is not included in the conference fees and is expected to be approximately £50 delegates should indicate at the time of booking if they wish to attend the dinner

Accommodation:

MicroTech 2009 is a non-residential event and the fees do not include accommodation, however accommodation is available on site at the conference centre. Delegates should book their rooms, if required, directly with the Edinburgh Conference Centre stating that they are attending IMAPS-UK MicroTech. It is recommended that bookings be made as soon as possible. Contact details for bookings: Web <http://www.edinburgh-conference.com/stay> Phone +44 (0) 131 451 3115



Typical Bedroom at Edinburgh Conference Centre

Exhibition

MicroTech 2009 will include a table-top exhibition area adjacent to the conference room. All coffee breaks and lunch will be served in the exhibition area ensuring that exhibitors gain maximum interaction with delegates. Exhibition fees include coffee and lunch as well as admission to the full conference. At a cost of only £150.00 plus VAT for IMAPS-UK corporate members and £200.00 plus VAT for others the exhibition offers a truly cost effective way to meet engineers and other decision makers within the Microelectronics sector. Please note the exhibition will take place in the Edinburgh Conference at Heriot-Watt on Tuesday March 3rd only

Conference Fees

IMAPS-UK members can attend MicroTech 2009 for just £99.00 plus VAT. The fee includes admission to the conference, coffee breaks, lunch and a copy of the conference proceedings. The fee for non – members is £139.00 plus VAT. A reduced fee is available for students and young engineers (under 25 years old) however proof of status will be required.

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Programme - Day 2

Tuesday 3rd March 2009

Venue: James Watt Centre II, Edinburgh Conference Centre, Heriot-Watt University

9.00am- 10.00am: Registration and coffee – Exhibition opens

Session 1 – Biosensors Technologies

10.00am-10.30am: Invited Paper

“Microtechnology Platform for cell cell interaction detection”

E. Jung, D. Manassis, A. Neumann, Lars Böttcher, T. Braun, J. Bauer, H. Reichl, Fraunhofer IZM, Germany

10.30am-11.00am: Invited Paper

“The Application of a Micromachined Three-Axis Accelerometer in Heart Bypass Surgery”

*Lars Hoff, Institute of Microsystems Technology, Vestfold University College, Tonsberg, Norway,
Craig Lowrie and Marc Desmulliez, Microsystems Engineering Centre (MISEC), Heriot-Watt University, Edinburgh, Scotland
Ole Jakob Elle and Erik Fosse, The Interventional Centre, Rikshospitalet University Hospital*

11.00am-11.25am

“Fabrication on flexible film — an enabling technology for integration in catheterised sensing”

Tony Corless, INEX, Newcastle University

11.25am – 11.50am: Coffee break

Session 2 – Biosensors Fabrication

11.50am – 12.20pm: Invited Paper

“Flexible Thin Film Multi Layer Substrates: Opportunities for Medical Sensors and Actuators”

A. Kaiser, K. Ruess, S. Hoyer, B. Holl, and E. Feurer, Reinhardt Microtech GmbH, 89077 Ulm, Germany

12.20pm – 12.45pm:

“Progress Towards Wafer-scale Fabrication of Ultrasound Arrays for Real-time High-resolution Biomedical Imaging”

*A.L.Bernassau, D.Hutson, S.Cochran, C.E.M.Démoré, Institute for Medical Science and Technology, University of Dundee
J.McAnery, Logitech Ltd, Old Kilpatrick, Glasgow
T.W.Button, Applied Functional Materials Ltd, Birmingham
D.Flynn, M.Desmulliez, Microsystems Engineering Centre, Heriot-Watt University*

12.45pm – 13.10pm:

“Issues in Manufacturing of Wafer Scale 3D Piezoelectric-on-Silicon Structures”

*J.Sweet, Loadpoint Ltd, Cricklade, Swindon
S.Cochran, D.Hutson and A.L.Bernassau, Institute for Medical Science and Technology, University of Dundee*

13.10pm – 14.15pm: Lunch break

Session 3 - MEMS Packaging

14.15pm - 14.45pm: Invited Paper

“Productionisation Issues for Commercialisation of Microfluidic Based Devices”

D.P.Webb, B.J.Knauf, C.Liu, D.A.Hutt and P.P.Conway, School of Mechanical and Manufacturing Engineering, Loughborough University, Loughborough UK

14.45pm – 15.10pm:

“Optimising Wirebonding for MEMS Assembly, by Cleaning Methods”

Oliver Manger, Zestron

15.10m – 15.35pm:

“Ultra Low Leak Detection Methods for MEMS Packaging

Suzanne Millar, Marc Desmulliez, Microsystems Engineering Centre (MISEC), Heriot-Watt University, Edinburgh, Scotland

15.35pm – 16.00pm:

“A Novel Encapsulation Method for Wafer Level MEMS Packaging”

Changhai Wang, Jun Zeng and Kun Zhao, School of Engineering & Physical Sciences, Heriot Watt University

Poster Presentations

“Novel RF Microfluidic sensor for Particle-Cell detection”

R. Lopez-Villarroya, S.K. Pavuluri, G. Gousssetis, M.P.Y. Desmulliez, D.M. Kavanagh, E. McKeever, MISEC, Dept of EECE, EPS, Heriot-watt University, UK.

“Temperature Monitoring in Laser Bonding for MEMS Packaging”

Yufei Liu, Jun Zeng, and Changhai Wang, School of Engineering and Physical Sciences, Heriot Watt University, Edinburgh UK.

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Booking Form

Please return the completed form to the IMAPS-UK Secretariat, Post: 4 The Close, Bracebridge Heath, Lincoln, LN4 2PB. E-mail imapsuk@aol.com, Fax +44 (0)1522 575582

Name Title IMAPS-UK or IEEE Member Yes/ No

Company/ Organisation

Address

Telephone:

Fax:

E-mail:

Conference Rates

Members of IEEE-CPMT-UK&RI may attend MicroTech 2009 conference at membership rate

Delegate Conference Booking MicroTech 2009 (includes LTCC tutorial on Monday March 2nd)

IMAPS-UK or IEEE Member	£99.00	(£113.85 inc VAT)	<input type="checkbox"/>
Non Member	£139.00	(£159.85 inc VAT)	<input type="checkbox"/>
Speaker	£85.00	(£97.75 inc VAT)	<input type="checkbox"/>
Student /Young engineer	£75.00	(£86.25 inc VAT)	<input type="checkbox"/>

Delegate Booking LTCC Tutorial on Monday March 2nd

All Delegates (unless attending MicroTech 2009)	£ 60.00	(£69.00 inc VAT)	<input type="checkbox"/>
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Exhibitor Booking (Includes admission to LTCC Tutorial and MicroTech 2009)

IMAPS-UK Corporate Member	£150.00	(£172.50 inc VAT)	<input type="checkbox"/>
Non Member	£200.00	(£230.00 inc VAT)	<input type="checkbox"/>

Payment

Cheque enclosed (made payable to IMAPS-UK)

Credit Card (Visa/Master Card/Amex/Maestro)

Card Holders Name

Card Number

Expiry Date

Issue Number (Maestro only)

Conference Dinner

I am interested in attending the conference dinner please send more details when available

IMAPS-UK Reserves the right to make changes to the programme without prior notification. IMAPS-UK cannot accept responsibility for items lost or stolen. Fees are non-refundable for cancellations received after 20 February 2009, prior to this date cancellations will be subject to a £50.00 administration charge. IMAPS-UK is a Registered Charity No 801142