INTERNATIONAL WORKSHOP on FLEXIBLE & STRETCHABLE ELECTRONICS

SEPTEMBER 6 & 7, 2007 LEUVEN, BELGIUM

A dissemination activity by IST-SHIFT, IST-STELLA and IWT-SBO-BIOFLEX
On behalf of the organising committee we would like to invite you to Flex-Stretch, the first International Workshop on Flexible and Stretchable Electronics, which will take place in Leuven, Belgium on September 6 and 7, 2007. This workshop is a dissemination activity of the EC funded Integrated Projects SHIFT (Smart High Integration Flex Technologies) and STELLA (Stretchable Electronics for Large area Applications) and of the Flemish Community funded SBO project BioFlex on Biocompatible Flexible and Stretchable circuits.

The workshop will deal with the latest developments in high density flex technologies and applications, including active and passive component embedding and assembly technologies, RF design and applications, thermo-mechanical modelling and reliability aspects. Moreover first design considerations, technology developments and potential applications in the new and very exciting area of stretchable electronics will be shared. It is believed that flexible and stretchable electronics are key enabling technologies for realising the ambient intelligence vision. Applications in a vast number of fields are emerging or will do so in a foreseeable future: implantable electronics, wearable computing, wellness and sports, haptics, robotics, intelligent textiles, wireless sensor networks, flexible displays and signage,…

The aim of the workshop is not only to present the results obtained so far in the above mentioned projects, but also to offer an outstanding international representation of technology developers and users of these new technologies. The workshop is supported by the IMAPS Benelux chapter and takes place at the premises of IMEC, the Interuniversity Microelectronics Centre.

As the number of participants is limited to about 140, be sure to register in time, if you are interested.

Hope to see you in Leuven next September!

Dr. Jan Vanfleteren
IMEC/TFCG Microsystems
SHIFT & BIOFLEX project co-ordinator

Dr. Christopher Klatt
Freudenberg
Forschungsdienste KG
STELLA project co-ordinator

A dissemination activity supported by
IST-SHIFT, IST-STELLA and IWT-SBO-BIOFLEX
The Venue

Leuven is a marvellous town! This culturally and historically rich city offers you a multitude of activities. Situated in the center of Belgium about 30 km from Brussels. Well-known for its university which was founded almost six hundred years ago. Throughout the centuries people have always occupied centre stage at the Catholic University of Leuven. The University's academic fame has attracted scholars and scientists as Justus Lipsius, Gerard Mercator and Andreas Vesalius who have all made valuable contribution to the European intellectual life. When brewing became a nationwide industry in the 19th century, Leuven became world famous for its beers, and today is still proud to be known as the beer capital of Belgium. Now, its rich history is still alive in its almost completely preserved city center, its numerous amount of shops, its lively atmosphere and its open-hearted citizens.

Don’t miss the opportunity to visit this unique city and breathe in the mixture of historical and contemporary spirit!

CONFERENCE DINNER
Faculty Club, Groot Begijnhof 14, 3000 Leuven (http://www.facultyclub.be)
Thursday, September 06, 2007 at 20.00 hrs
Included in registration fee for participants (pre-registration is mandatory)
Separate registration is required for partners at a fee of €65

Faculty Club is a unique banqueting centre. They welcome their guests to the calm and tranquility of the 13th century Infirmerie of the Grand Beguinage and the Convent of Chièvres, built in 1561. The ancient historical site of the Grand Beguinage was included in the UNESCO World Heritage List in March 2000, and Faculty Club manages a part of this unique complex. Their expertise is efficient service, flexibility and top-quality cuisine. Leuven's historical and vibrant town centre is only a short walk away.

THE WORKSHOP WILL TAKE PLACE AT IMEC
IMEC vzw, Kapeldreef 75, 3001 Leuven, Belgium (http://www.imec.be)
IMEC is a world-leading independent research center in nanoelectronics and nanotechnology. Its research focuses on the next generations of chips and systems, and on the enabling technologies for ambient intelligence.
Registration Form

Registration (Fax Back: +32 16 28 85 00)
Last name & Forename: ................................................................................................
Company: .......................................................................................................................
Address: ........................................................................................................................
E-mail: ............................................................................................................................
Phone: ............................................................................................................................
Fax: .................................................................................................................................
VAT no.: .........................................................................................................................
Mailing Date: ..................................................................................................................
Signature: ........................................................................................................................

I will attend the Flex–Stretch Workshop 2007 in Leuven on the following days:
Thursday 06 September  ❑ Yes  ❑ No
Friday 07 September   ❑ Yes  ❑ No

I will attend the dinner event at the Faculty Club, Groot Begijnhof 14, 3000 Leuven on Thursday 06 September 2007 at 20h00 (included in workshop registration fee)
❑ Yes  ❑ No

One partner can join the social event for a fee of €65:
❑ Yes  ❑ No

I have special dietary needs:
❑ Yes  ❑ No       If yes, please specify __________________________________

Payment [prices inclusive of VAT]:

[Registration fee]
until 31/07/07: €300 ~ from 01/08/07 onwards: €350________________:=..................

[dinner partner] €65____________________________:=..................

Total ______________________________:=..................
By credit card:

- VISA
- EUROCARD/MASTERCARD
- AMERICAN EXPRESS

I authorize IMEC to debit my credit card no.: ..............................................................

CVC Code VISA ~EC/MC (3 last digits @ back side credit card): .................................

CVC Code AMERICAN EXPRESS (4 digits @ front side credit card): ..............................

Expiry Date mm/yy: .......................................................................................................

Name Cardholder: ...........................................................................................................

Signature: ......................................................................................................................

By bank transfer to:

- FORTIS BANK, Heverlee-Zuid, Naamsesteenweg 173-175, 3001 Heverlee, Belgium
- Account: 230-0028572-74
- Branch Identifier Code: GEBABEBB
- IBAN: BE16 230002857274
- With the following reference:
  “Flex-Stretch 2007 + name of participant + Faculty Club (if you attend the dinner)”

Do not forget to book your hotel room at Novotel or The Lodge
(see website http://www.imec.be/flex-stretch)

Booking Terms: Cancellations received before 25/05/2007 - full refund, less €75 administration costs.
Cancellations between 25/05/2007 and 08/06/2007 - 50% refund, less €75 administration cost.
It is regretted that no refunds are made for cancellations received after 08/06/2007. In case of cancellation as of 08/06/2007 you can transfer the booking to a colleague at an extra charge of €25.

Please return this registration form to:

Flex - Stretch Workshop 2007
IMEC
Hegemann Marion
Kapeldreef 75, B-3001 Leuven, Belgium
Tel. +32 (0)16 281 849
Fax +32 (0)16 288 500
E-mail: hegemann@imec.be
Thursday 6 September 2007

08h00: Registration, Coffee, Networking

Opening Session:
09h00: “Introduction to SHIFT, STELLA and BIOFLEX projects”
J. Vanfleteren – IMEC / C. Klatt - Freudenberg Forschungsdienste KG
09h30: Keynote 1: “The Past, Present and Future of Flexible Circuit Technology”
J. Fjelstad – Silicon Pipe
10h15: Keynote 2: “Large area flex interconnect and outlook on stretchable applications in automotive”
A. Blessing – Freudenberg NOK Mechatronics
10h45: Coffee break - Networking

Session 2: Substrate technology I
11h15: Keynote 3: “Next generation Flex Technology - Special materials and fine processing technology”
J. Günther - Freudenberg Forschungsdienste KG
11h45: “Reel-to-reel processes for flexible electronic systems”
M. Feil - IZM
12h05: “Thin film multilayers for integration into flex-boards”
H. Burkard – Hightec
12h25: “Stretchable electronics on polyurethane substrates”
T. Löher – TUBerlin
12h45: Lunch break - Networking

Session 3: Assembly technology
13h45: Keynote 4: “Chip-to-Next-Level Interconnection Technologies in a Flexible World”
D. Pedder – TWI
14h15: “Embedding approaches for chips into build-up layers of flexible printed circuits”
T. Löher – TUBerlin
14h35: “Stretchable electronic circuits using Molded Interconnect Device (MID) technology”
F. Axisa – IMEC
14h55: “High Volume production challenges for stretchable electronics“
B. van der Zon– BESI
15h15: Coffee break – Networking

Session 4: Applications I
15h50: Keynote 5: “Micro transponder systems for diagnostical and therapeutical applications using Flex-Tapes”
U. Schnakenberg – RWTH Aachen
16h20: “Chip embedding stretched and bend for low volume industrialization”
A. Petersen – Oticon
16h40: “Embedded active components using flex for medical applications”
D. Redding – Zarlink
17h00: “The merit of stretchable electronics in biomedical applications”
B. Puers – KULeuven
17h20: “Health care demonstrator”
S. Lecomte, L. Alpert – URGO
17h40: “Wearable health care applications”
A. Van Mele, K. De Bruyn – Verhaert

Friday 7 September 2007

Session 5: Substrate technology 2 – Materials
09h00: Keynote 6: “Stretchable thin-film devices: from elastic metallic conductors to prosthetic skin”
S. Lacour - University of Cambridge
09h30: “Biocompatibilisation of stretchable implants”
E. Schacht - University of Gent
09h50: “Stretchable substrate materials on the basis of non-wovens”
B. Schmied - Freudenberg Forschungsdienste KG
10h10: “Flexible polyimide based ultra-thin chip package (UTCP)”
W. Christiaens – IMEC
10h30: Coffee break - Networking

Session 6: Modelling and reliability
11h00: Keynote 7: “Mechanics of stretchable electronics”
Yonggang Young Huang – University of Illinois
11h30: “Thermal and mechanical aspects for flexible embedded components”
B. Vandevelde – IMEC
11h45: “RF structures and antennas for flex and stretchable substrates”
S. Brebels – IMEC
12h00: “Modeling of stretchable interconnections”
M. Gonzalez – IMEC
12h15: “Testing devices for stretchable substrates”
E. Raemaekers – QPI
12h30: Lunch break - Networking

Session 7: Applications 2
13h30: Keynote 8: “Roll to Roll Flexible Printed Circuit for Smart Card Applications”
Y. De Maquillé – FCI
14h00: “Flexible electronics for mobile applications, one step closer to New Device Paradigm”
R. Vatanparast – Nokia
14h20: “Flex for avionics: a meteorological radar”
P. Kertesz - Thales
14h40: “Activity monitoring and car compartment demonstrator”
R. van Doremalen – Philips App Tec
15h00: cocktail/beer

Program: Subject to changes.
The Organising Committee has pre-booked a number of rooms, in two hotels in Leuven. These hotels offer quality lodging at reasonable prices (special workshop rate). Since these hotels are located near the city centre, both of them provide an excellent starting point for explorations of the inner city.

**NOVOTEL LEUVEN, Vuurkruisenlaan 4, 3000 LEUVEN, BELGIUM**
Tel: (+32)16/213200 • Fax: (+32)16/213201
E-mail: h3153@accor.com • URL: [http://www.accorhotels.com](http://www.accorhotels.com)
Price / Night = 120 Euro (Single) / 135 Euro (Double) • Breakfast & Taxes included
Booking before 05/08/2007 (use hotel reservation form on www.imec.be/flex-stretch)

*This 3 star hotel offers 139 rooms with a fully equipped bathroom, air-conditioning, minibar, TV, pay-TV, telephone, modem socket. The hotel features a gym, hammam, brasserie, conference rooms, business corner and private car park.*

**THE LODGE LEUVEN, Kantineplein 3, 3001 HEVERLEE (LEUVEN), BELGIUM**
Tel: (+32)16/509509 • Fax: (+32)16/509508
E-mail: heverlee@lodge-hotels.be • URL: [http://www.lodge-hotels.be](http://www.lodge-hotels.be)
Price / Night = 99 Euro • Breakfast & Taxes included
Booking before 31/07/2007 (mention “Flex - Stretch Workshop 2007”)

*This historical farmhouse has been magnificently renovated and transformed into a stylish hotel. Embraced by nostalgia and natural surroundings, Hotel The Lodge is the ideal spot for both business visitors and bon vivants alike. The rooms, with all modern conveniences, are designed tastefully in warm and natural tones and great attention has been paid to retaining the property’s authentic character.*

Participants are encouraged to make a hotel reservation before July 31, 2007. Room availability at special rate cannot be guaranteed after this date.