

# Scientific Program 4 May 2010

09.00–  
10.30 **Registration and Coffee**

10.30 **Welcome** G. Stemme & C. Vieider  
*Room: Repslagaren*

10.40 **Invited 1:** A new RF-MEMS metal via capping platform  
E. Kälvesten – Silex Microsystems AB  
*Room: Repslagaren*

11.10 **Invited 2:** Chemical microsystems: nanoliters and attomoles  
S. Franssila – Aalto University  
*Room: Repslagaren*

11.40 **Lunch**

13.00 **Poster Session**

15.00 **Key Note:** Nanoplasmonic satellites and optofluidic application  
specific Integrated Systems  
Prof. L. Lee, Dept. of Bioengineering, UC Berkeley  
*Room: Repslagaren*

15.40 **Coffee Break**

## **Medical Technology**

*Room: Repslagaren*

16.00 Nanoplasmonic sensing of  
cellmembrane mimics  
F. Höök – Chalmers

16.20 Breath alcohol sensor for emergency  
care  
J. Steggo – Hök Instr. AB

16.40 Microfluidic systems for point-of-care  
diagnostics  
W. van der Wijngaart – KTH

17.00 Microfluidic based proteomics for  
biomarker discovery and early  
diagnostics  
F. Nikolajeff – UU

## **Security & Safety**

*Room: Segelmakaren*

Technology for Modular and Recon-  
figurible Rapid Response Nanosatel-  
lites  
F. Bruhn – ÅAC AB

A microstructured magnetoresistive  
magnetometer for space applica-  
tions  
A. Persson – UU

Ink-Jet printing of wireless surveil-  
lance tags with integrated sensor  
functionality  
H.-E. Nilsson – Mid University

Scintillator matrix technology  
A. Sahlholm – Scint-X AB

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## **Medical Technology**

*Room: Repslagaren*

17.20 Self assembly monolayers of designed peptides on gold nanoparticles can act as specific sensors  
D. Ilver – Imego AB

17.40 Acoustic whole blood plasmapheresis chip for psa microarray diagnostics  
A.A. Tajudin – LU

## **Security & Safety**

*Room: Segelmakaren*

Quantum-well silicon-germanium bolometers for low-cost infrared imagers  
F. Niklaus – KTH

Low cost, high performance long wave infrared microbolometer  
R. Audun – SensoNor A/S

18.00-  
19.30

## **Social Event**

20.00

## **Conference Dinner**

# Scientific Program 5 May 2010

- 08.30 **Key Note:** MEMS Move into Smart Sensors,  
B. Vigna, VP MEMS & Healthcare Product Division, ST Microelectronics.  
*Room: Repslagaren*
- 09.10 **Coffee Break**
- |       | <b>Cells on Chip</b><br><i>Room: Repslagaren</i>   | <b>Process &amp; Packaging</b><br><i>Room: Segelmakaren</i>   |
|-------|--|---|
| 09.40 | Cell separation based on<br>acoustophoresis and applications in<br>health care.<br>T. Laurell – LU   | Low temperature cofired ceramics for mems<br>bonding<br>M.F. Khan – Chalmers  |
| 10.00 | Microfluidic technologies for<br>cell-based analysis of surface<br>receptors with fast activation kinetics<br>M. Karlsson – Celectricon AB | MEMS at Sintef<br>D. Wang – SINTEF A/S  |
| 10.20 | Organic bioelectronics<br>E. Jager – LiU   | Expanding in situ TEM instrumentation<br>with MEMS technology<br>A. Nafari – NanoFactory AB                                       |
| 10.40 | Controlling cell interaction by<br>ultrasound in a multi-well microplate<br>M. Wiklund – KTH   | Small but tough - microsystems for harsh<br>environments<br>K. Brinkfeldt – Swerea IVF  |
| 11.00 | Bacteria isolation from whole blood<br>for Sepsis diagnostics<br>A. Russom – KTH   | Low resistive metallic through silicon via<br>A. Ljunggren – ÅAC AB   |
| 11.20 | Microstructures cell culturing<br>platform for qualitative<br>neuroscientific studies<br>T. Schönberg – Acreo AB                           | Low-cost Through Silicon Vias (Tsvs) with<br>wire-bonded metal cores and low capacitive<br>substrate-coupling<br>A. Fischer – KTH |
- 11.40 **Lunch**

# Scientific Program 5 May 2010

## **CleanTech & Automation**

*Room: Repslagaren*

- 12.40 New cost effective micro fuel cell charger  
A. Lundblad – MyFC
- 13.00 Silicon carbide based sensor system for domestic biofuel boiler control  
B. Hammarlund - Sensic
- 13.20 IR-sensors for measurement of greenhouse gases  
H. Rödjegård – SenseAir
- 13.40 Combining active control and conditioning based monitoring using smart embedded Piezo sensors and actuators  
H. Åkesson – Acticut
- 14.00 Raw milk quality control using acoustophoresis  
C. Grenwall – LU
- 14.20 Micromirror arrays for maskless lithography  
T. Karlin – Micronic

## **Telecom**

*Room: Segelmakaren*

- Microwave MEMS activities at KTH  
J. Oberhammer – KTH
- High performance passive RF components for mobile communications  
I. Katardjiev – UU
- RF MEMS in a GaAs MMIC foundry process: applications and test results  
R. Malmqvist – FOI
- RF MEMS tuneable high-impedance metamaterial surfaces for millimeter-wave applications  
M. Sterner – KTH
- A miniaturized optical communication system for microspacecraft  
K. Palmer – UU
- Hot-wall MOCVD growth of hexagonal GAN pyramids for single-photon emitter ap  
A.Lundskog – LiU

## 14.40 **Coffee Break**

- 15.10 **Invited 3:** RF-MEMS capacitive switches enable tunable RF for mobile devices  
M. Giesen - TDK-EPC Corporation  
*Room: Repslagaren*

- 15.40 **Invited 4:** Nanometer structure consortium  
L. Samuelson – Lund University  
*Room: Repslagaren*

- 16.10 **Conference Closing**  
*Room: Repslagaren*

- 16.40 Transport leaves for optional tour at Electrum in Kista

- 17.00 Tour of the Electrum laboratory cleanroom