Bern University of Applied Sciences
Engineering and Information Technology

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Energy Harvesting – Running Mobile Devices Longer

Energy harvesting aims at replacing or complementing batteries by using micro-power generators.

The needs are enormous. For example in the medical field (e.g., running pace makers and other electronic implants without batteries) and the consumer products field (e.g., cell phones that need fewer or no recharges).

However, harvesting energy from the environment remains a challenge and therefore R+D in the field is booming.

The association sensors.ch and the Bern University of Applied Sciences, Engineering and Information Technology (BFH-TI), offer a one-day conference with key players who will present needs and technical solutions for energy harvesting.

Date
Wednesday, 27th Oct. 2010

Location
Bern University of Applied Sciences,
Engineering and Information Technology,
Quellgasse 21, Aula, 2502 Biel

Participation Fee
CHF 190 for members of sensors.ch and IEEE
CHF 290 for non members
CHF 70 for students and seniors (AHV/AVS),
free for students from BFH and of MSc Biomedical Engineering (BFH+UNIBE).

Registration
ti.bfh.ch/energyharvesting till 15th Oct. 2010

08.45 Arrival & Coffee

Morning session's host
Prof. Dr. Volker M. Koch, BFH-TI, Biel (CH)

09.15 Welcome Messages

09.30 Challenges of Energy Harvesting
Dr. Rob van Schaijk, Program manager Micropower, IMEC, Eindhoven (NL)

10.00 Energy Harvesting Needs in the Medical Field
Prof. Dr. Rolf Vogel, Inselspital, Bern (CH)

10.30 Coffee & Exhibition

11.00 Energy Harvesting in Consumer Goods
Dr. Michel Willemin, The Swatch Group R&D SA, Biel (CH)

11.30 Energy Harvesting in the Automotive Field
Prof. Kurt Hug, BFH-TI, Biel (CH)

12.00 Lunch & Exhibition

Afternoon session's host
Philippe Fischer, sensors.ch, Neuchâtel (CH)

13.30 Overview of Harvesting Techniques
Prof. Dr. Peter Woias, IMTEK, Freiburg (DE)

14.30 Nanotechnology for Thermogenerators
Dr. Laurent Gravier, HEIG-VD, Yverdon les Bains (CH)

14.50 Passive and Intelligent RFID Tag for Sensors
Prof. Dr. Marcel Meli, ZHAW, Winterthur (CH)

15.10 Coffee & Exhibition

15.40 Solar Energy for Sensor Nodes
Dr. Philippe Dallemagne, CSEM, Neuchâtel (CH)

16.00 Piezoelectric MEMS Based Energy Harvesters
Dr. Danick Briand, EPFL, Lausanne (CH)

16.20 Commercial Thermo Generator
Dr. Wulf Glatz, greenTEG, Zürich (CH)

16.40 Final Discussion

17.00 Apéro & Exhibition

fsrm

IEEE
Swiss IEEE EMBS Chapter
www.biomedeng.org

sensors.ch – Feeling the World
Networking, information exchange and continuous education – sensors.ch brings together manufacturers, users, research institutions and universities.
Philippe Fischer, sensors.ch, CH-Neuchâtel, +41 32 720 09 04, fischer@fsrm.ch, fsrm.ch

Bern University of Applied Sciences – Biomedical Engineering
Core competencies in the areas of sensors and actuators, signal processing, electronic implants, energy harvesting, telemetry, imaging techniques and image processing, electronic healthcare, biomechanics as well as medical instruments.
Prof. Dr. Volker M. Koch, BFH-TI, CH-Biel, +41 32 321 63 84, volker.koch@bfh.ch, ti.bfh.ch/med

fsrm – Crossroads of Microtechnology
The foundation promotes micro technology and its applications with offers in continous education, project management and organization. fsrm.ch

IEEE - Institute of Electrical and Electronics Engineers, Swiss EMBS Chapter
IEEE is the world's largest professional association dedicated to advancing technological innovation and excellence for the benefit of humanity. biomedeng.org

Technology Transfer Consortium W6
Win-win for science and economy through efficient transfer of know-how and technology. whoch6.ch

Travel Information to and from Biel

SBB/CFF/FFS

Basel	dep. 07.15	arr. 08.45	17.49 / 18.15 (via Olten) etc.	18.53 / 19.32 etc.
Bern	dep. 08.12	arr. 08.38	17.51 / 18.21 etc.	18.18 / 18.48 etc.
Genève	dep. 07.14	arr. 08.41	18.19 etc.	19.46 etc.
Lausanne	dep. 07.45	arr. 08.43	18.16 etc.	19.15 etc.
Neuchâtel	dep. 08.27	arr. 08.43	18.16 / 18.19 etc.	18.32 / 18.35 etc.
Zürich	dep. 07.30	arr. 08.45	17.46 / 18.15 etc.	18.56 / 19.30 etc.

15 min walk from the railway station or 5 min by bus to "FUNIC Leubringen-Evilard" with lines No. 5 and 6 "Spitalzentrum/Centre hôspitalier" or No. 8 "Fuchsenried"

Motorized Vehicles
Car park "Museen/Musées", 2 CHF/h

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