

## Session 7: Energy-Efficient Networking and Protocols

Session Chair: Henning Schulzrinne, Columbia Univ., U.S.A.

- 16:15 Invited Paper: M. A. Marsan, L. Chiaraviglio, D. Ciullo, and M. Meo (Politecnico di Torino, Italy). A Simple Analytical Model for the Energy-Efficient Activation of Access Points
- 16:45 N. Vasić, and D. Kostić (EPFL, Switzerland). Energy-Aware Traffic Engineering
- 17:00 U. Lee, I. Rimać, and V. Hilt (Bell Labs, Alcatel-Lucent, New Jersey, U.S.A.). Greening the Internet with Content-Centric Networking
- 17:15 L. Gyarmati, and T. A. Trinh (Budapest Univ. of Tech. and Economics, Hungary). How Architecture Can Help to Reduce Energy Consumption in Data Center Networking?
- 17:30 M. Z. Feng, K. Hinton, R. Ayre, and R. S. Tucker (Univ. of Melbourne, Australia). Reducing NGN Energy Consumption with IP/SDH/WDM
- 17:45 L. Chiaraviglio (Politecnico di Torino, Italy), and I. Matta (Boston University, U.S.A.). GreenCoop: Co-operative Green Routing with Energy-efficient Servers
- 18:00 Poster session and wine tasting

**THURSDAY 15.04.2010**

- 09:00 Keynote 2: Manfred Immitzer (CIO, Nokia Siemens Networks, Finland/Germany)
- 10:00 Break

## Session 8: Energy-Efficient Data Center Technology

Session Chair: Marco A. Marsan, Politecnico di Torino, Italy

- 10:30 Invited Paper: V. Vasudevan, D. Andersen (Carnegie Mellon Univ., U.S.A.), and M. Kaminsky (Intel Labs Pittsburgh, U.S.A.). Energy-efficient Cluster Computing with FAWN: Workloads and Implications
- 11:00 T. Rabl, C. Dellwo, and H. Kosch (Univ. of Passau, Germany). Introducing Scalileo
- 11:30 J. L. Berral, I. Goiri, R. Nou, F. Julià, J. Guitart, R. Galvaldà, and J. Torres (Univ. Politècnica de Catalunya, Spain). Towards energy-aware scheduling in data center using machine learning
- 12:00 V. Petrucci, O. Loques (Univ. Federal Fluminense, Brasil), and D. Mossé (Univ. of Pittsburgh, U.S.A.). A dynamic optimization model for power and performance management of virtualized clusters
- 12:30 Lunch + END

## General Co-Chairs:

Randy Katz, UC Berkeley, U.S.A.  
David Hutchison, Lancaster University, U.K.

## Technical Program Committee Co-Chairs:

Hermann de Meer, Passau University, Germany  
Suresh Singh, Portland State University, U.S.A.  
Torsten Braun, Bern University, Switzerland

## Publicity Chair:

Karin Anna Hummel, University of Vienna, Austria  
Gergö Lovász, University of Passau, Germany



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**TECHNICAL PROGRAM**

1st Int'l Conf. on Energy-Efficient  
Computing and Networking  
April 13-15, 2010  
University of Passau, Germany



## MONDAY, 12.04.2010

18:00 Reception 

## TUESDAY, 13.04.2010

- 09:00 Opening: Prof. Walter Schweitzer (President Of The University Of Passau)
- 09:30 Keynote 1: Paul Hühn (University Of Stuttgart, Germany). Infrastructures For Power Grids - The Conflict Between Transparency And Privacy
- 10:30 Break

### Session 1: Energy-Efficient Home and Office Environments Session Chair: David Hutchison, Lancaster University, U.K

- 11:00 Invited Paper: F. Mattern, T. Staake, and M. Weiss (ETH Zürich, Switzerland). ICT for Green – How Computers Can Help Us to Conserve Energy
- 11:30 A. Berl, and H. de Meer (Univ. of Passau, Germany). A Virtualized Energy-Efficient Office Environment
- 12:00 S. Taherian, M. Pias, G. Coulouris, and J. Crowcroft (Univ. of Cambridge, U.K.). Profiling Energy Use in Households and Office Spaces
- 12:30 Lunch

### Session 2: Energy Efficiency and QoS Session Chair: Paul Kühn, University of Stuttgart, Germany

- 13:45 I. Kamitsos (Princeton Univ., U.S.A.), L. Andrew (Swinburne Univ. of Tech., Australia), H. Kim, and M. Chiang (Princeton Univ., U.S.A.). Optimal Sleep Patterns for Serving Delay-Tolerant Jobs
- 14:15 C. Panarello, A. Lombardo, G. Schembra (Univ. di Catania, Italy), L. Chiaraviglio, and M. Mellia (Politecnico di Torino, Italy). Energy Saving and Network Performance: a Trade-off Approach
- 14:45 M. Hoyer, K. Schröder, and W. Nebel (Univ. of Oldenburg, Germany). Statistical static capacity management in virtualized data centers supporting fine grained QoS specification
- 15:15 J. H. Schönherr, J. Richling (TU Berlin, Germany), M. Werner (Chemnitz Univ. of Technology, Germany), and G. Mühl (Univ. of Rostock, Germany). Event-Driven Processor Power Management
- 15:45 Break

### Session 3: Industrial Perspectives Panel Session Chair: Eve Schooler Intel Labs, Santa Clara, U.S.A.

- 16:15 Industrial Perspectives Panel
- Panellists:
- Heinrich Stüttgen, Vice President, NEC Laboratories Europe
  - Jörg Widmer, Manager, Ubiquitous Computing Research, DoCoMo Euro-Labs
  - Ludwig Karg, B.A.U.M. Consult GmbH, Head of E-Energy & ICT for E-Mobility Ancillary Research, German Ministry of Economics and Technology-
  - Franz Haberhauer, Chief Technologist Systems Line of Business, Sun Microsystems GmbH
- 18:15 End

### Dinner and Social Event

- 19:30 Conference dinner and social event at the medieval town hall.

## WEDNESDAY, 14.04.2010

### Session 4: Energy-Efficient Wireless Networking Session Chair: K. A. Hummel, Univ. of Vienna, Austria

- 09:00 Invited Paper: J. Manner, M. Luoma, J. Ott, and J. Hämäläinen (Aalto Univ., Finland). Mobile Networks Unplugged
- 09:30 Y. Xiao (Aalto Univ., Finland), P. Savolainen (Univ. of Helsinki, Finland), A. Karppanen (Nokia Research Center, Finland), M. Siekkinen, and A. Ylä-Jääski (Aalto Univ., Finland). Practical Power Modeling of Data Transmission over 802.11g for wireless applications
- 10:00 A. Somov (Univ. of Trento, Italy), D. Spirjakin, M. Ivanov, I. Khromushin (Moscow State Aviation Technol. Univ., Russia), R. Passerone (Univ. of Trento, Italy), A. Baranov, A. Savkin (Moscow State Aviation Technol. Univ., Russia). Combustible Gases and Early Fire Detection: an Autonomous System for Wireless Sensor Networks
- 10:30 Break

### Session 5: Energy Reduction Measures Session Chair: Torsten Braun, Univ. of Bern, Switzerland

- 11:00 G. Da Costa (Univ. Paul Sabatier, France), M. D. de Assunção, J.-P. Gelas (Univ. de Lyon, France), Y. Georgiou (MESCAL, Laboratoire ID-IMAG, France), L. Lefèvre, A.-C. Orgerie (Univ. de Lyon, France), J.-M. Pierson (Univ. Paul Sabatier, France), O. Richard (MESCAL, Laboratoire ID-IMAG, France), and A. Sayah (Univ. Paul Sabatier). Multi-facet approach to reduce energy consumption in clouds and grids: The GREEN-NET Framework
- 11:30 C. Wang (CSIRO ICT Centre, Australia), and M. de Groot (Tasmania ICT Centre, Australia). Managing End-User Preferences in the Smart Grid
- 12:00 Z. Fan, G. Kalogridis, C. Efthymiou, M. Sooriyabandara, M. Serizawa, J. McGeehan (Toshiba Research Europe, Bristol U.K.). The New Frontier of Communications Research: Smart Grid and Smart Metering
- 12:15 A. Misra (Telcordia, New Jersey, U.S.A.), and H. Schulzrinne (Columbia Univ., U.S.A.). Policy-Driven Distributed and Collaborative Demand Response in Multi-Domain Commercial Buildings
- 12:30 K. Schröder, D. Schlitt, M. Hoyer, and W. Nebel (Univ. of Oldenburg, Germany). Power and Cost Aware Distributed Load Management
- 12:45 J.-M. Pierson (Univ. Paul Sabatier, France). Allocating resources greenly: Reducing energy consumption or reducing ecological impact?
- 13:00 Lunch

### Session 6: Modeling, Monitoring and Accounting Session Chair: Jörg Widmer, DoCoMo Euro-Labs, Germany

- 14:15 M. Poess (Oracle, Redwood Shores, U.S.A.), R. O. Nambiar (HP, Houston, U.S.A.), K. Vaid (Microsoft, Redmond, U.S.A.), J. M. Stephens (Gradient Systems, Redwood City, U.S.A.), K. Huppler (IBM, Rochester, U.S.A.), E. Haines (ICF Int., Washington, U.S.A.). Energy Benchmarks: A Detailed Analysis
- 14:45 P. Somavat, S. Jadhav, and V. Namboodiri (Wichita State Univ., U.S.A.). Accounting for the Energy Consumption of Personal Computing Including Portable Devices
- 15:15 R. Basmadjian, and H. de Meer (Univ. of Passau, Germany). An Approach to Reduce the Energy Cost of the Arbitrary Tree Replication Protocol
- 15:45 Break