

Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering

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Mobile Networks and Management

Third International ICST Conference
MONAMI 2011
Aveiro, Portugal, September 21–23, 2011
Revised Selected Papers

Volume Editors

Kostas Pentikousis
Huawei Technologies Düsseldorf GmbH
European Research Centre
10587 Berlin, Germany
E-mail: k.pentikousis@huawei.com

Rui Aguiar
University of Aveiro
Advanced Telecommunications and Networks Group (ATNoG)
3810-193 Aveiro, Portugal
E-mail: ruilaa@ua.pt

Susana Sargento
University of Aveiro
Networks Architectures and Protocols Group (NAP)
3810-193, Aveiro Portugal
E-mail: susana@ua.pt

Ramón Agüero
University of Cantabria
Department of Communications Engineering
39005 Santander, Spain
E-mail: ramon@tlmat.unican.es

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Preface

This volume is the result of the Third International ICST Conference on Mobile Networks and Management (MONAMI), which was held in Aveiro, Portugal during September 21–23, 2011, hosted by the Instituto de Telecomunicações and University of Aveiro.

Aveiro is in the center of a beautiful ocean-side region where the sun, the sea and the river please visitors' sight. In the past, the local economy was primarily based on sea-related industries. No wonder that the *ria* and *salinas* have been a constant in postcards from the town of Aveiro. Today, however, the area is home to a thriving high-tech center with significant R&D in telecommunications, biochemical, ceramics, and environmental industries.

The MONAMI conference series aims at closing the gap between hitherto considered separate and isolated research areas, namely, multiaccess and resource management, mobility and network management, and network virtualization. Although these have emerged as core aspects in the design, deployment, and operation of current and future networks, there is still little to no interaction between the experts in these fields. MONAMI enables cross-pollination between these areas by bringing together top researchers, academics, and practitioners specializing in the area of mobile network and service management.

This year, after a thorough peer-review process, 30 papers were selected for inclusion in the technical program. Forty-four Technical Program Committee (TPC) members made sure that each submitted paper was reviewed by at least three competent researchers, including at least one TPC member.

The conference opened with a half-day tutorial on “Cooperative Wireless Networks,” a key topic in modern mobile communications, presented by Stefan Valentin (Bell Labs, Alcatel-Lucent Deutschland AG) and Hermann S. Lichte (net mobile AG). John Strassner, CTO Software R&D Laboratory, Huawei, USA, opened the second day with his vision on the management of future mobile networks in a talk entitled “Autonomic Mobile Network and Service Management for the Future Internet.” On the third day, Luís Miguel Campos of the PDM Group gave a motivating talk, targeting in particular aspiring high-tech-oriented entrepreneurs, entitled “The Random Walk Down Venture Capital Land.” Following last year's success, MONAMI 2011 also hosted a future research directions (FRD) session. Finally, MONAMI featured a workshop on Smart Objects Resource Management (SMART). For more details on this year's program visit www.mon-ami.org.

This volume includes the revised versions of all papers presented at MONAMI 2011 in a single-track format, organized thematically in five parts as follows. Papers 1 to 7 address Mobile and Wireless Networks in Part I. Self-Organized and Mesh Networks aspects are discussed in Part II (papers 8-13). Papers 14 through 18 present new approaches for Network Virtualization (Part III). Papers

19 to 26 consider Network Services and Security in Part IV. Finally, Part V includes four papers presenting SMART Applications.

Attendance increased this year considerably, laying the foundation for establishing MONAMI as a key annual conference in the calendar of researchers in this area. We are happy to announce that the fourth edition of MONAMI will be hosted by the Technical University of Hamburg in September 2012.

We close this preface by acknowledging the vital role that the TPC members and additional referees played during the review process. Their efforts ensured that all submitted papers received a proper evaluation. We thank EAI and ICST for assisting with organization matters, CREATE-NET and IEEE Portugal Section for technically co-sponsoring the event, and Instituto de Telecomunicações, University of Aveiro and PT Inovação for hosting MONAMI 2011. The team that put together this year's event is large and required the sincere commitment of many folks. Although too many to recognize here by name, their effort should be highlighted. We particularly thank Richard Heffernan for his active, can-do management of all conference matters on behalf of EAI, and Imrich Chlamtac of CREATE-NET for his continuous support of the conference. Finally, we thank all delegates for attending MONAMI 2011 and making it such a vibrant conference!

November 2011

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