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# NETWORKING 2012 Workshops

International IFIP TC 6 Workshops ETICS, HetsNets, and CompNets Held at NETWORKING 2012 Prague, Czech Republic, May 25, 2012 Proceedings



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## Message from the Chairs

The IFIP Networking conference is an international series of events that started in Paris, France, in 2000. The 2012 edition was held at the Czech Technical University in Prague, Czech Republic, in May 2012.

Practically since the beginning, a series of workshops have been co-located with the main conference to discuss timely topics. Three workshops were planned during IFIP Networking 2012: the "Workshop ETICS 2012," the "Workshop HetsNets: Future Heterogeneous Networks 2012," and the "Workshop CompNets: Computing in Networks 2012."

After a strict review process, involving submitted papers plus several invited contributors solicited by the Workshop Chairs, the three workshops took place on May 25, 2012, at the Networking 2012 venue in Prague.

Twenty-one papers were presented and discussed in all three workshops. Fruitful discussions during the workshops were maintained by the Chairs and by the authors as a valuable input for the final writing of the papers. We would like to warmly thank the six workshop Chairs: Helia Pouyllau and Jean-Louis Rougier of ETICS 2012; Emilio Calvanese Strinati and Antonio De Domenico of HetsNets 2012; and Miroslav Voznak and Hakan Kavlak of CompNets 2012. They did excellent work when issuing the call for papers and a very professional management during the review process together with the Technical Program Committees. Thanks to all of them. Last, but not least, we thank all of the attendees for contributing to the success of the workshops.

Thanks to the utmost important topics addressed and the high level of all 21 contributions, this proceedings volume provides a valuable summary of the main research efforts in the fields of network management, quality of services, heterogeneous networks, and analysis or modeling of network.

May 2012

Zdenek Becvar Robert Bestak Lukas Kencl

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## Workshop on Economics and Technologies for Inter-Carrier Services (ETICS 2012)

The rapid evolution of Internet applications is causing major changes in carriers' business and network management. To support such demands (e.g., gaming, teleconference), telco operators have moved their business strategy to provide more applications and services to both end-users and business customers. This strategy change, strengthened by other contradictions in the Internet business model, has generated more tussles with application providers for network resources or with other Internet service providers. As some of these tensions were publicly disclosed, many discussions arose worldwide around net neutrality –application providers asking regulation authorities to keep networks neutral and telco operators arguing for the need for investment incentives. Moreover, application needs for QoS guarantees have become increasingly urgent, especially in the field of real-time interactive applications and for supporting security impediments.

The main objective of the ETICS 2012 workshop was to bring together economic and technical experts of the Internet to discuss some of the key economic and technical issues to alleviate the aforementioned tussles.

We would like to thank the IFIP Networking 2012 organizers for their help in the organization of this event. We would also like to thank the European Commission for funding the ETICS project and thus the venue and keynote speakers as well. Finally, we also would like to acknowledge the TPC members, the authors and the workshop attendees.

May 2012

Helia Pouyllau Jean-Louis Rougier

## Workshop on Future Heterogeneous Networks (HetsNets 2012)

The workshop on Future Heterogeneous Networks 2012 (HetsNets 2012) was held in Prague, Czech Republic, on May 25, 2012, in conjunction with the 11th International Conferences on Networking 2012 sponsored by the IFIP Technical Committee on Communication Systems (TC6).

Future deployments of heterogeneous cellular networks, which support macro, pico, relay, femto, and atto cells coexisting on the same spectrum in the same geographical area, lead to new technical challenges never faced before. To address these issues, industry and academia are working on the development of new technologies and cellular standards.

The main objective of the workshop is to offer an opportunity to academic and industrial researchers to spread and share results and knowledge in the area in order to make communication networks more efficient than they are today. The workshop consisted of seven papers with contributions from France, Germany, Ireland, Italy, The Netherlands, Pakistan, Portugal, Serbia, and Spain.

We would like to thank Robert Bestak and Lukas Kencl, the General Chairs of Networking 2012, and Zdenek Becvar, the Workshop Chair of Networking 2012, all from Czech Technical University in Prague, for their encouragement and support in organizing this successful workshop. Our gratitude also goes to our TPC members and reviewers for their excellent cooperation.

May 2012

Emilio Calvanese Strinati Antonio De Domenico

# Workshop on Computing in Networks (CompNets 2012)

The aim of the Computing in Networks 2012 workshop is to provide a forum to present new approaches in the area of the analysis, modeling, behavior visualization and network simulations.

Today, a substantial amount of data is surrounding us, generated both by human action and by technology. Such data can be a source of interesting information which is not visible at first glance. Data from these sources can be interpreted as a result of the network behavior (computer or communication network, transport, information, social and bio-inspired network). Very often, these are extensive data, in many cases they indicate issues that require designing new models, performing simulations and predicting network behavior. The complexity and extent of such solutions are the reason why these issues cannot be solved directly and it is necessary to design heuristic schemes and to apply soft computing methods.

The Computing in Networks 2012 workshop focused primarily on the application of new approaches and the optimization of known methods for analyzing extensive network data with the emphasis on demos.

We would like to appreciate the contribution of the authors of all submitted papers and also to thank the Technical Program Committee for their reviews and valuable remarks. Last but not least, we would like to especially thank the IFIP Networking 2012 organizers for the support and help they provided to us.

May 2012 Miroslav Voznak Hakan Kaylak

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