Hermann de Meer
James P. G. Sterbenz (Eds.)

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Self-Organising Systems

First International Workshop, IWSOS 2006,
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in Network Architectures and Services, EuroNGI 2006
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Volume Editors

Hermann de Meer
University of Passau
Faculty for Mathematics and Informatics
Innstr. 33, 94032 Passau, Germany
E-mail: demeer@fmi.uni-passau.de

James P.G. Sterbenz
University of Kansas
Department of Electrical Engineering and Computer Science
Information and Telecommunication Technology Center
209 Nichols Hall, 2335 Irving Hill Rd, Lawrence, Kansas 66045-7612, USA
E-mail: jpgs@ittc.ku.edu, jpgs@comp.lancs.ac.uk

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Preface

We welcome you to the proceedings of the workshop on self-organizing systems, held at the University of Passau, located at the confluence of the Danube, Inn, and Ilz rivers, in the beautiful state of Bavaria, Germany! We hope you enjoyed your time in this ancient and historic city.

Self-organizing systems emerge as an increasingly important area of research, particularly for computer networks. Auto-configuration and self-organization are key enablers for network optimization, self-management, self-diagnosis, self-repair, and autonomic networking in support of the increasing complexity and demands on the global Internet, as well as for emerging technologies such as ad-hoc, sensor, and peer-to-peer overlay networks.

In recognition of this, we created a cross-disciplinary program at the First International Workshop on Self-Organizing Systems (IWSOS 2006). This event was supported by the European Next Generation Internet (EuroNGI) Network of Excellence, which gathers major leading European institutions and researchers. Previously, two EuroNGI workshops on "New Trends of Network Services and Architectures" took place in Wuerzburg, Germany, and then in Villa Vigoni at Lake Como, Italy. The third edition of this workshop emerged as the first IWSOS 2006.

We hoped to seed connections between different disciplines and between industry and academia. The technical program consisted of six sessions: dynamics of structured and unstructured overlays; self-organization in peer-to-peer networks; self-organization in wireless environments; self-organization for network management and routing; self-organization in grid computing; and self-managing and autonomic computing.

Additionally, two sessions consisted of work-in-progress and position papers and featured ideas and early research that is still open for discussion and commentary. Furthermore, a poster session permitted participants to interact with members of the European Network of Excellence EuroNGI, to discuss research in an informal setting.

In addition to the reviewed paper sessions, we were exceptionally pleased to present Robbert van Renesse, Cornell University, USA, as our keynote speaker with the challenging topic on "Making Self-Organizing Systems Secure". An international panel session entitled "Self-Organising Networks: Panacea or Pandora's Box?" considered the benefits, complexities and prospects for future deployment of these emerging technologies. Two half-day tutorials on the topics of resilient and survivable networks, as well as on peer-to-peer networking, completed the attractive program.

As always, a great deal of effort has gone into creating this program. More than 70 paper submissions were received from 21 countries. We were particularly pleased with the relatively large number of papers received from Asia. The best

16 full papers were selected after a thorough peer reviewing process, in which each paper was independently evaluated by at least three reviewers. In addition to the full papers, six short papers and a preselection of posters were chosen based on their merit for the respective session and their general quality.

We wish to thank the Technical Program Committee for their hard work to ensure that high-quality papers were accepted and that new research was viewed with an open mind. Many thanks also to Amine Houyou, Patrick Wüchner, Richard Holzer, Christopher Auer, Michael Straßer, the student volunteers and many other people who helped with the workshop organization during various phases. Finally, the authors are to be thanked for their submissions and continuing excellence.

June - September 2006

Hermann de Meer and James P.G. Sterbenz
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