

Preface

This book constitutes the refereed proceedings of the two thematic workshops held jointly with Networking 2002: WEB Engineering and Peer-to-Peer Computing.

Networking 2002 was organized by the Italian National Research Council (CNR) and was sponsored by the IFIP working groups WG 6.2 (Network and Internet-network Architectures), WG 6.3 (Performance of Communication Systems), and WG 6.8 (Wireless Communications). The program of the conference covered five days and included the main conference (three days), two tutorial days, and one day of thematic workshops.

The International Workshop on Web Engineering was dedicated to the discussion of the principal issues that emerge in the design and implementation of large-scale, complex, Web-based systems. Scalability issues pose a number of challenging problems to solve for both applications and the underlying web/network infrastructure. On one hand, web services and internet applications must take into account network performance and transport protocol design, to achieve acceptable performance and robustness. On the other hand, emerging network and Web technologies are determined by the requirements of these applications.

Fifteen papers were presented that illustrated the current state of the art in this area.

In addition to the authors of these papers, the Workshop on Web Engineering was attended by about thirty participants, who contributed to the workshop by stimulating fruitful discussions at the end of each presentation. Thus, this workshop provided a excellent opportunity for researchers, from both industry and academia, to gather, exchange ideas, and discuss recent results in the development of Web-based systems and emerging Internet applications.

The aim of the International Workshop on Peer-to-Peer Computing was to bring together researchers and practitioners active in the field of peer-to-peer computing with the goal of identifying the core open research issues, and defining the research agenda for the next generation of peer-to-peer systems.

The peer-to-peer paradigm of communication is not new to researchers, who have adopted it for years. As an example, most Internet network protocols are based on this model, which results in highly adaptive systems. In the last few years, however, the peer-to-peer paradigm has gained popularity at the application level, thanks to the emergence of file sharing applications over the Internet. Napster, Gnutella, and Freenet are examples of applications that enable users to share information residing on their own machine with other connected peers by exploiting an overlay network. The interest in the opportunities opened up by this paradigm has been so great that many have already welcomed the birth of “the next Internet”.

The workshop received 26 submissions from all over the world. Each paper was assigned three reviewers drawn from the Program Committee, composed of researchers actively involved in peer-to-peer computing. In the end, ten regular papers and six short/position papers were accepted. The workshop program was organized in four sessions: routing and discovery, applications, programming models, and security.

The workshops on Web Engineering and on Peer-to-Peer Computing would not have been possible without the enthusiastic and hard work of a number of colleagues. A special thanks to the TPC members, and all the referees, for their invaluable help in reviewing papers for the workshops. Finally we would like to thank all the authors that submitted their papers to this conference for their interest.

We are also indebted to our supporters. First of all CNR. CNR not only gave Enrico Gregori enough time to organize this event during the year leading up to the workshops, but also financially supported the event through sponsorship by the CNUCE and IIT institutes. A special thanks to Telecom Italia for joining us in the organization of this event. We are also indebted to our corporate sponsors (Cassa di Risparmio di Pisa, Compaq, Microsoft, Provincia di Pisa, and Softech) whose help removed much of the financial uncertainty and who also provided interesting suggestions for the program.

July 2002

Enrico Gregori
Ludmilla Cherkasova
Gianpaolo Cugola
Fabio Panzieri
Gian Pietro Picco

Organizers



Sponsoring Institutions



Networking 2002 Organization Committee

Conference Executive Committee

General Chair:

Enrico Gregori, National Research Council, Italy

General Vice-chair:

Ioannis Stavrakakis, University of Athens, Greece

Technical Program Chair:

Marco Conti, National Research Council, Italy

Special Track Chair for Networking Technologies, Services, and Protocols:

Andrew T. Campbell, Columbia University, USA

Special Track Chair for Performance of Computer and Communication Networks:

Moshe Zukerman, University of Melbourne, Australia

Special Track Chair for Mobile and Wireless Communications:

Guy Omidyar, National University of Singapore

Tutorial Program Co-chairs:

Giuseppe Anastasi, University of Pisa, Italy

Stefano Basagni, Northeastern University, USA

Workshop Chairs:

Workshop 1 — *Web Engineering*

Ludmilla Cherkasova, Hewlett Packard Labs, USA

Fabio Panzieri, University of Bologna, Italy

Workshop 2 — *Peer-to-Peer Computing*

Gianpaolo Cugola, Politecnico di Milano, Italy

Gian Pietro Picco, Politecnico di Milano, Italy

Workshop 3 — *IP over WDM*

Giancarlo Prati, Scuola Superiore S. Anna, Italy

Piero Castoldi, Scuola Superiore S. Anna, Italy

Invited Speaker Chair:

Fabrizio Davide, PhD, Telecom Italia S.p.A., Italy

Organization Chair:

Stefano Giordano, University of Pisa, Italy

Publicity Chair:

Silvia Giordano, Federal Inst. of Technology Lausanne (EPFL), Switzerland

Laura Feeney, SICS, Sweden

Steering Committee Chair:

Harry Perros, North Carolina State University, USA

Steering Committee Members:

Augusto Casaca, IST/INESC, Portugal

S. K. Das, The University of Texas at Arlington, USA

Erol Gelenbe, University of Central Florida, USA

Harry Perros, NCSU, USA (Chair)

Guy Pujolle, University of Paris 6, France

Harry Rudin, Switzerland

Jan Slavik, TESTCOM, Czech Republic

Hideaki Takagi, University of Tsukuba, Japan

Samir Thome, ENST, France

Adam Wolisz, TU-Berlin, Germany

Electronic Submission:

Alessandro Urpi, University of Pisa, Italy

Web Designer:

Patrizia Andronico, IAT-CNR, Italy

Local Organizing Committee:

Renzo Beltrame, CNUCE-CNR, Italy

Raffaele Bruno, CNUCE-CNR, Italy

Willy Lapenna, CNUCE-CNR, Italy

Gaia Maselli, CNUCE-CNR, Italy

Renata Bandelloni, CNUCE-CNR, Italy

International Workshop on Web Engineering

Co-located with Networking 2002

Pisa, Italy, May 24, 2002

Program Co-chairs:

Ludmilla Cherkasova, Hewlett Packard Labs, USA

Fabio Panzieri, University of Bologna, Italy

Technical Program Committee

Jon Crowcroft, University of Cambridge, UK

Anindya Datta, Georgia Tech, USA

Wolfgang Emmerich, University College London, UK

Rachid Gerraoui, EPFL, Lausanne, Switzerland

Vittorio Ghini, University of Bologna, Italy

Anne-Marie Kermarrec, Microsoft Research Ltd., UK

Tomas Rokicki, Instantis Corp., USA

Gianpaolo Rossi, University of Milan, Italy

Santosh Shrivastava, University of Newcastle-upon-Tyne, UK

Wenting Tang, Hewlett Packard Labs., USA

Helen Thomas, Carnegie Mellon University, USA

Amin Vahdat, Duke University, USA

Jia Wang, AT&T Labs-Research, USA

Philip S. Yu, IBM Research, USA

Willy Zwaenepoel, Rice University, USA

Referees

Tim Brecht

Jon Crowcroft

Anindya Datta

Wolfgang Emmerich

Rachid Gerraoui

Vittorio Ghini

Sven Graupner

Magnus Karlsson

Anne-Marie Kermarrec

Harumi Kuno

Mallik Mahalingam

Elena Pagani

Tomas Rokicki

Gianpaolo Rossi

Santosh Shrivastava

Sharad Singhal

Wenting Tang

Helen Thomas

Amin Vahdat

Alistair Veitch

Jia Wang

Qian Wang

Haifeng Yu

Philip S. Yu

Willy Zwaenepoel

Web Engineering and Peer-to-Peer Computing
NETWORKING 2002 Workshops, Pisa, Italy, May 19-24,
2002, Revised Papers
Gregori, E.; Cherkasova, L.; Cugola, G.; Panzieri, F.;
Picco, G.P. (Eds.)
2002, XVI, 360 p., Softcover
ISBN: 978-3-540-44177-9