Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering 210

More information about this series at http://www.springer.com/series/8197

Qianbin Chen · Weixiao Meng
Liqiang Zhao (Eds.)

Communications and Networking

11th EAI International Conference, ChinaCom 2016
Chongqing, China, September 24–26, 2016
Proceedings, Part II

Springer

Editors
Qianbin Chen
Post and Telecommunications
Chongqing University
Chongqing, China

Weixiao Meng
Harbin Institute of Technology (HIT)
Harbin, China

Liqiang Zhao
Xidian University
Xi'an, China

ISSN 1867-8211 ISSN 1867-822X (electronic)
Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering
ISBN 978-3-319-66627-3 ISBN 978-3-319-66628-0 (eBook)
DOI: 10.1007/978-3-319-66628-0

Library of Congress Control Number: 2017953406

This Springer imprint is published by the registered company Springer Nature Switzerland AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Preface

On behalf of the Organizing Committee of the 11th EAI International Conference on Communications and Networking in China (ChinaCom 2016), we would like to welcome you to the proceedings of this conference. ChinaCom aims to bring together international researchers and practitioners in networking and communications under one roof, building a showcase of these fields in China. The conference is being positioned as the premier international annual event for the presentation of original and fundamental research advances in the field of communications and networks.

ChinaCom 2016 was jointly hosted by Chongqing University of Posts and Telecommunications and Xidian University during September 24–26, 2016. The conference received 181 paper submissions. Based on peer reviewing, 107 papers were accepted and presented at the conference. We thank all the Technical Program Committee (TPC) members and reviewers for their dedicated efforts.

ChinaCom 2016 featured six keynote speeches, four invited talks, and a comprehensive technical program offering numerous sessions in wireless, networks, and security, etc. About 150 experts and scholars from more than 10 countries and regions including China, the USA, Canada, Singapore, etc., attend this year's conference in Chongqing.

As the youngest municipality of China, Chongqing has become the largest industrial and economic center of the upper Yangtze area. Renowned as the Mountain City and famous for its beautiful and unique spots, Chongqing is a popular destination for travelers from all over the world.

We hope you find reading the papers in this volume a rewarding experience.

August 2017

Yanbin Liu
Yunjie Liu

Organization

Steering Committee

Imrich Chlamtac	CREATE-NET (Chair)
Hsiao-Hwa Chen	National Cheng Kung University, Taiwan
Ya-Bin Ye	Huawei Europe Research Cente
Zheng Zhou	Beijing University of Posts and Telecommunications, China
Bo Li	Hong Kong University of Science and Technology, SAR China
Andreas F. Molisch	University of Southern California, USA
Jun Zheng	Southeast University
Zhi-Feng Zhao	Zhejiang University, China

Organizing Committee

General Chairs

Yunjie Liu	Academician of Chinese Academy of Engineering, China Unicom
Yanbin Liu	Vice-president, Chongqing University of Posts and Telecommunications, China

TPC Chairs

Weixiao Meng	Harbin Institute of Technology, China
Liqiang Zhao	Xidian University, China
Qianbin Chen	Chongqing University of Posts and Telecommunications, China

Local Chairs

Zufan Zhang	Chongqing University of Posts and Telecommunications, China
Jiangtao Luo	Chongqing University of Posts and Telecommunications, China
Hongxin Tian	Xidian University, China
Zhiyuan Ren	Xidian University, China

Sponsorship and Exhibits Chair

Qiong Huang	Chongqing University of Posts and Telecommunications, China

Publicity and Social Media Chair

Yang Wang	Chongqing University of Posts and Telecommunications, China

Web Chair

Ting Zhang	Chongqing University of Posts and Telecommunications, China

Publication Chair

Rong Chai	Chongqing University of Posts and Telecommunications, China

Conference Manager

Barbara Fertalova (EAI, European Alliance for Innovation)

TPC Chairs of Chinacom 2016

TPC Chairs

Weixiao Meng	Harbin Institute of Technology, China
Qianbin Chen	Chongqing University of Posts and Telecommunications, China
Liqiang Zhao	Xidian University, China

Symposium Chairs

Future Internet and Networks Symposium

Huaglory Tianfield	Glasgow Caledonian University, UK
Guofeng Zhao	Chongqing University of Posts and Telecommunications, China

Mobile and Wireless Communications Symposium

Lin Dai	City University of Hong Kong, SAR China
Yunjian Jia	Chongqing University, China

Optical Networks and Systems Symposium

Xingwen Yi	University of Electronic Science and Technology of China, China
Huanlin Liu	Chongqing University of Posts and Telecommunications, China

IoT, Smart Cities, and Big Data Symposium

Shensheng Tang	Missouri Western State University, USA
Wee Peng Tay	Nanyang Technological University, Singapore
Rong Yu	Guangdong University of Technology, China

Security Symposium

Qing Yang	Montana State University, USA
Yi Qian	University of Nebraska Lincoln, USA
Jun Huang	Chongqing University of Posts and Telecommunications, China

Technical Program Committee

Rong Chai	Chongqing University of Posts and Telecommunications, China
Hongbin Chen	Guilin University of Electronic Technology, China
Zhi Chen	University of Electronic Science and Technology of China
Peter Chong	Nanyang Technological University, Singapore
Dezun Dong	National University of Defense Technology, China
Wei Dong	Zhejiang University, China
Jun Fang	University of Electronic Science and Technology of China
Zesong Fei	Beijing Institute of Technology, China
Feifei Gao	Tsinghua University, China
Ping Guo	Chongqing University, China
Guoqiang Hu	Nanyang Technological University, Singapore
Tao Huang	Beijing University of Posts and Telecommunications, China
Xiaoge Huang	Chongqing University of Posts and Telecommunications, China
Fan Li	Beijing Institute of Technology, China
Zhenyu Li	Institute of Computing Technology, Chinese Academy of Sciences, China
Hongbo Liu	Indiana University-Purdue University Indianapolis, USA
Hongqing Liu	Chongqing University of Posts and Telecommunications, China
Jiang Liu	Beijing University of Posts and Telecommunications, China
Qiang Liu	University of Electronic Science and Technology of China, China
Wenping Liu	Hubei University of Economic, China
Rongxing Lu	Nanyang Technological University, Singapore
Yilin Mo	Nanyang Technological University, Singapore
Jianquan Ouyang	Xiangtan University, China
Tian Pan	Beijing University of Posts and Telecommunications, China

Mugen Peng	Beijing University of Posts and Telecommunications, China
Bin Shen	Chongqing University of Posts and Telecommunications, China
Yan Shi	Beijing University of Posts and Telecommunications, China
Gongpu Wang	Beijing Jiaotong University, China
Lin Wang	Yanshan University, China
Yang Wang	Chongqing University of Posts and Telecommunications, China
Kun Xie	Hunan University, China
Renchao Xie	Beijing University of Posts and Telecommunications, China
Changyou Xing	PLA University of Science and Technology, China
Chengwen Xing	Beijing Institute of Technology, China
Chuan Xu	Chongqing University of Posts and Telecommunications, China
Fan Yang	Beijing University of Posts and Telecommunications, China
Qinghai Yang	Xidian University, China
Zhe Yang	Northwestern Polytechnical University
Guangxing Zhang	Institute of Computing Technology, Chinese Academy of Sciences
Jian-Kang Zhang	McMaster University, Canada
Jiao Zhang	Beijing University of Posts and Telecommunications, China
Xiaofei Zhang	Nanjing University of Aeronautics and Astronautics, China
Xing Zhang	Beijing University of Posts and Telecommunications, China
Yanping Zhang	Gonzaga University, USA
Dongmei Zhao	McMaster University, Canada
Nan Zhao	Dalian University of Technology, China
Yangming Zhao	University of Electronic Science and Technology of China
Sheng Zhou	Tsinghua University, China
Zhangbing Zhou	China University of Geosciences

Contents – Part II

Network Architecture and SDN

Signal Detection and Estimation (2)

Heterogeneous Networks

Internet of Things

Hardware Design and Implementation

Mobility Management

SDN and Clouds

Contents –Part I

Traffic Engineering and Routing Algorithms

Security

Coding Schemes

Relay Systems

System Performance Evaluation and Enhancement

Optical Systems and Networks