Next-Generation Internet Architectures and Protocols

With ever-increasing demands on capacity, quality of service, speed, and reliability, current Internet systems are under strain and under review. Combining contributions from experts in the field, this book captures the most recent and innovative designs, architectures, protocols, and mechanisms that will enable researchers to successfully build the next-generation Internet. A broad perspective is provided, with topics including innovations at the physical/transmission layer in wired and wireless media, as well as the support for new switching and routing paradigms at the device and sub-system layer. The proposed alternatives to TCP and UDP at the data transport layer for emerging environments are also covered, as are the novel models and theoretical foundations proposed for understanding network complexity. Finally, new approaches for pricing and network economics are discussed, making this ideal for students, researchers, and practitioners who need to know about designing, constructing, and operating the next-generation Internet.

Byrav Ramamurthy is an Associate Professor in the Department of Computer Science and Engineering at the University of Nebraska, Lincoln (UNL). He is a recipient of the UNL CSE Department Student Choice Outstanding Teaching Award, the author of *Design of Optical WDM Networks* (2000), and a co-author of *Secure Group Communications over Data Networks* (2004). His research areas include optical networks, wireless/sensor networks, network security, distributed computing, and telecommunications.

George N. Rouskas is a Professor of Computer Science at North Carolina State University. He has received several research and teaching awards, including an NSF CAREER Award, the NCSU Alumni Outstanding Research Award, and he has been inducted into the NCSU Academy of Outstanding Teachers. He is the author of the book *Internet Tiered Services* (2009) and his research interests are in network architectures and protocols, optical networks and performance evaluation.

Krishna Moorthy Sivalingam is a Professor in the Department of Computer Science and Engineering at the Indian Institute of Technology (IIT), Madras. Prior to this, he was a Professor at the University of Maryland, Baltimore County, and also conducted research at Lucent Technologies and AT&T Bell Labs. He has previously edited three books and holds three patents in wireless networking. His research interests include wireless networks, wireless sensor networks, optical networks, and performance evaluation.

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Edited by

BYRAV RAMAMURTHY
University of Nebraska-Lincoln

GEORGE ROUSKAS
North Carolina State University

KRISHNA M. SIVALINGAM
Indian Institute of Technology Madras

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To my mother, Mrs. Lalitha Ramamurthy – BR
To Magdalini and Alexander – GNR
To my family – KMS

Contents

Contributors

Mohamed A. Ali, City University of New York, USA
Neophytos Antoniades, City University of New York, USA
Anish Arora, The Ohio State University, USA
Onur Ascigil, University of Kentucky, USA
Marcelo Bagnulo, Universidad Carlos III de Madrid, Spain
Ilia Baldine, Renaissance Computing Institute, USA
Kenneth L. Calvert, University of Kentucky, USA
Mung Chiang, Princeton University, USA
Davide Cuda, Politecnico di Torino, Turin, Italy
Rudra Dutta, North Carolina State University, USA
Georgios Ellinas, University of Cyprus, Cyprus
Joseph B. Evans, University of Kansas, USA
Alberto García-Martínez, Universidad Carlos III de Madrid, Spain
Roberto Gaudino, Politecnico di Torino, Turin, Italy
Guido A. Gavilanes Castillo, Politecnico di Torino, Turin, Italy
James Griffioen, University of Kentucky, USA
Aparna Gupta, Rensselaer Polytechnic Institute, USA
Andrei Gurtov, University of Oulu, Finland
Antonis Hadjiantonis, University of Nicosia, Cyprus
Thomas R. Henderson, Boeing, USA
Alden W. Jackson, BBN Technologies, USA
John Jacob, BAE Systems, USA
Suyang Ju, University of Kansas, USA
Xi Ju, The Ohio State University, USA
Shiv Kalyanaraman, IBM Research, India
Koushik Kar, Rensselaer Polytechnic Institute, USA
Frank Kelly, University of Cambridge, UK
Ahmad Khalil, City University of New York, USA
William Leal, The Ohio State University, USA
Will E. Leland, BBN Technologies, USA
Baochun Li, University of Toronto, Canada
Zongpeng Li, University of Calgary, Canada
John H. Lowry, BBN Technologies, USA
Walter C. Milliken, BBN Technologies, USA

Biswanath Mukherjee, University of California Davis, USA
John Musacchio, University of California Santa Cruz, USA
Fabio Neri, Politecnico di Torino, Turin, Italy
Pekka Nikander, Ericsson Research, Finland
P. Pal, BBN Technologies, USA
Gaurav Raina, Indian Institute of Technology Madras, India
Byrav Ramamurthy, University of Nebraska-Lincoln, USA
Subramanian Ramanathan, BBN Technologies, USA
Rajiv Ramnath, The Ohio State University, USA
K. Rauschenbach, BBN Technologies, USA
Anusha Ravula, University of Nebraska-Lincoln, USA
Abu (Sayeem) Reaz, University of California Davis, USA
Ceaser A. Santivanez, BBN Technologies, USA
Galina Schwartz, University of California Berkeley, USA
Lei Shi, University of California Davis, USA
Mukundan Sridharan, The Ohio State University, USA
Franciso Valera, Universidad Carlos III de Madrid, Spain
Iljitsch van Beijnum, IMDEA Networks, Spain
Jean Walrand, University of California Berkeley, USA
Damon Wischik, University College London, UK
Daniel Wood, Verizon Network Systems, USA
Tilman Wolf, University of Massachusetts Amherst, USA
Hong Xu, University of Toronto, Canada
Yung Yi, Princeton University, USA
Song Yuan, University of Kentucky, USA
Murat Yuksel, University of Nevada - Reno, USA
Wenjie Zeng, The Ohio State University, USA
Hongwei Zhang, The Ohio State University, USA