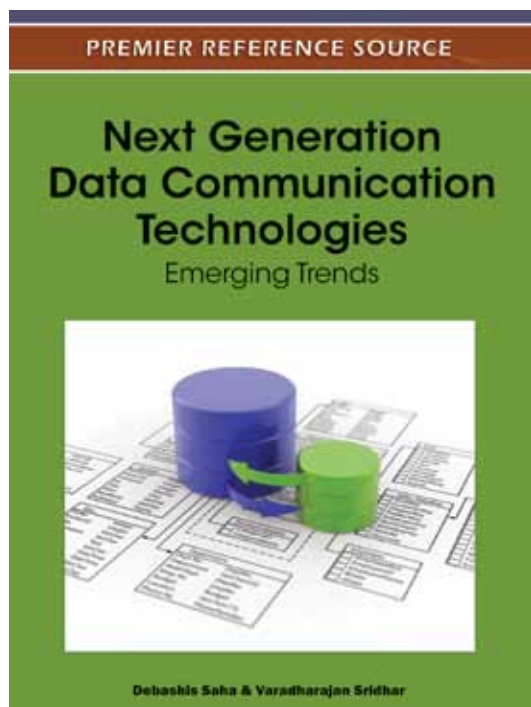


An Excellent Addition to Your Library!

Released: December 2011

Next Generation Data Communication Technologies: Emerging Trends



Debashis Saha (Indian Institute of Management Calcutta, India)
and Varadharajan Sridhar (Sasken Communication Technologies)

Data sharing is central to the existence of any computer network. Research on the types of networks used to transmit data, as well as the nature of the data itself, is essential for computer engineers and information technology professionals.

Next Generation Data Communication Technologies: Emerging Trends contains case studies, theories, and empirical research aimed to assist individuals and organizations in understanding the critical concepts of data networking and communications. The transmission of different types of media, along with resulting business implications, is studied in depth and applications for service providers and policymakers are offered in this rigorously researched collection.

Topics Covered:

- Authentication Protocols
- Cross-Layer Design
- Mobile Ad Hoc Networks
- Mobile Content Delivery
- Next Generation Networks
- Optimization in 4G Networks
- Process Scheduling
- Scalable Video Streaming
- Trust Based Authentication
- Vehicular Ad Hoc Networks

ISBN: 9781613504772; © 2012; 416 pp.

Print: US \$190.00 | Perpetual: US \$285.00 | Print + Perpetual: US \$380.00

Market: This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal for classroom use.

Debashis Saha is currently a full professor with the MIS Group, Indian Institute of Management (IIM)-Calcutta (Kolkata, India). Previously, he was with CSE Department at Jadavpur University (Kolkata, India). He received his BE (Hons) degree from Jadavpur University (Kolkata, India), and the MTech and PhD degrees from the Indian Institute of Technology (IIT)-Kharagpur (India), all in electronics and telecommunications engineering. His research interests include pervasive communication and computing, network operations, management and security, wireless networking and mobile computing, ICT for development, and network economics. He has supervised thirteen doctoral theses, published about 250 research papers in various conferences and journals, and directed four funded research projects on networking. He is a member of the organizing/program committee of several international conferences, and is a regular reviewer of several international journals. He has co-authored several book chapters, a monograph, and five books including *Networking Infrastructure for Pervasive Computing: Enabling Technologies and Systems* (Norwell, MA: Kluwer, 2002) and *Location Management and Routing in Mobile Wireless Networks* (Boston, MA: Artech House, 2003). Dr. Saha is the recipient of the prestigious career award for Young Teachers from AICTE, Government of India, and is a SERC Visiting Fellow with the Department of Science and Technology (DST), Government of India. He is a Fellow of West Bengal Academy of Science and Technology (WAST), Senior Life Member of Computer Society of India, Senior Member of IEEE, member of ACM, member of AIS, and member of the International Federation of Information Processing Working Group's 6.8 and 6.10. He was the founding Chair of Calcutta Chapter of IEEE Communications Society (2003-2008) which won the 'Best Chapter of the World' award in 2008.

Section 1: Next Generation Communication Networks: Towards Enhanced Design, Interoperability and Performance

Chapter 1

Planning and Dimensioning of the 3G UMTS Core Networks

Ouyang Ye (Stevens Institute of Technology, USA)

Fallah M. Hosein (Stevens Institute of Technology, USA)

Chapter 2

Cartography and Stability to Enhance and Self Regulate Proactive Routing in MANETs

Abid Mohamed Amine (University of Manouba, Tunisia)

Belghith Abdelfettah (University of Manouba, Tunisia)

Chapter 3

Handoff Cost Minimization and Planning of Heterogeneous Integrated Overlay Networks

Paul Ayan (Bharat Sanchar Nigam Limited, India)

Maitra Madhubanti (Jadavpur University, India)

Mandal Swarup (Wipro Technologies, India)

Sadhukhan Samir Kumar (Indian Institute of Management Calcutta, India)

Chapter 4

QoS-Aware Scheme for Mobility Management and Adaptive Resource Reservation in 4G Wireless Networks

Trabelsi Sihem (High School of Communications (Sup'Com), Tunisia)

Boudrigha Nouredine (High School of Communications (Sup'Com), Tunisia)

Chapter 5

Dependency of Transport Functions on IEEE802.11 and IEEE802.15.4 MAC/PHY Layer Protocols for WSN:

Sharif Atif (Curtin University of Technology, Australia)

Potdar Vidyasagar M. (Curtin University of Technology, Australia)

Rathnayaka A. J. D. (Curtin University of Technology, Australia)

Section 2: Communication Network Security: Improved Architecture and Prevention Mechanisms

Chapter 6

Secure Route Discovery in DSR against Black Hole Attacks in Mobile Ad Hoc Networks

Subathra P. (Thiagarajar College of Engineering, India)

Sivagurunathan S. (Gandhigram Rural Institute – Deemed University, India)

Chapter 7

VANET Authentication Using Trust Distribution in a Clustered Environment

Sivagurunathan S. (Gandhigram Rural Institute – Deemed University, India)

Subathra P. (Thiagarajar College of Engineering, India)

Chapter 8

A Distributed Secure Architecture for Vehicular Ad Hoc Networks

Gazdar Tahani (University of Manouba, Tunisia)

Belghith Abdelfettah (University of Manouba, Tunisia)

Benslimane Abderrahim (University of Avignon, France)

Chapter 9

Security Aspects in Radio Frequency Identification Systems

Gödör Gyöző (Budapest University of Technology and Economics, Hungary)

Imre Sándor (Budapest University of Technology and Economics, Hungary)

Section 3: Network Data Services and Applications: Improving Interoperability and Performance

Chapter 10

Deployment of Live Audio Services on FTTx Networks

Cabrero Sergio (University of Oviedo, Spain)

Melendi David (University of Oviedo, Spain)

García Roberto (University of Oviedo, Spain)

Pañeda Xabiel G. (University of Oviedo, Spain)

García Victor (University of Oviedo, Spain)

Chapter 11

Scalable P2P Video Streaming

Alhaisoni Majed (University of Essex, UK)

Ghanbari Mohammed (University of Essex, UK)

Liotta Antonio (Technische Universiteit Eindhoven, The Netherlands)

Chapter 12

Interoperable IPv6 Sensor Networking over PLC and RF Media

Chauvenet Cedric (INSA CITI Lab, Wateco Inc. and INRIA, France)

Tourancheau Bernard (INSA CITI Lab, Université Lyon1 and INRIA, France)

Genon-Catalot Denis (LCI EA Grenoble INP-UPMF, France)

Goudet Pierre-Emmanuel (Wateco Inc., France)

Pouillot Mathieu (Wateco Inc., France)

Chapter 13

A Cache Replacement Policy for Location Dependent Data in Mobile Environments

Mary Magdalene Jane. F (Dr.N.G.P.Institute of Technology, India)

Nadarajan R (PSG College of Technology, India)

Safar Maytham (Kuwait University, Kuwait)

Chapter 14

Process Scheduling Using Task Duplication in Heterogeneous Distributed Systems

Elcock Jeffrey (University of the West Indies, Barbados)

Chaudhuri Pranay (Heritage Institute of Technology, India)

Section 4: Network Economy: New Business Models

Chapter 15

Using Real Options Theory to Evaluate Strategic Investment Options for Mobile Content Delivery:

Liginlal Divakaran (Carnegie Mellon University)

Khansa Lara (Virginia Polytechnic Institute)

Chia Stella C. (City University of Hong Kong)

Chapter 16

Valuation of Alternative Business Models in Information, Communication and Media Markets:

Nascimento Álvaro (Universidade Católica Portuguesa, Portugal)

Santos Fernando (Universidade Católica Portuguesa, Portugal)

Order Your Copy Today!

Name: _____

Organization: _____

Address: _____

City, State, Zip: _____

Country: _____

Tel: _____

Fax: _____

E-mail: _____

☐ Enclosed is check payable to IGI Global in
US Dollars, drawn on a US-based bank

☐ Credit Card ☐ Mastercard ☐ Visa ☐ Am. Express

3 or 4 Digit Security Code: _____

Name on Card: _____

Account #: _____

Expiration Date: _____