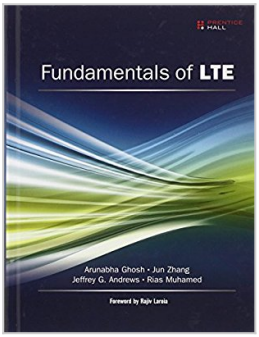

Fundamentals of LTE (Prentice Hall Communications Engineering and Emerging Technologies Series from Ted Rappaport)

By Arunabha Ghosh, Jun Zhang, Jeffrey G. Andrews, Rias Muhamed

Fundamentals of LTE (Prentice Hall Communications Engineering and Emerging Technologies Series from Ted Rappaport) By Arunabha Ghosh, Jun Zhang, Jeffrey G. Andrews, Rias Muhamed

The Definitive Guide to LTE Technology

Long-Term Evolution (LTE) is the next step in the GSM evolutionary path beyond 3G technology, and it is strongly positioned to be the dominant global standard for 4G cellular networks. LTE also represents the first generation of cellular networks to be based on a flat IP architecture and is designed to seamlessly support a variety of different services, such as broadband data, voice, and multicast video. Its design incorporates many of the key innovations of digital communication, such as MIMO (multiple input multiple output) and OFDMA (orthogonal frequency division multiple access), that mandate new skills to plan, build, and deploy an LTE network.

In ***Fundamentals of LTE*** , four leading experts from academia and industry explain the technical foundations of LTE in a tutorial style—providing a comprehensive overview of the standards. Following the same approach that made their recent *Fundamentals of WiMAX* successful, the authors offer a complete framework for understanding and evaluating LTE.

Topics include

- Cellular wireless history and evolution: Technical advances, market drivers, and foundational networking and communications technologies
- Multicarrier modulation theory and practice: OFDM system design, peak-to-average power ratios, and SC-FDE solutions
- Frequency Domain Multiple Access: OFDMA downlinks, SC-FDMA uplinks, resource allocation, and LTE-specific implementation
- Multiple antenna techniques and tradeoffs: spatial diversity, interference cancellation, spatial multiplexing, and multiuser/networked MIMO
- LTE standard overview: air interface protocol, channel structure, and physical layers

- Downlink and uplink transport channel processing: channel encoding, modulation mapping, Hybrid ARQ, multi-antenna processing, and more
- Physical/MAC layer procedures and scheduling: channel-aware scheduling, closed/open-loop multi-antenna processing, and more
- Packet flow, radio resource, and mobility management: RLC, PDCP, RRM, and LTE radio access network mobility/handoff procedures

Fundamentals of LTE (Prentice Hall Communications Engineering and Emerging Technologies Series from Ted Rappaport)

By Arunabha Ghosh, Jun Zhang, Jeffrey G. Andrews, Rias Muhamed

Fundamentals of LTE (Prentice Hall Communications Engineering and Emerging Technologies Series from Ted Rappaport) By Arunabha Ghosh, Jun Zhang, Jeffrey G. Andrews, Rias Muhamed

The Definitive Guide to LTE Technology

Long-Term Evolution (LTE) is the next step in the GSM evolutionary path beyond 3G technology, and it is strongly positioned to be the dominant global standard for 4G cellular networks. LTE also represents the first generation of cellular networks to be based on a flat IP architecture and is designed to seamlessly support a variety of different services, such as broadband data, voice, and multicast video. Its design incorporates many of the key innovations of digital communication, such as MIMO (multiple input multiple output) and OFDMA (orthogonal frequency division multiple access), that mandate new skills to plan, build, and deploy an LTE network.

In ***Fundamentals of LTE*** , four leading experts from academia and industry explain the technical foundations of LTE in a tutorial style—
providing a comprehensive overview of the standards. Following the same approach that made their recent *Fundamentals of WiMAX* successful, the authors offer a complete framework for understanding and evaluating LTE.

Topics include

- Cellular wireless history and evolution: Technical advances, market drivers, and foundational networking and communications technologies
- Multicarrier modulation theory and practice: OFDM system design, peak-to-average power ratios, and SC-FDE solutions
- Frequency Domain Multiple Access: OFDMA downlinks, SC-FDMA uplinks, resource allocation, and LTE-specific implementation
- Multiple antenna techniques and tradeoffs: spatial diversity, interference cancellation, spatial multiplexing, and multiuser/networked MIMO
- LTE standard overview: air interface protocol, channel structure, and physical layers
- Downlink and uplink transport channel processing: channel encoding, modulation mapping, Hybrid ARQ, multi-antenna processing, and more
- Physical/MAC layer procedures and scheduling: channel-aware scheduling, closed/open-loop multi-antenna processing, and more
- Packet flow, radio resource, and mobility management: RLC, PDCP, RRM, and LTE radio access network mobility/handoff procedures

Fundamentals of LTE (Prentice Hall Communications Engineering and Emerging Technologies Series from Ted Rappaport) By Arunabha Ghosh, Jun Zhang, Jeffrey G. Andrews, Rias Muhamed Bibliography

- Sales Rank: #771496 in Books
- Published on: 2010-09-20
- Original language: English
- Number of items: 1
- Dimensions: 9.84" h x 1.11" w x 7.28" l, 1.92 pounds
- Binding: Hardcover
- 464 pages

Editorial Review

Review
"*Fundamentals of LTE* is a clear yet detailed introduction to the 3GPP Long-Term Evolution. I would recommend it both to those wishing to get up to speed on the fundamentals of LTE and those who are already involved but in need of a reference for this critical technology."

—Dr. Alan Gatherer
CTO of Baseband System-on-Chip
Huawei

"Excellent . . . . A comprehensive and in-depth treatment of what is likely to become the dominant world broadband wireless standard."
—Dr. Reinaldo Valenzuela
Director of Wireless Communications Research
Bell Labs, Alcatel-Lucent

"*Fundamentals of LTE* is a well-written and self-contained book featuring a unique blend of leading industry and academic perspectives. Comprehensive and highly accessible."
—Dr. Angel Lozano
Professor, Information & Communication Technologies
University of Pompeu, Fabra

"This book offers a good entry point to the world of LTE for newcomers, since it contains useful background material for understanding the technology. It can serve as an instrumental reference for the general LTE community."
—Dr. Eko Onggosanusi
Senior member of technical staff and 3GPP RAN1 lead delegate
Texas Instruments

From the Back Cover
The Definitive Guide to LTE Technology Long-Term Evolution (LTE) is the next step in the GSM evolutionary path beyond 3G technology, and it is strongly positioned to be the dominant global standard for 4G cellular networks. LTE also represents the first generation of cellular networks to be based on a flat IP architecture and is designed to seamlessly support a variety of different services, such as broadband data, voice, and multicast video. Its design incorporates many of the key innovations of digital communication, such as MIMO (multiple input multiple output) and OFDMA (orthogonal frequency division multiple access), that mandate new skills to plan, build, and deploy an LTE network. In "Fundamentals of LTE," four leading experts from academia and industry explain the technical foundations of LTE in a tutorial style-providing a comprehensive overview of the standards. Following the same approach that made their recent "Fundamentals of WiMAX" successful, the authors offer a complete framework for understanding and evaluating LTE. Topics include
Cellular wireless history and evolution: Technical advances, market drivers, and foundational networking and communications technologies
Multicarrier modulation theory and practice: OFDM system design, peak-to-average power ratios, and SC-

FDE solutions
Frequency Domain Multiple Access: OFDMA downlinks, SC-FDMA uplinks, resource allocation, and LTE-specific implementation
Multiple antenna techniques and tradeoffs: spatial diversity, interference cancellation, spatial multiplexing, and multiuser/networked MIMO
LTE standard overview: air interface protocol, channel structure, and physical layers
Downlink and uplink transport channel processing: channel encoding, modulation mapping, Hybrid ARQ, multi-antenna processing, and more
Physical/MAC layer procedures and scheduling: channel-aware scheduling, closed/open-loop multi-antenna processing, and more
Packet flow, radio resource, and mobility management: RLC, PDCP, RRM, and LTE radio access network mobility/handoff procedures

About the Author
Arunabha Ghosh is a lead member of technical staff in the Wireless Communications Group in AT&T Laboratories. He received his B.S. with highest distinction from the Indian Institute of Technology at Kanpur in 1992 and his Ph.D. from the University of Illinois at Urbana Champaign in 1998. As a technical member at AT&T Labs, Dr. Ghosh's primary area of research is mobile wireless systems, with particular emphasis on MIMO-OFDM systems. Dr. Ghosh has worked extensively in the area of closed-loop single-user and multiuser MIMO solutions for technologies such as LTE and WiMAX and has been an active participant in many standards bodies such as 3GPP, IEEE, and WiMAX Forum.

Jun Zhang is a visiting assistant professor in the Department of Electronic and Computer Engineering at the Hong Kong University of Science and Technology. He received his B.Eng. in electronic engineering from the University of Science and Technology of China (USTC) in 2004, his M.Phil. in information engineering from the Chinese University of Hong Kong (CUHK) in 2006, and his Ph.D. in electrical and computer engineering from the University of Texas at Austin in 2009. He was an intern at AT&T Labs in the summers of 2007 and 2008.

Jeffrey G. Andrews is an associate professor in the Department of Electrical and Computer Engineering at the University of Texas at Austin, where he is the director of the Wireless Networking and Communications Group. He received his B.S. in engineering with high distinction from Harvey Mudd College, and his M.S. and Ph.D. in electrical engineering from Stanford University. Dr. Andrews has industry experience at companies including Qualcomm, Intel, and Microsoft, and is the co-recipient of three IEEE best paper awards and the National Science Foundation CAREER Award.

Rias Muhamed is a director of business development with the AT&T Corporate Strategy and Development Team. His area of focus is on developing and incubating new business applications and services for AT&T using emerging technologies. He was previously with AT&T Labs, where he led technology assessment of a variety of wireless communication systems. He received his B.S. in electrical engineering from Pondicherry University, India in 1990; his M.S. in electrical engineering from Virginia Tech in 1996; and his M.B.A. from St. Edward University in Austin in 2000.

Users Review

From reader reviews:

Therese McGaha:

Information is provisions for anyone to get better life, information these days can get by anyone from everywhere. The information can be a know-how or any news even restricted. What people must be consider if those information which is inside former life are difficult to be find than now is taking seriously which one is acceptable to believe or which one the particular resource are convinced. If you find the unstable resource then you get it as your main information you will see huge disadvantage for you. All those possibilities will not happen in you if you take Fundamentals of LTE (Prentice Hall Communications Engineering and Emerging Technologies Series from Ted Rappaport) as your daily resource information.

Randy Anderson:

The reserve with title Fundamentals of LTE (Prentice Hall Communications Engineering and Emerging Technologies Series from Ted Rappaport) posesses a lot of information that you can understand it. You can get a lot of help after read this book. This particular book exist new know-how the information that exist in this reserve represented the condition of the world right now. That is important to yo7u to find out how the improvement of the world. This specific book will bring you throughout new era of the globalization. You can read the e-book on your own smart phone, so you can read this anywhere you want.

Nicholas Valles:

Reading a book for being new life style in this calendar year; every people loves to study a book. When you go through a book you can get a large amount of benefit. When you read books, you can improve your knowledge, since book has a lot of information upon it. The information that you will get depend on what types of book that you have read. If you wish to get information about your analysis, you can read education books, but if you act like you want to entertain yourself read a fiction books, these us novel, comics, and soon. The Fundamentals of LTE (Prentice Hall Communications Engineering and Emerging Technologies Series from Ted Rappaport) will give you new experience in looking at a book.

Iona Calhoun:

Is it you who having spare time then spend it whole day by watching television programs or just laying on the bed? Do you need something new? This Fundamentals of LTE (Prentice Hall Communications Engineering and Emerging Technologies Series from Ted Rappaport) can be the reply, oh how comes? The new book you know. You are thus out of date, spending your time by reading in this completely new era is common not a nerd activity. So what these textbooks have than the others?

from Ted Rappaport) By Arunabha Ghosh, Jun Zhang, Jeffrey G. Andrews, Rias Muhamed #15UPOB96DY7

Read Fundamentals of LTE (Prentice Hall Communications Engineering and Emerging Technologies Series from Ted Rappaport) By Arunabha Ghosh, Jun Zhang, Jeffrey G. Andrews, Rias Muhamed for online ebook

Fundamentals of LTE (Prentice Hall Communications Engineering and Emerging Technologies Series from Ted Rappaport) By Arunabha Ghosh, Jun Zhang, Jeffrey G. Andrews, Rias Muhamed Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Fundamentals of LTE (Prentice Hall Communications Engineering and Emerging Technologies Series from Ted Rappaport) By Arunabha Ghosh, Jun Zhang, Jeffrey G. Andrews, Rias Muhamed books to read online.

Online Fundamentals of LTE (Prentice Hall Communications Engineering and Emerging Technologies Series from Ted Rappaport) By Arunabha Ghosh, Jun Zhang, Jeffrey G. Andrews, Rias Muhamed ebook PDF download

Fundamentals of LTE (Prentice Hall Communications Engineering and Emerging Technologies Series from Ted Rappaport) By Arunabha Ghosh, Jun Zhang, Jeffrey G. Andrews, Rias Muhamed Doc

Fundamentals of LTE (Prentice Hall Communications Engineering and Emerging Technologies Series from Ted Rappaport) By Arunabha Ghosh, Jun Zhang, Jeffrey G. Andrews, Rias Muhamed Mobipocket

Fundamentals of LTE (Prentice Hall Communications Engineering and Emerging Technologies Series from Ted Rappaport) By Arunabha Ghosh, Jun Zhang, Jeffrey G. Andrews, Rias Muhamed EPub

15UPOB96DY7: Fundamentals of LTE (Prentice Hall Communications Engineering and Emerging Technologies Series from Ted Rappaport) By Arunabha Ghosh, Jun Zhang, Jeffrey G. Andrews, Rias Muhamed