

References for Advanced 3G and 4G Wireless Mobile Communications

Lecture 1 – Introduction to 3G and 4G Wireless Standards

1. Wireless communications: Principles and Practice (2nd Edition), Theodore S. Rappaport, Prentice Hall, 2002.
2. Principles of Wireless Networks: A Unified Approach, Kaveh Pahlavan and Prashant Krishnamurthy, Prentice Hall, 2001
3. WCDMA for UMTS: HSPA Evolution and LTE by Harri Holma and Antti Toskala, Wiley Publishers, 5th Edition, 2010
4. 4G: LTE/LTE-Advanced for Mobile Broadband by Erik Dahlman, Stefan Parkvall and Johan Skold, Academic Press, 1st Edition, 2011
5. Fundamentals of WiMAX: Understanding broadband wireless networking by Jeffrey G. Andrews, Arunabha Ghosh and Rias Muhamed, Prentice Hall, 2007

Lecture 2 – Lecture 8: Fading Wireless Channels and Diversity

1. Fundamentals of Wireless Communication by David Tse and Pramod Vishwanath, Cambridge University Press, 2005
2. Wireless Communications by Andrea Goldsmith, Cambridge University Press, 2005
3. Digital Communications by John Proakis and Masoud Salehi, Mc-Graw Hill Science, 5th Edition, 2007
4. Lecture 9 – Lecture 12: Wireless Channel Modeling, Delay Spread and Doppler
5. Digital Communications by John Proakis and Masoud Salehi, Mc-Graw Hill Science, 5th Edition, 2007
6. Fundamentals of Wireless Communication by David Tse and Pramod Vishwanath, Cambridge University Press, 2005
7. Wireless communications: Principles and Practice (2nd Edition), Theodore S. Rappaport, Prentice Hall, 2002.

Lecture 13 – Lecture 20: Code Division for Multiple Access (CDMA)

1. Wireless communications: Principles and Practice (2nd Edition), Theodore S. Rappaport, Prentice Hall, 2002.

2. CDMA: Principles of Spread Spectrum Communication by Andrew J. Viterbi, Addison Wesley, 1st Edition, 1995
3. IS-95 CDMA and CDMA2000: Cellular/ PCS System Implementation by Vijay K. Garg, Prentice Hall, 1st Edition, 1999
4. A generalized Rake Receiver for Interference Suppression, by Gregory E. Bottomley, Tony Ottosson and Yi-Pin Eric Wang, *IEEE Journal on Selected Areas in Communications*, Vol. 18., No. 8, August 2000.
5. Optimal Decorrelating Receivers for DS-CDMA Systems: A Signal Processing Framework, *IEEE Transactions on Signal Processing*, 1996.

Lecture 20 – Lecture 26: Multiple-Input Multiple-Output (MIMO) Wireless Systems

1. Fundamentals of Wireless Communication by David Tse and Pramod Vishwanath, Cambridge University Press, 2005
2. MIMO Wireless Communications by Ezio Biglieri, Robert Calderbank, Anthony Constantinides, Andrea Goldsmith, Arogyaswami Paulraj and H. Vincent Poor, Cambridge University Press, 2010.
3. Introduction to Space-Time Wireless Communications by Arogyaswami Paulraj, Rohit Nabar and Dhananjay Gore, Cambridge University Press, 2008
4. Capacity of Multi-antenna Gaussian Channels, Emre Telatar, *European Transactions on Telecommunications*, Vol. 10, No. 6, Nov/Dec 1999.
5. Diversity and Multiplexing: A Fundamental Tradeoff in Multiple-Antenna Channels, by Lihong Zheng and David N.C.Tse, *IEEE Transactions in Information Theory*, Vol. 49, No. 5, May 2003.
6. A Simple Transmit Diversity Technique for Wireless Communications by Siavash Alamouti, *IEEE Journal on Selected Areas in Communications*, Vol. 16, No. 8, October 1998
7. Space-Time Block Coding for Wireless Communications by Vahid Tarokh, Hamid Jafarkhani and Robert Calderbank, *IEEE Journal on Selected Areas in Communications*, Vol. 17, No. 3, March 1999.

Lecture 27 to Lecture 35: OFDM and SC-FDMA

1. OFDM Wireless LANs: A Theoretical and Practical Guide by Juha Heiskala and John Terry, Sams Publishing, 2001
2. Orthogonal Frequency Division Multiplexing for Wireless Communications by Ye Geoffrey Li and Gordon L. Stuber, Springer, 2010
3. OFDMA Mobile Broadband Communications: A Systems Approach by Junyi Li, Xinzhou Wu and Rajiv Laroia, Cambridge University Press, 2013

4. Single Carrier FDMA: A New Air Interface for Long Term Evolution by Hyung G. Myung and David Goodman, Wiley 2008
5. Broadband MIMO-OFDM Wireless Communications by Gordon L. Stuber, John Barry, Steve McLaughlin, Ye Geoffrey Li, Mary Ann Ingram and Thomas Pratt, Proceedings of the IEEE, Vol. 91, No. 2, February 2004.
6. Optimal Power Allocation and Control for OFDM in Multiple Access Channels by Jisung Oh, Seung-Jean Kim and John M. Cioffi, *Proceeding of the IEEE Vehicular Technology Conference*, 2004, Pages 774-778, Vol. 2.

Lectures 35- Lectures 40: Wireless Large Scale Models and Teletraffic Theory

1. Wireless communications: Principles and Practice (2nd Edition), Theodore S. Rappaport, Prentice Hall, 2002.
2. Field Strength and its variability in VHF and UHF Land Mobile Radio Service by Okumura, Ohmori, Kawano and Fukudu, Rev. Elec. Comm. Lab, vol. 16, No. 9-10, pp. 825-873, 1968.
3. Empirical formula for propagation loss in land mobile radio services by M. Hata in *IEEE Transactions on Vehicular Technology*, Vol. 29, No. 3, pp. 317-325, 1980.