

References

- Bahl, L., Cocke, J., Jelinek, F., and Raviv, J., (1974), "Optimal decoding of linear codes for minimizing symbol error rate," *IEEE Transactions on Information Theory*, Vol. 20, No. 2, pp.284-287.
- Beeecube, 2014, <http://www.beeecube.com>; October 1, 2014.
- BladeRF, 2014, <https://www.kickstarter.com/projects/1085541682/bladerf-usb-30-software-defined-radio>, 15 December 2014.
- Bernhard, D., Lovejoy, J., Horn, A., and Hughes, B., (2009), "Facebook and online privacy: Attitudes, behaviors, and unintended consequences." *Journal of Computer Mediated Communication*, Vol. 15, No. 1, pp.83-108
- Cass, S., (2006), "Tools and Toys: Hardware for your Software Radio," *IEEE Spectrum*, Vol. 43, No. 10, pp. 51-54
- Chandra, R., Mahajan, R., Moscibroda, T., Raghavendra, R., and Bahl, P., (2008), "A case for adapting channel width in wireless networks," In *ACM SIGCOMM Computer Communication Review*, Vol. 38, No. 4, pp. 135-146
- Costa, E., and Pupolin, S., (2002), "M-QAM-OFDM system performance in the presence of a nonlinear amplifier and phase noise," *IEEE Transactions on Communications*, Vol. 50, No. 3, pp.462-472
- Cox, D., (1972), "Delay Doppler characteristics of multipath propagation at 910 MHz in a suburban mobile radio environment," *IEEE Transactions on Antennas and Propagation*, Vol. 20, No. 5, pp. 625-635.
- Cutler, B., (2002), "Effects of physical layer impairments on OFDM systems," *RF Design*, Vol. 25, No. 5, pp.36-45.
- Daniels, R., Caramanis, C., and Heath, R., "Adaptation in convolutionally coded MIMO-OFDM wireless systems through supervised learning and SNR ordering," *IEEE Transactions on Vehicular Technology*, Vol. 59, No. 1, pp.114-126.
- Daniels, R., and Heath, R., 2009, "An online learning framework for link adaptation in wireless networks," *IEEE Information Theory and Applications Workshop*, pp.138-140.
- Daniels, R., Mandke, K., Truong, K., Nettles, S., and Heath, R., (2008), "Throughput/delay measurements of limited feedback beamforming in indoor wireless networks," *IEEE Global Telecommunications Conference*, pp.1-6.
- De, P., Raniwala, A., Sharma, S., and Chiueh, T., (2005), "Design considerations for a multihop wireless network testbed," *IEEE Communications Magazine*, Vol. 43, No. 10, pp.102-109.
- Duarte, M., Dick, C., Sabharwal, A., (2012), "Experiment Driven Characterization of Full-Duplex Wireless Systems," *IEEE Transactions on Wireless Communications*, Vol. 11, No. 12, pp.4296-4307.
- Ettus Research, (2014), <http://www.ettus.com>; 13 December 2014
- Fleming, K., Adler, M., Pellauer, M., Parashar, A., Mithal, A., and Emer, J., (2012), "Leveraging latency-insensitivity to ease multiple FPGA design," *ACM/SIGDA International symposium on Field Programmable Gate Arrays (FPGA '12)*, pp.175-184
- Foukalas, F., Gazis, V., and Alonistioti, N., (2008), "Cross-layer design proposals for wireless mobile networks: a survey and taxonomy," *IEEE Communications Surveys and Tutorials*, Vol. 10, No. 1, pp.70-85
- Fu, B., Xiao, Y., Deng, H., and Zeng, H., (2014), "A survey of cross-layer designs in wireless networks," *IEEE Communications Surveys and Tutorials*, Vol. 16, No. 1, pp.110-126
- Gollakota, S., and Katabi, D., (2008), "Zigzag decoding: combating hidden terminals in wireless networks," *Communications of the ACM*, Vol. 10, No. 4, pp.83-87
- Gummadi, R., Patra, R., Balakrishnan, H., and Brewer, E., (2008), "Interference avoidance and control," *Hotnets-VII*, Calgary, Canada.
- HackRF (2014), <http://ossmann.blogspot.com.au/2012/06/introducing-hackrf.html>, 15 December 2014.
- Hariharan, R., Edalat, F., Katabi, D., and Sodini, C.G., (2009), "Frequency-aware rate adaptation and MAC protocols," *Proceedings of the 15th Annual International Conference on Mobile Computing and Networking*, ACM, pp.193-204.
- Hershberger, J., Thompson, E., and Loos, T., (2013), "A real-time WARP-based data capture and playback test bed for DSP applications," *IEEE Digital Signal Processing and Signal Processing Education Meeting (DSP/SPE)*, pp.48-53.
- Hill, J., and Culler, D., (2002), "Mica: A wireless platform for deeply embedded networks," *IEEE Micro*, Vol. 22, No. 6, pp.12-24

- Holland, G., Vaidya, N., and Bahl, P., (2001), "A rate-adaptive MAC protocol for multi-hop wireless networks," Proceedings of the 7th Annual International Conference on Mobile Computing and Networking (MobiCom '01), ACM, New York, NY, USA, pp.236-251
- Howard, S. J., and Pahlavan, K., (1991), "Fading results from narrowband measurements of the indoor radio channel" IEEE International Symposium on Personal, Indoor and Mobile Radio Communications, pp. 92-97
- Hunter, C., Camp, J., Murphy, P., Sabharwal, A., and Dick, C., (2006), "A flexible framework for wireless medium access protocols," Fortieth IEEE Asilomar Conference on Signals, Systems and Computers, pp.2046-2050
- Jamieson, K., and Balakrishnan, H., (2007), "PPR: partial packet recovery for wireless networks," ACM SIGCOMM Computer Communication Review, Vol. 37, No. 4, pp.409-420
- Jamieson, K.A., (2008), "The SoftPHY Abstraction: From Packets to Symbols in Wireless Network Design," PhD Dissertation., Massachusetts Institute of Technology
- Joan, A., Berg, M., and Coiera, E., (2004), "Some unintended consequences of information technology in health care: the nature of patient care information system-related errors," Journal of the American Medical Informatics Association, Vol. 11, No. 2, pp.104-112
- Johan, K., and Wittenmark, B., (2008), "Adaptive control," Courier Dover Publications
- Karagianni, E.A., Tsenes, P.S., Athanasopoulos, N.C., and Makri, R.J., (2008), "Decrease of oscillator phase noise and I/Q imbalance impacts on a WLAN transmitter using appropriate predistortion," 6th IEEE International Symposium on Communication Systems, Networks and Digital Signal Processing, pp.378-381.
- Kawadia, V., and Kumar, P.R., (2005), "A cautionary perspective on cross-layer design," Wireless Communications, IEEE, Vol. 12, No. 1, pp.3-11.
- Kim, J., Mersereau, R., and Altunbasak, Y., (2003), "Error-resilient image and video transmission over the Internet using unequal error protection," IEEE Transactions on Image Processing, Vol. 12, No. 2, pp.121-131.
- Kim, K., and Kumar, P., (2012), "Cyberphysical systems: A perspective at the centennial," Proceedings of the IEEE Special Centennial Issue, Vol. 100, pp. 1287-1308.
- Kim, W., Khan, O., Truong, K., Choi, S., Grant, R., Wright H., Mandke, K., Daniels, R., Heath, R., and Nettles S., (2009), "An experimental evaluation of rate adaptation for multi-antenna systems," IEEE INFOCOM, pp.2313-2321.
- Kiyavash, N., Koushanfar, F., Coleman, T.P., Rodrigues, M., (2013), "A Timing Channel Spyware for the CSMA/CA Protocol," IEEE Transactions on Information Forensics and Security, Vol. 8, No. 3, pp.477-487.
- Khokhar, A., Viktor K., Shaaban, M., and Wang, C., (1993), "Heterogeneous computing: Challenges and opportunities," Computer, Vol. 26, No. 6, pp. 18-27
- Kohler, E., Morris, R., Chen, B., Jannotti, J., and Kaashoek, M., (2000), "The Click modular router," ACM Transactions on Computer Systems, Vol. 18, No. 3, pp.263-297.
- Korakis, T., Knox, M., Erkip, E., and Panwar, S., (2009), "Cooperative network implementation using open-source platforms," IEEE Communications Magazine, Vol. 47, No. 2, pp.134-141
- Kumar, P., (1985), "A survey of some results in stochastic adaptive control," SIAM Journal on Control and Optimization, Vol. 23, No. 3, pp.329-380.
- Lee, E., and Sangiovanni-Vincentelli, A., "A framework for comparing models of computation," (1998), IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, Vol. 17, No. 12, pp.1217-1229.
- Mandke, K., Choi, S-H., Kim, G., Grant, R., Daniels, R.C., Kim, W., Heath, R.W., and Nettles, S.M., (2007), "Early results on hydra: a flexible MAC/PHY multihop testbed," IEEE 65th Vehicular Technology Conference, pp.1896-1900
- Mandke, K., Daniels, R.C., Choi, S-H., Nettles, S.M., and Heath, R.W., (2007), "Physical concerns for cross-layer prototyping and wireless network experimentation," Proceedings of the Second ACM International Workshop on Wireless Network Testbeds, Experimental Evaluation and Characterization (WinTECH '07), ACM, pp.11-18
- Magistretti, E., Gurewitz, O., and Knightly, E., (2012), "802.11 ec: collision avoidance without control messages," 18th ACM annual international conference on Mobile computing and networking, pp.65-76.
- Minibee, 2014, <http://www.beecube.com/products/miniBEE.asp>; October 1, 2014.
- Minseok, K.I.M., Konishi, Y., Takada, J-i., and Boxin, G.A.O., (2012), "Automatic IQ imbalance compensation technique for quadrature modulator by single-tone testing," IEICE Transactions on Communications, Vol. 95, No. 5, pp.1864-1868.

- Mitola, J., (1995), "The software radio architecture," *IEEE Communications Magazine*, Vol. 33, No. 5, pp. 26-38.
- Ng, M.C., Fleming, K.E., Vutukuru, M., Gross, S., and Balakrishnan, H., (2010), "Airblue: a system for cross-layer wireless protocol development," *Proceedings of the 6th ACM/IEEE Symposium on Architectures for Networking and Communications Systems*, ACM, pp.4-10
- Ng, M., Vijayaraghavan, M., Dave, N., Raghavan, G., and Hicks, J., (2007), "From WiFi to WiMAX: Techniques for high-level IP reuse across Different OFDM protocols," *5th IEEE/ACM International Conference on Formal Methods and Models for Codesign*, pp. 71-80.
- Nutaq (2014), <http://www.nutaq.com/en>; 13 December 2014.
- Nychis, G., Hottelier, T., Yang, Z., Srinivasan S., and Steenkiste, P., (2009), "Enabling MAC Protocol Implementations on Software-Defined Radios," *NSDI*, Vol. 9, pp.91-105.
- Perry, J., Iannucci, P., Fleming, K., Balakrishnan, H., and Shah, D., (2012), "Spinal codes," *ACM SIGCOMM conference on Applications, technologies, architectures, and protocols for computer communication*, pp.49-60
- Proakis, J.G., Salehi, M., Zhou, N., and Li, X., (1994), "Communication Systems Engineering," Vol. 2, Prentice-Hall, Englewood Cliffs
- Rappaport, T.S., (1996), "Wireless Communications: Principles and Practice", Vol. 2, Prentice Hall PTR, New Jersey
- Rishiyur, N., (2004), "Bluespec System Verilog: efficient, correct RTL from high level specifications," *Second ACM and IEEE International Conference on Formal Methods and Models for Co-Design*, pp. 69-70
- Rothman, J., and Chang, C., (2012), "BEE technology overview," *2012 International Conference on Embedded Computer Systems (SAMOS)*, IEEE, pp.277-279
- Sahai, A., Patel, G., Dick, C., and Sabharwal, A., (2013), "On the impact of phase noise on active cancelation in wireless full-duplex," *IEEE Transactions on Vehicular Technology*, Vol. 62, No. 9, pp. 4494-4510
- Santella, G., and Mazzenga, F., (1995), "A model for performance evaluation in MQAM-OFDM schemes in presence of nonlinear distortions," *IEEE 45th Vehicular Technology Conference, 1995*, Vol. 2, pp.830-834
- Sen, S., Santhapuri, N., Choudhury, R., and Nelakuditi, S., (2010), "AccuRate: constellation based rate estimation in wireless networks," *NSDI*, pp.175-190.
- Shakkottai, S., Rappaport, T.S., and Karlsson, P.C., (2003), "Cross-layer design for wireless networks," *IEEE Communications Magazine*, October, Vol. 41, No. 10, pp.74, 80.
- Shannon, C., (2001), "A mathematical theory of communication," *ACM SIGMOBILE Mobile Computing and Communications Review* 5, No. 1, pp. 3-55.
- Shepard, C., Hang Y., and Lin Z., (2013), "ArgosV2: a flexible many-antenna research platform," *ACM 19th International Conference on Mobile Computing and Networking*, pp. 163-166.
- Shi, J., Aryafar, E., Salonidis, T., and Knightly, E., (2009), "Synchronized CSMA contention: Model, implementation and evaluation," *IEEE INFOCOM*, pp.2052-2060.
- Shishkin, B., Pfeil, D., Nguyen, D., Wanuga, K., Chacko, J., Johnson, J., Kandasamy, N., Kurzweg, T., and Dandekar, K., (2011), "SDC testbed: Software defined communications testbed for wireless radio and optical networking," *IEEE International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt)*, pp.300-306.
- Smith, M., and Rottenberg, C., (1991), "Unintended consequences of external testing in elementary schools," *Educational measurement: Issues and practice*, Vol. 10, No. 4, pp.7-11
- Srivastava, V., and Motani, M., (2005), "Cross-layer design: a survey and the road ahead," *IEEE Communications Magazine*, Vol. 43, No. 12, pp.112-119.
- Thomas, D., Dirkes, E., Walker, R., Rajan, J., Nestor, J., and Blackburn, R., (1988), "The system architect's workbench," *25th ACM/IEEE Design Automation Conference*, pp.337-343
- Tan, K., Liu, H., Zhang, J., Zhang, Y., Fang, J., and Voelker, G., (2011), "Sora: high-performance software radio using general-purpose multi-core processors," *Communications of the ACM*, Vol. 54, No. 1, pp.99-107
- Valiant, Leslie G., (1990), "A bridging model for parallel computation," *Communications of the ACM*, Vol. 33, No. 8, pp.103-111
- Vutukuru, M., Balakrishnan, H., and Jamieson, K., (2009), "Crosslayer wireless bit rate adaptation," *In ACM SIGCOMM Computer Communication Review*, Vol. 39, No. 4, pp. 3-14
- Vutukuru, M., Jamieson, K., and Balakrishnan, H., (2008), "Harnessing Exposed Terminals in Wireless Networks," *NSDI*, Vol. 3, No. 1, pp. 3-3
- Windisch, M., and Fettweis, G., (2006), "Performance degradation due to I/Q imbalance in multi-carrier direct conversion receivers: a theoretical analysis," *IEEE International Conference on Communications, 2006, ICC'06*, Vol. 1, pp.257-262

...