LEONARD JOSEPH CIMINI, JR.

PROFESSIONAL EMPLOYMENT

2002-Present UNIVERSITY OF DELAWARE, NEWARK, DE (Professor)

- Teach courses in linear systems, probability, and digital and wireless communications
- Supervised 20 graduate students (7 received MS, 12 received PhD), 4 post-docs, and 7 visiting scholars
- Research topics: multiuser MIMO networks, cooperative networking, underwater acoustic communications

1996-2002 AT&T LABORATORIES - RESEARCH, MIDDLETOWN, NJ. (Technology Consultant)

- Studied the effect of channel mismatch on adaptive modulation for OFDM for wireless applications.
- Invented and analyzed techniques for robust channel estimation and peak power reduction in OFDM.
- Invented and analyzed solutions to both the physical layer and MAC layer challenges for providing high-bit-rate packet data to wide-area cellular users, using OFDM.

1985-1996 AT&T BELL LABORATORIES, HOLMDEL, NJ. (Member of Technical Staff)

- Invented, analyzed, designed, and built a 20-Mbps packet-based wireless modem using clustered OFDM.
- Proposed and analyzed the use of OFDM to overcome limitations to high-bit-rate wireless transmission.
- Invented and analyzed new algorithms for dynamic channel selection in wireless communication systems.
- Proposed, analyzed, and demonstrated a TDMA-based technique for indoor wireless communications using slow cyclical frequency hopping and Reed-Solomon coding.
- Invented, analyzed, and demonstrated the use of a Fabry-Perot filter as a fiber-dispersion equalizer in high-bit-rate, long-haul, lightwave systems.
- Proposed and demonstrated an optical frequency synthesizer.
- Invented, analyzed, and demonstrated polarization switching as a means of achieving polarization-insensitive single-photodiode coherent detection.

1982-1985 AT&T BELL LABORATORIES, WEST LONG BRANCH, NJ. (Member of Technical Staff)

- Proposed and analyzed new speech privacy techniques for cellular mobile radio systems.
- Designed and demonstrated 10- and 18-GHz hardware for a personal communication system.
- Proposed and analyzed the use of OFDM in mobile radio systems. This was the first application of OFDM to wireless systems and has been the basis for much of the current widespread work in this area.

1976-1978 IN-COLLEGE EMPLOYMENT

- RCA, MISSILE AND SURFACE RADAR DIVISION, MOORESTOWN, NJ. Designed hardware and software for testing of a phased array radar system. Also worked on several radar detection problems.
- UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA. Investigated the feasibility of using frequency diversity as a means of enhancing images in microwave holography.

OTHER TEACHING AND CONSULTING EXPERIENCE

1996-2004	Gave numerous tutorials at IEEE conferences and workshops on High-Speed Wireless Data and OFDM for Wireless Communications.
1994-2001	UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA. Adjunct Professor in Dept. of Electrical Engineering. Taught course in wireless systems.
1983-1988	MONMOUTH COLLEGE, WEST LONG BRANCH, N.J. Adjunct Professor in the Dept. of Elec. Eng. Taught several graduate and undergraduate courses.
2002-2003	MITSUBISHI ELECTRIC RESEARCH LABS, MURRAY HILL, NJ. Consultant.
2004-Present	Patent litigation - consultant and expert witness.
1998-2010	Technical Advisory Board for Adaptix, Inc., and Walbell, Inc.

PROFESSIONAL AND SERVICE ACTIVITIES

- IEEE, Member (1977-1988), Senior Member (1989-1999), Fellow (2000-Present)
- Director of Journals, IEEE Comm. Society (2014-2015)
- Vice President-Technical Activities, IEEE Comm. Society (2012-2013)
- Vice President-Publications, IEEE Comm. Society (2010-2011)
- Director of On-Line Content, IEEE Comm. Society, (2008-2009)
- Board of Governors, At-Large Member, IEEE Comm. Society (1999-2001, 2005-2007, 2016-2018))

- Chair, Emerging Technologies Committee, IEEE Comm. Society (2004-2007)
- Member, Strategic Planning Committee, IEEE Comm. Society (2004-2007)
- Member, Fellow Evaluation Committee, IEEE Vehicular Technology Society (2004-2016)
- Member, Fellow Evaluation Committee, IEEE Comm. Society (2008-2010)
- Member, Awards Committee, IEEE Comm. Society (2004-2007, 2018)
- Member, Nominations and Elections Committee, IEEE Comm. Society (2003-2007, 2017-2019)
- Member/Chair, *IEEE Transactions on Wireless Communications* Steering Committee (2001-2009)
- Comm. Theory Committee, IEEE Comm. Society: Sec. (1987-1989), Vice Chair (1989-1992, 2001-2004)
- *IEEE Trans. on Comm.,* Ed. for Mobile Comm. (1989-1991), Area Ed. for Wireless Comm. (1991-1998)
- Founding Editor-in-Chief of the *IEEE-JSAC: Wireless Communications Series* (1998-2000)
- *IEEE JSAC,* Guest Ed., April/May 1996, on Wireless Local Comm.; Senior Ed., *IEEE JSAC* (2000-2009)
- Comm. Theory Symposium Co-Chair, *Globecom 2004*
- Technical Program Chair, *1999 Comm. Theory Workshop*
- Technical Program Committee for more than 30 international conferences from 1994-2017
- Session Organizer and Chairman for many conferences as well as a reviewer for many archival journals
- Gave numerous invited university seminars, including NJIT, Polytechnic Institute, Princeton University, University of Pennsylvania, University of Alberta, and the Royal Institute Technology in Sweden

EDUCATION

1980-1982	UNIVERSITY OF PENNSYLVANIA (Ph.D. Electrical Eng. in May 1982, GPA 4.0/4.0) Dissertation: "Some Results in Quantization for Filtering and Detection" (Advisor: S. A. Kassam)
Fall 1979	MASSACHUSETTS INSTITUTE OF TECHNOLOGY Research involved the analysis of free-space optical systems. GPA 5.0/5.0.
1978-1979	UNIVERSITY OF PENNSYLVANIA (M. S. Electrical Eng. in August 1979, GPA 4.0/4.0) Thesis: "Minimax Estimation Filters" (Advisor: S. A. Kassam)
1974-1978	UNIVERSITY OF PENNSYLVANIA (B. S. Electrical Eng. in May 1978, GPA 3.9/4.0)

HONORS AND AWARDS

- Distinguished Lectured, IEEE Vehicular Technology Society (2012-2017)
- 2021 Technical Achievement Award from the Communication Theory Committee of the IEEE Communications Society, "For contributions to OFDM for wireless communications and MIMO radar."
- 2021 Mentorship Award from Women in Communications Engineering (WICE) Committee of the IEEE Communications Society.
- 2013 Highly Cited Author. http://highlycited.com/institution/university-of-delaware.html
- 2010 Service Award from the Communication Theory Committee of the IEEE Communications Society.
- 2010 Donald W. McLellan Meritorious Service Award from the IEEE Communications Society
- 2010 Recognition Award from the Wireless Communications Committee of the IEEE Comm. Society.
- 2010 Innovator's Award from the New Jersey Inventors Hall of Fame for innovative research related to high-speed wireless communications.
- 2010 Stephen O. Rice Prize from the IEEE Comm. Society for the best paper in the *IEEE Trans. on Commun.*
- 2007 James Evans Avante-Garde Award from the IEEE Vehicular Technology Society.
- July 1985 paper in *IEEE Trans. on Comm.*, "Analysis and Simulation of a Digital Mobile Channel Using Orthogonal Frequency Division Multiplexing," named one of the 50 most influential papers in the history of the IEEE Comm. Society.
- Elected IEEE Fellow in 2000 for contributions to the theory and practice of high-speed wireless communications. Life Fellow in 2021.
- Best Paper Awards at *WCNC 2007*, *Chinacomm 2008*, and *ICC 2012*.
- National Science Foundation Fellowship (1978-1981); MIT Vinton Hayes Fellowship in Communications; University of Pennsylvania Graduate Fellowship; IEEE Fortescue Fellowship.
- Mayor's Scholar (1974-1978); RCA Scholar (1975-1978); Benjamin Franklin Scholar (1974-1978).
- Dean's List (1974-1978); Graduated (1978) with summa cum laude honors and awarded A. Atwater Kent Prize in Electrical Engineering.
- Member of Tau Beta Pi (Vice-President 1977-1978); Member of Eta Kappa Nu (Secretary 1977-1978)

COMMUNITY ACTIVITIES AND MENTORING

- Received AT&T Research Affirmative Action Award for 1995
- Tutored minority students at a local middle school as part of affirmative action program at AT&T
- Supervised and mentored many students as part of the Summer Research Program at AT&T

UNIVERSITY OF DELAWARE ACTIVITIES

FUNDING - GRANTS

- ARL/Telcordia Cooperative Technology Alliance, "Sparse Multicarrier for Very Wideband Wireless Communications" $59K (awarded 11/03, 1 year)
- ARL/Telcordia CTA, "Wireless Communications in Uncertain Environments" $65K (awarded 11/04, 1 year)
- AFOSR, "Cooperative Networking" $270K (11/05-10/08)
- CERDEC, "Leveraging Diversity Transmission and Reception to Improve EW System Performance" (w/ S. Bohacek and C. Cotton), $72K (awarded 9/09, received 2/10)
- AFOSR, "Decentralized Cooperative Networking" $418K (3/09-11/11)
- NSF CIF, "Distributed PHY/MAC Optimization for Energy and Spectral Efficient Wireless Networks" (collaborative w/ Y. Li , Georgia Tech), $250K (UD) (8/10-8/13)
- AFOSR, "Overhead-Performance Tradeoffs in Distributed Wireless Networks" (w/ J. Walsh and S. Weber, Drexel, and J. Garcia-Frias), $1,441,809 (Cimini $490K) (4/12-3/15)
- NSF NeTS, "In-Band Full-Duplex Underwater Acoustic Networks" (w/ A. Song, Alabama, C.-C. Shen, and X.-G. Xia), $200K (UD) (6/17-5/20) + $15K REU 2019

FUNDING - GIFTS

- Broadcom, $20K (awarded 9/06)
- Intel University Sponsored Research "Resource Allocation for Multiuser MIMO/OFDM in Highly Mobile Environments," $44K (awarded 9/07), $67K (6/09)
- Cisco Undergraduate Research Program
  - "Adaptive Beamforming for IEEE802.11n," $69.5K (6/06)
  - "Beamforming in IEEE802.11n for Wide-Area Applications," $75K (6/07)
  - "Interference Consideration in Outdoor IEEE 802.11n Systems Using MIMO Beamforming Techniques," $78K (6/08)
  - "Beamforming for Backhaul in Outdoor IEEE801.11n Networks," $81K (6/09)
  - "Beamforming in Very High Throughput Multiuser Wireless Networks," $83K (6/10)
  - "Optimizing Resources for Multiuser MIMO in IEEE 802.11ac Networks Using Beamforming," $85K (6/11)
  - "New Approaches for Maximizing Throughput and Quality of Multiuser MIMO Wireless LANs," $89K (6/12)
  - "Interference Management for Multiuser MIMO Wireless Networks in Uncertain and Heterogeneous Environments," $91K (6/13)
  - "The Impact of Multiple Radio Access Technologies Sharing the Same Spectrum," $93K (6/14)
  - "Fair and Spectrally Efficient Coexistence of Multiple Radio Access Technologies in the Same Spectrum Band," $98K (8/15)
  - "Fair and Spectrally Efficient Coexistence of LAA-LTE and Wi-Fi," $99K (8/16)
  - "Aggregation and Determinism in Next-Generation Wireless Networks," $101K (01/18)
  - "Smart Scheduling and Coexistence in Next Generation Heterogeneous Wireless Networks," $104K (08/19)

STUDENTS/VISITORS

PhD

- Erdem Bala, Winter 2007, "Multichannel, Multiuser and Multiple Antenna Wireless Communication Systems" (now with Interdigital)
- Bo Gui, Fall 2008, "Cooperative OFDM Networking" (Cisco)

- Lu Zhang, Summer 2009, "Decentralized Cooperative Communications for Wireless Relaying Networks" (Ericsson, Shanghai)
- Xiantao Sun, Summer 2010, "Beamforming for MIMO-OFDM Wireless Systems" (co-advisor L. Greenstein) (Apple)5/20/2/21
- Chenzi Jiang, Fall 2012, "Interference Management and Energy-Efficient Transmission in Wireless Communications Systems" (Apple)
- GuBong Lim, Fall 2013, "Energy Efficient Wireless Communications" (Qualcomm)
- Yao Xiao, Winter 2014, "Cross-Layer Design for Wireless Cooperative Networks" (Aibee)
- Hao Feng, Fall 2014, "Overhead, Uncertainty, and Interference in Wireless Networks" (Google)
- Qi Wang, Fall 2014, "Resource Management for Multi-User MIMO Systems" (Google)
- Li Li, Summer 2018, "Analysis and Management of Intra- and Inter-System Interference in Wireless Communications Systems" (Samsung)
- Bohan Zhang, Fall 2019, "Massive MIMO and Millimeter Wave Communications for 5G and Beyond Wireless Systems" (MediaTek)
- Guangyi Liu, Summer 2019, "Advanced Cellular Networks with Densely Deployed Antennas and Imperfect Network State Information" (Qualcomm)
- Mohammad Towliat (w/ X.-G. Xia), dissertation defense expected in January 2023

Masters

- Kemal Sucak, Winter 2005, "Statistical MIMO Radar"
- Mani Kishore Vajipeyajula, Summer 2005, "Clustered Multicarrier Systems for Very Wideband Wireless Communications"
- GuBong Lim, Summer 2005, "Analysis and Results for H-MIMO: A Hybrid of Spatial Multiplexing and Adaptive Beamforming"
- German Andres Mancera-Mendez, Summer 2006, "Ad Hoc Wireless Networks: Flooding and Statistical Understanding of Node Movement"
- Deokwon Kang, Summer 2009, "MIMO Beamforming in Multiuser Wireless Environments"
- Wooyoung Ryu, Summer 2010, "Performance Analysis of Beamforming for Femtocellular Applications"
- Chenzi Jiang, Fall 2010, "Interference Considerations in MIMO-Based Cellular Systems"

PostDocs

- Lin Dai (9/05-1/07)
- Lu Zhang (8/09-5/10)
- Hongzheng Wang (8/10-8/11)
- Seyedmohammad Salehi (5/20-2/21)

Research Fellow

Larry Greenstein 1/06-1/17

Visiting Faculty

- Yongzhao Li (Xidian University) 9/07-8/08, 8/16-10/16
- Jing Li (Xidian University) 3/14-3/15

Visiting Students/Scholars

- Patrick Svedman (Ericsson Research, Sweden) 1/05-8/05
- Haina Ye (Beijing Jiaotong University) 9/12-8/13
- Chengming Zhou (Xidian University) 9/13-8/15
- Lixing Fan (Southeast University) 8/14-8/15
- Tao Li (Xiaidan University) 10/15-9/16

Undergraduate Research/Independent Study

- Nuha Ahmed, Summer 2006
- Mohamed Dicko, Summer 2008
- Colin McLafferty, Summer 2008, Summer 2009 (w/ X. Li)
- Patrick Nelson, Spring 2009
- Brian Chlan, Summer 2009, Spring 2010
- Dora Maria Ballesteros, Summer 2010

- Jose Rugeles Uribe, Summer 2010
- Frank Shen, Summer 2010, Spring 2011 (w/ P. Dhurjati, ChemE)
- John Mullan, Fall 2011
- Ryan Petery and Ahmed Masood, NSF REU, Summer 2019
- Ryan Petery, Winter 2020

COURSES TAUGHT

- ELEG 212 Signals and Communications
- ELEG 305 Signals and Systems
- ELEG 310 Random Signals and Noise
- ELEG 403 Communication Systems Engineering
- ELEG 635 Digital Communications
- ELEG 812 Wireless Digital Communications

SERVICE – ECE DEPARTMENT AND COLLEGE OF ENGINEERING (COE)

- UD Representative, Telcordia CTA CMC (2004-05)
- Faculty Advisor, Eta Kappa Nu ECE Honor Society, Epsilon Omicron Chapter (2003-present)
- Organizer, ECE Distinguished Lecture Series (2007-present)
- Member, ECE Secondary Appointments Committee (2007-present)
- ECE Undergraduate Committee (2008-present)
- ECE Representative to COE Educational Activities Committee (2016-17)
- Chair, COE Nominations and Elections Committee (2016-18)
- Other: Chair, ECE promotion and Tenure Committee (2015); Member, ECE Faculty Search Committee; COE Space Planning and Optimization Committee (2015-16); Member, Faculty Search Committee for Continuing Track Faculty in Biomedical Engineering Department (2017)

PUBLICATION LIST - Leonard J. Cimini, Jr.

JOURNAL ARTICLES

1. Towliat, Guo, Cimini, Xia, and Song, "Multi-layered Recursive Least Squares for Time-Varying System Identification," *IEEE Trans. on Sig. Proc.*, April 2022, pp. 2280-2292.
2. Guo, Song, Towliat, Cimini, and Xia, "Lake Experimentation of In-band Full-duplex Underwater Acoustic Communications," *J. Acoust. Soc. of Am.,* April 2022, pp. A235-A235.
3. Guo, Song, Towliat, Cimini, and Xia, "Impacts of Channel Fluctuations on Channel Estimation in Underwater Acoustic Communications," *J. Acoust. Soc. of Am.,* June 2021, pp. 3929-3942.
4. Salehi, Alnajim, Zhu, Smith, Shen, and Cimini. "Traffic Characteristics of Virtual Reality over Edge-enabled Wi-Fi Networks," in revision for *IEEE Network Mag.*
5. Liu, Salehi, Bala, Shen, and Cimini, "Communication-Constrained Routing and Traffic Control for Autonomous Vehicles," in revision for *IEEE Trans. on Veh. Technol.*
6. Liu, Salehi, Shen, and Cimini, "TDD Massive MISO Piloting Strategy with User Information: A Reinforcement Learning Approach," *IEEE Wireless Commun. Letts.*, Feb. 2021, pp. 349-352.
7. Liu, Bala, Li, and Cimini, "Outage Analysis for MISO Zero-Forcing Precoding With Outdated CSI," *IEEE Trans. on Veh. Technol.*, Aug. 2020, pp. 9152-9156.
8. Zhang, Yue, and Cimini, "Efficient Beamforming Training and Limited Feedback Precoding for Massive MIMO Systems," *IEEE J. Sel. Areas in Commun.*, June 2020, pp. 2197-2214.
9. Liu, Feng, Wang, and Cimini, "Overhead-Performance Tradeoff for MISO Broadcast Channels with Zero-Forcing Precoder," *IEEE Trans. on Wireless Commun.*, Feb. 2020, pp. 995-1007.
10. Liu, Li, Cimini, and Shen, "Extending Proportional Fair Scheduling to Buffer-Aided Relay Access Networks," *IEEE Trans. on Veh. Technol.*, Jan. 2019, pp. 1041-1044.
11. Li, Li, Cimini, and Zhang, "Hypothesis Testing Based Fast-Converged Blind Estimation of Transmit-Antenna Number for MIMO Systems," *IEEE Trans. on Veh. Tech.*, June 2018, pp. 5084-5095.
12. Li, Li, Chen, Cimini, and Zhang, "Estimation of MIMO Transmit-Antenna Number Using Higher-Order Moments Based Hypothesis Testing," *IEEE Wireless Commun. Letts.*, April 2018, pp. 258-261.
13. Li, Seymour, Cimini, and Shen, "Coexistence of Wi-Fi and LAA Networks With Adaptive Energy Detection," Nov. 2017, pp. 10384-10393.
14. Li, Li, Cimini, and Zhang, "Blind Estimation of Transmit-Antenna Number for Non-Cooperative Multiple-input Multiple-output Orthogonal Frequency Division Multiplexing Systems," *IET Communications*, Nov. 2017, pp. 2637-2642.
15. Li, Cimini, Ge, Zhang, and Feng, "Optimal and Suboptimal Joint Relay and Antenna Selection for Two-Way Amplify-and-Forward Relaying," *IEEE Trans. on Wireless Commun.,* Feb. 2016, pp. 980-993.
16. Ye, Lim, Cimini, and Tan, "Energy-Efficient Scheduling and Resource Allocation in Uplink OFDMA Systems," *IEEE Commun. Letts.,* March 2015, pp. 439-442.
17. Feng, Xiao, and Cimini, "Net Throughput of Centralized and Decentralized Cooperative Networks with Relay Selection," *IEEE Wireless Commun. Letts.*, Oct. 2014, pp. 477-480.
18. Liu, Tan, Hu, Cimini, and Li, "Channel Estimation for OFDM," *IEEE Commun. Surveys and Tutorials,* Fourth Quarter 2014, pp. 1891-1908.
19. Wang, Greenstein, Cimini, Chan, and Hedayat, "Multi-User and Single-User Throughputs for Downlink MIMO Channels with Outdated Channel State Information," *IEEE Wireless Commun. Letts.*, June 2014, pp. 321-324.
20. Lim, Xiong, Cimini, and Li, "Energy-Efficient Resource Allocation for OFDMA-Based Multi-RAT Networks," *IEEE Trans. on Wireless Commun.,* May 2014, pp. 2696-2705.
21. Wang, Feng, Cimini, Greenstein, Chan and Hedayat, "Comparison of Quantization Techniques for Downlink Multi-User MIMO Channels with Limited Feedback," *IEEE Wireless Commun. Letts.*, April 2014, pp. 165-168.
22. Feng, Wang, Dai, and Cimini, "To Cooperate or Not to Cooperate: An Outage Analysis of Interference-limited Wireless Networks," *IEEE Trans. on Wireless Commun.*, Feb. 2014, pp. 822-833.
23. Jiang and Cimini, "Energy-Efficient Transmission for MIMO Interference Channels," *IEEE Trans. on Wireless Commun.*, June 2013, pp. 2988-2999.
24. Xiao and Cimini, "Impact of Overhead on Spectral Efficiency of Cooperative Relaying," *IEEE Trans. on Wireless Commun.*, May 2013, pp. 2228-2239.

25. Lim, Wilson, Cimini, and Taylor, "On Higher Order Modulations for OFDM in Frequency-Selective Fading Channels," *IEEE Commun. Letts.*, April 2013, pp. 641-644.
26. Lim and Cimini, "Energy-Efficient Cooperative Beamforming in Clustered Wireless Networks," *IEEE Trans. on Wireless Commun*., March 2013, pp. 1376-1385.
27. Jiang, Cimini, and Himayat, "MIMO Precoding and Mode Adaptation in Femtocellular Systems," *EURASIP Journal on Wireless Commun. and Networking,* Jan. 2013.
28. Feng, Jiang, Lim, Cimini, Feng, and Li, "A Survey of Energy-Efficient Wireless Communications," *IEEE Commun. Surveys and Tutorials*, Jan. 2013, pp. 167-178.
29. Jiang and Cimini, "Antenna Selection for Energy-Efficient MIMO Transmission," *IEEE Wireless Commun. Letts.*, Dec. 2012, pp. 577-580.
30. Lim and Cimini, "Energy-Efficient Cooperative Relaying in Heterogeneous Radio Access Networks," *IEEE Wireless Commun. Letts.,* Oct. 2012, pp. 476-479.
31. Zhang, Li, and Cimini, "Statistical Performance Analysis for MIMO Beamforming and STBC When Co-Channel Interferers Use Arbitrary MIMO Modes," *IEEE Trans. on Commun.*, Oct. 2012, pp. 2926-2937.
32. Li, Li, Zhang, Cimini, and Fang, "Integer Frequency Offset Estimation for OFDM Systems With Residual Timing Offset Over Frequency Selective Fading Channels," *IEEE Trans. on Veh. Tech.*, July 2012, pp. 2848-2853.
33. Sun, Wang, Cimini, Greenstein, and Chan, "ICI/ISI Aware Beamforming for MIMO-OFDM Wireless Systems," *IEEE Trans. on Wireless Commun*., Jan. 2012, pp. 378-385.
34. Li, Zhang, Cimini, and Zhang, "Statistical Analysis of MIMO Beamforming with Co-Channel Unequal-Power MIMO Interferers Under Path-Loss and Rayleigh Fading," *IEEE Trans. on Sig. Proc*., Aug. 2011, pp. 3738-3748.
35. Li, Cimini, and Himayat, "Outage Analysis of Interference-Limited Systems Using STBC with Co-Channel MIMO Interferers," in *Frontiers of Computer Science in China*, Springer-Verlag 2009.
36. Yackoski, Zhang, Shen, Cimini, and Gui, "Networking with Cooperative Communications: Holistic Design and Realistic Evaluation," *IEEE Commun. Mag.*, Aug. 2009, pp. 113-119.
37. Song, Li, and Cimini, "Joint Channel- and Queue-Aware Scheduling for Multiuser Diversity in Wireless Multicarrier Networks," *IEEE Trans. on Commun.*, July 2009, pp. 2109-2121. (Best Paper Award)
38. Dai, Chen, Cimini, and Ben-Letaief, "Fairness Improves Throughput in Energy-Constrained Cooperative Ad-Hoc Networks, "*IEEE Trans. on Commun.*, July 2009, pp. 3679-3691.
39. Zhang and Cimini, "Efficient Power Allocation for Decentralized Distributed Space-Time Block Coding," *IEEE Trans. on Wireless Commun.,* March 2009, pp. 1102-1106.
40. Gui, Dai, and Cimini, "Routing Strategies in Multihop Cooperative Networks," *IEEE Trans. on Wireless Commun.*, Feb. 2009, pp. 843-855.
41. Haimovich, Blum, and Cimini, "MIMO Radar with Widely Separated Antennas," *IEEE Signal Proc. Mag.*, Jan. 2008, pp. 116-129.
42. Gui and Cimini, "Bit Loading Algorithms for Cooperative OFDM Systems," *EURASIP Journal on Wireless Commun. and Networking*, Jan. 2008.
43. Zhang and Cimini, "Power-Efficient Relay-Selection in Cooperative Networks Using Decentralized Distributed Space-Time Block Coding," *EURASIP Journal on Advances in Sig. Proc.*, Jan. 2008.
44. Leung, Clark, McNair, Kostic, Cimini, and Winters, "Outdoor IEEE 802.11 Cellular Networks: Radio and MAC Design and Their Performance," *IEEE Trans. on Veh. Tech.,* Sept. 2007, pp. 2673-2684.
45. Bala and Cimini, "Robust Adaptive OFDM with Diversity for Time Varying Channels," *EURASIP Journal on Wireless Commun. and Networking*, June 2007.
46. Lehmann, Fishler, Haimovich, Blum, Chizhik, Cimini, and Valenzuela, "Evaluation of Transmit Diversity in MIMO-Radar Direction Finding," *IEEE Trans. on Sig. Proc.*, May 2007, pp. 2215-2225.
47. Svedman, Wilson, Cimini, and Ottersten, "Opportunistic Beamforming and Scheduling for OFDMA Systems," *IEEE Trans. on Commun.*, May 2007, pp. 941-952.
48. Luo, Blum, Cimini, Greenstein, and Haimovich, "Decode-and-Forward Cooperative Diversity with Power Allocation in Wireless Networks," *IEEE Trans. on Wireless Commun.*, March 2007, pp. 793-799.
49. Ye, Blum, and Cimini, "Adaptive OFDM Systems with Imperfect Channel State Information," *IEEE Trans. on Wireless Commun.*, Nov. 2006, pp. 3255-3265.
50. Zhang, Xia, Cimini, and Ching, "Synchronization Techniques and Guard-Band-Configuration Scheme for Single-Antenna Vector-OFDM Systems," *IEEE Trans. on Wireless Commun.*, Sept. 2005, pp. 2454-2464.

51. Fishler, Haimovich, Blum, Cimini, Chizhik, and Valenzuela, "Spatial Diversity in Radars - Models and Detection Performance," *IEEE Trans. on Sig. Proc.,* March 2006, pp. 823-838.
52. Luo, Blum, Cimini, Greenstein, and Haimovich, "Power Allocation in a Transmit Diversity System with Mean Channel Gain Information," *IEEE Commun. Letts.*, July 2005, pp. 616-618.
53. Li and Cimini, "Bounds on the Interchannel Interference of OFDM in Time-Varying Impairments," *IEEE Trans. on Commun.,* March 2001, pp. 401-404.
54. Lin, Cimini, and Chuang, "Comparison of Convolutional and Turbo Codes for OFDM with Antenna Diversity in High-Bit-Rate Wireless Applications," *IEEE Commun. Letts.,* Sept. 2000, pp. 277-279.
55. Cimini and Sollenberger, "Peak-to-Average Power Ratio Reduction of an OFDM Signal Using Partial Transmit Sequences," *IEEE Commun. Letts.,* March 2000, pp. 86-88.
56. Daneshrad and Cimini, "Predicting the Outage Performance of an Equalized-QPSK System Over Indoor Wireless Channels," *IEEE Commun. Letts.,* May 1999, pp. 125-127.
57. Cimini, Chuang, and Sollenberger, "Advanced Cellular Internet Service," *IEEE Commun. Mag.,* Oct. 1998, pp. 150-159.
58. Li, Cimini, and Sollenberger, "Robust Channel Estimation for OFDM Systems with Rapid Dispersive Fading Channels," *IEEE Trans. on Commun.,* July 1998, pp. 902-915.
59. Li and Cimini, "Effects of Clipping and Filtering on the Performance of OFDM," *IEEE Commun. Letts.,* May 1998, pp. 131-133.
60. Daneshrad, Cimini, Carloni, and Sollenberger, "Performance and Implementation of Clustered OFDM for Wireless Communications," *ACM J. on Wireless Nets. (MONET) Special Issue on PCS,* 1997, pp. 305-314.
61. Cimini, "Performance Studies for High-Speed Indoor Wireless Communications," *Wireless Personal Communications (Kluwer),* Dec. 1995, pp.67-85.
62. Cimini, Foschini, and Shepp, "Single-Channel User-Capacity Calculations for Self-Organizing Cellular Systems," *IEEE Trans. on Commun.,* Dec. 1994, pp. 3137-3143.
63. Cimini, Foschini, and I, "Call Blocking Performance of Distributed Algorithms for Dynamic Channel Allocation in Microcells," *IEEE Trans. on Commun.,* Aug. 1994, pp. 2600-2607.
64. Cimini and Foschini, "Can Multilevel Signaling Improve the Spectral Efficiency of ASK Optical FDM Systems?," *IEEE Trans. on Commun.,* July 1993, pp. 1084-1090.
65. Greenstein, Amitay, Chu, Cimini, Foschini, Gans, Rustako, Valenzuela, and Vannucci, "Microcells in Personal Communications Systems," *IEEE Commun. Mag.,* Dec. 1992, pp. 76-88.
66. Gnauck, Cimini, Giles, Stone, Stultz, Korotky, and Veselka, "8 Gbit/s - 130 km Transmission Experiment Using Er-Doped Fiber Preamplifier and Optical Dispersion Equalization," *IEEE Phot. Techn. Lett.,* Dec. 1991, pp. 1147-1149.
67. Habbab and Cimini, "Optimized Performance of Erbium-Doped Fiber Amplifiers in Subcarrier Multiplexed Lightwave AM-VSB CATV Systems," *J. Lightwave Tech.,* Oct. 1991, pp. 1321-1329.
68. Habbab and Cimini, "A New DBR Laser Structure for Improved Side-Mode Suppression," *IEEE Phot. Techn. Lett.,* Aug. 1991, pp. 700-702.
69. Saleh, Rustako, Cimini, Owens, and Roman, "An Experimental TDMA Indoor Radio Communications System Using Slow Frequency Hopping and Coding," *IEEE Trans. on Commun.,* Jan. 1990, pp. 152-162.
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TUTORIALS/SHORT COURSES

- "OFDM for Wireless Communications," with Li and Stuber, presented full-day tutorials at:
  - *2004 Globecom,* Dallas, TX
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  - *2003 ICC,* Anchorage, Alaska
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  - *2003 VTC - Fall,* Orlando, FL
  - *2003 Milcom,* Boston, MA
  - *2003 WCNC*, New Orleans, LA
- "OFDM for Wireless Communications," with Y. Li, presented at:
  - *2002 ICC,* New York, New York (half day)
  - *2001 Globecom,* San Antonio, TX (half day)
  - *2001 VTC - Fall* Atlantic City, NJ (half day)
  - *2001 ICC,* Helsinki, Finland (half day)
  - *2000 Globecom,* San Francisco, CA (full day)
  - *2000 VTC - Fall,* Boston, MA (half day)
  - *2000 VTC - Spring,* Tokyo, Japan (half day)
  - *1999 Globecom,* Rio de Janiero, Brazil (half day)
  - *1999 ICC,* Vancouver, British Columbia, Canada (half day)
  - *1999 VTC,* Houston, TX (half day)
  - *1998 Globecom,* Sydney, Australia (half day)
- "High-Speed Wireless Data," with A. Goldsmith, presented at:
  - *Berkeley Extension Short Course,* August 1998, (two days)
  - *1997 Globecom,* Phoeniz, AZ (full day)
  - *Ninth International Conference on Wireless Communications,* Calgary, Alberta, Canada, July 1997 (invited -half day)
  - *1996 Globecom,* London, England (half day)

BOOKS/BOOK CHAPTERS

1. "Wideband Wireless Packet Data Access," with Chuang and Sollenberger, Chapter 13 in *Multimedia Communications,* J. Gibson, Ed., Academic Press, 2001.
2. "OFDM," with Greenstein, article in *Wiley Encyclopedia of Telecommunications,* J. Proakis, Ed., Wiley, 2002.