

ACADEMIC VITA

JOSEPH P. HOFFBECK

School of Engineering
Portland, OR 97203-5798
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ACADEMIC APPOINTMENTS

Professor, School of Engineering, University of Portland, Tenured, 2017-Present
Associate Professor, School of Engineering, University of Portland, Tenured, 2003-2017
Assistant Professor, School of Engineering, University of Portland, Tenure-track, 1997-2003
Research Assistant, Purdue University, 1993-1995
Teaching Assistant, Purdue University, 1988-1992, 1994

EDUCATION

Ph.D., School of Electrical Engineering, May 1995
Purdue University, West Lafayette, IN
Thesis: Classification of High Dimensional Multispectral Image Data

MSEE, Emphasis in Communications and Signal Processing, December 1990
Purdue University, West Lafayette, IN

BSEE, May 1989, Purdue University, West Lafayette, IN

COURSES TAUGHT AT UNIVERSITY OF PORTLAND

EE111 Introduction to Multimedia Processing
EE214 Material Science for Electrical Engineers
EE231 Logic Design
EE261 Electrical Circuits
EE271 Electrical Circuits Laboratory
EE300 Electrical Engineering Seminar
EE334 Embedded Systems Design
EE353 Electrical Instrumentation
EE371 Electronic Circuits Laboratory
EE372 Microelectronic Circuits Laboratory (formerly EE371)
EE373 Digital Systems Design Laboratory
EE362 Signals and Systems
EE375 Instrumentation Laboratory

EE403/503 Communication Systems
EE435 Verilog Digital Systems Modeling
EE462/EE463/EE563/BME563 Digital Signal Processing
EE464/564 Real-Time Digital Signal Processing
EE470 Senior Laboratory
EE471 Specialized Senior Laboratory
EE483 Electrical Engineering Capstone Project I
EE484 Electrical Engineering Capstone Project II
EE490 Data Hiding Methods for Audio Signals (Directed Study)
EE490 Applied Digital Signal Processing (Directed Study)
EE490 Bluetooth Communication (Directed Study)
EE490 Real-time Digital Signal Processing (Directed Study)
EE590 Digital Communication Systems and WiMax (Directed Study)
EE590 Advanced Communication Systems (Directed Study)
EGR110 Introduction to Engineering
EGR111 Engineering Computing with Applications
EGR360 Analysis of Engineering Data
EGR483 Multi-Disciplinary Capstone Project I
EGR484 Multi-Disciplinary Capstone Project II
FE Review Courses on Communication Systems, Signal Processing, Computer Systems,
Digital Systems, and Instrumentation and Measurement

ADMINISTRATIVE POSITIONS

Chair of Electrical Engineering Program, 2019-2022, Spring 2025-present
Acting Chair of Electrical Engineering Program, Fall 2017

PROFESSIONAL EXPERIENCE

Member of the Technical Staff, Lucent Technologies (Formerly AT&T Bell Laboratories),
Whippany, NJ, 1995-1997
Summer Intern, Magnavox Electronic Systems Company, Fort Wayne, IN, 1989
Co-op Student, Magnavox Electronic Systems Company, Fort Wayne, IN, 1985-1988

CONSULTING

Consultant, Tonkon Torp LLP, 2006
Consultant, Omega Micro Technologies, Inc., (Formerly Omega Wireless Solutions), 2004
Consultant, Stauff Enterprises, Inc., 2001 - 2003

GRANTS

Shiley Grant for Faculty Research, Fall 2025 – Spring 2026, Mentored one student in fall and two students in spring

Sabbatical, University of Portland, Spring 2024

Shiley Grant for Faculty Research and Development, New Platform for EE464, 2021

KEEN Grant to write a module for EE271 and EGR111, 2018

Sabbatical, University of Portland, Spring 2015

Sabbatical, University of Portland, Spring 2007

Arthur Butine Faculty Development Award for "Acquisition of Communication Signals", 2005

Arthur Butine Faculty Funded Research Grant for "Method for Hiding Data in Audio Signals", 1999

SCHOLARLY WORK - PEER-REVIEWED CONFERENCE PAPERS

Hoffbeck, Joseph P., "A Low-cost Platform for Teaching Real-time Digital Signal Processing", American Society for Engineering Education Annual Conference and Exposition (ASEE2024), Portland, Oregon, June 23 - 26, 2024.

Hoffbeck, J.P.; Moldovan, D.; Design an Energy-Saving Device: An Engaging Module for a Laboratory Course, 2023 ASEE PNW Section Conference, Gonzaga University, Spokane, April 6-7, 2023.

Symons, J.E.; Dillon, H.E.; Hoffbeck, J.P.; The effect of deductive and inductive teaching methods in an introductory programming course. Proceedings of the 2019 American Society for Engineering Education, Pacific North West Section Conference, Corvallis, Oregon, March 21, 2019.

Dillon, H.E.; Hoffbeck, J.P.; Ralson, N.; Doughty, T.A.; "3C Constellations - Spreading EML with Onsite Training," Kern Entrepreneurial Engineering Network National Conference, 2019.

Delaney, William M., Dillon, Heather E., and Hoffbeck, Joseph P., "Design of a Cross-Curricular Circuits Laboratory Experiment", 2018 American Society for Engineering Education Annual Conference and Exposition (ASEE2018), Salt Lake City, Utah, June 24-27, 2018.

Hoffbeck, Joseph; Dillon, Heather; and Hildebrand, Stephen; "Design of a Power Waveform Capture Platform for Plug Load Monitoring", ASME 2016 International Mechanical Engineering Congress and Exposition (IMECE2016), Phoenix, Arizona, November 11-17, 2016.

Hoffbeck, Joseph P., Dillon, Heather E., Albright, Robert J., Lu, Wayne, and Doughty, Timothy A., "Teaching Programming in the Context of Solving Engineering Problems", 2016 Frontiers in Education Conference (FIE2016), Erie, Pennsylvania, October 12-15, 2016.

Hoffbeck, Joseph P., "Real-Time Digital Signal Processing Demonstration Platform", American Society for Engineering Education Annual Conference and Exposition (ASEE2015), Seattle, Washington, June 14 - 17, 2015.

Hoffbeck, Joseph P., "Using Practical Examples in Teaching Digital Logic Design", ASEE Annual Conference and Exposition (ASEE2014), Indianapolis, Indiana, June 15 - 18, 2014.

Hoffbeck, Joseph P., and Sugiyama, Mark M., "Real-time FM Radio for Teaching DSP and Communication Systems," 2013 Frontiers in Education Conference (FIE2013), Oklahoma City, Oklahoma, October 23-26, 2013.

Hoffbeck, Joseph P., "Enhance your DSP Course with these Interesting Projects," American Society for Engineering Education Annual Conference and Exposition (ASEE2012), San Antonio, Texas, June 10 - 13, 2012.

Hoffbeck, Joseph P., "Teaching Communication Systems with Simulink and the USRP," American Society for Engineering Education Annual Conference and Exposition (ASEE2012), San Antonio, Texas, June 10 - 13, 2012.

Hoffbeck, Joseph P., "A Laboratory Method for Teaching Analog-to-Digital and Digital-to-Analog Conversion," American Society for Engineering Education Annual Conference and Exposition (ASEE 2010), Louisville, Kentucky, June 20 – 23, 2010.

Hoffbeck, Joseph P., "Teaching Communication Systems using the Universal Software Radio Peripheral (USRP) and GNU Radio," American Society for Engineering Education Annual Conference and Exposition (ASEE 2009), Austin, Texas, June 14 – 17, 2009.

Hoffbeck, Joseph P., "Using Real RF Signals Such as FM Radio to Teach Concepts in Communication Systems," American Society for Engineering Education Annual Conference and Exposition (ASEE 2008), Pittsburg, Pennsylvania, June 22 - 25, 2008.

Hoffbeck, Joseph P., "RF Signal Database for a Communication Systems Course," American Society for Engineering Education Annual Conference and Exposition (ASEE 2006), Chicago, Illinois, June 18-21, 2006.

Turner, John, and Hoffbeck, Joseph P., "Putting Theory into Practice with Simulink," American Society for Engineering Education Annual Conference and Exposition (ASEE 2005), Portland, Oregon, June 12-15, 2005.

Hoffbeck, Joseph P., "Using Real Signals with Simulated Systems," American Society for Engineering Education Annual Conference and Exposition (ASEE 2002), Montréal, Quebec, Canada, June 16-19, 2002.

Vondrachek, Christopher J., and Hoffbeck, Joseph P., "A Speech and Music Detector Project for a DSP Class," American Society for Engineering Education Annual Conference and Exposition (ASEE 2001), Albuquerque, NM, June 24-27, 2001.

Hoffbeck, J. P., and Landgrebe, D. A., "A Method for Estimating the Number of Components in a Normal Mixture Density Function," The 2000 International Geoscience and Remote Sensing Symposium (IGARSS'00), July 24 - 28, 2000, pp. 1675-1677.

Hoffbeck, J. P., and Landgrebe, D. A., "Covariance Estimation for Classifying High Dimensional Data," Proceedings of the 1995 International Geoscience and Remote Sensing Symposium (IGARSS'95), 1995, pp. 1023-1025.

Hoffbeck, J. P., and Landgrebe, D. A., "Effect of Radiance-to-Reflectance Transformation and Atmosphere Removal on Maximum Likelihood Classification Accuracy of High-Dimensional Remote Sensing Data," Proceedings of the 1994 International Geoscience and Remote Sensing Symposium (IGARSS'94), August 1994, pp. 2538-2540.

Hoffbeck, J. P., and Landgrebe, D. A., "Classification of High Dimensional Multispectral Image Data," Summaries of the Fourth Annual JPL Airborne Geoscience Workshop, JPL Publication 93-26, Vol. 1, October 1993, pp. 93-96.

SCHOLARLY WORK - PEER-REVIEWED JOURNAL PAPERS

Hoffbeck, Joseph P., "Using Real Signals with Simulated Systems," ASEE Computers in Education Journal, Vol. XIII, No. 1, January - March 2003, pp. 31-38.

Albright, Robert J.; and Hoffbeck, Joseph P., "Discovering the Effects of Feedback on Control Systems: Informative and Interesting Numerical Exercises", IEEE Transactions on Education, Vol. 44, No. 2, May 2001, pp. 104-108.

Hoffbeck, Joseph P., "A Method for Hiding Useful Information in Digital Audio Signals," Computers in Education Journal, Vol. XI, No. 1, January - March, 2001, pp. 7-11.

Hoffbeck, Joseph P., Sarwar, Mansoor; and Rix, Eric J., "Interfacing MATLAB with a Parallel Virtual Processor for Matrix Algorithms", The Journal of Systems and Software, vol. 56, 2001, pp. 77-80.

Hoffbeck, J. P., "Tools for Teaching and Learning Digital Logic Design," Computers in Education Journal, Vol. IX, No. 2, April-June 1999, pp. 24-26.

Hoffbeck, J. P., and Landgrebe, D. A., "Covariance Matrix Estimation and Classification with Limited Training Data," IEEE Transactions on Pattern Analysis and Machine Intelligence., Vol. 18, No. 7, July 1996, pp. 763-767.

Hoffbeck, J. P., and Landgrebe, D. A., "Classification of Remote Sensing Images having High Spectral Resolution," Remote Sensing of the Environment, Vol. 57, No. 3, September 1996, pp. 119-126.

SCHOLARLY WORK - PRESENTATIONS AND WORKSHOPS (NOT PEER-REVIEWED)

Hoffbeck, Joseph P., "A Low-cost Platform for Teaching Real-time Digital Signal Processing", American Society for Engineering Education Annual Conference and Exposition (ASEE2024), Portland, Oregon, June 24, 2024.

Hoffbeck, J.P.; Moldovan, D.; Design an Energy-Saving Device: An Engaging Module for a Laboratory Course, 2023 ASEE PNW Section Conference, Gonzaga University, Spokane, April 6-7, 2023.

Hoffbeck, Joseph P., Dillon, Heather E., Albright, Robert J., Lu, Wayne, and Doughty, Timothy A., "Teaching Programming in the Context of Solving Engineering Problems", 2016 Frontiers in Education Conference (FIE2016), Erie, Pennsylvania, October 12-15, 2016.

Hoffbeck, Joseph P., "Real-Time Digital Signal Processing Demonstration Platform", American Society for Engineering Education Annual Conference and Exposition (ASEE2015), Seattle, Washington, June 14 - 17, 2015.

Prust, Cory J.; Hoffbeck, Joseph P.; and Atkins, Todd; "Low-cost Software-Defined Radio for Teaching Communication Systems and Digital Signal Processing: A Hands-on Workshop", American Society for Engineering Education Annual Conference and Exposition (ASEE2015), Seattle, Washington, June 14, 2015.

Hoffbeck, Joseph P., "Using Practical Examples in Teaching Digital Logic Design", ASEE Annual Conference and Exposition (ASEE2014), Indianapolis, Indiana, June 15 - 18, 2014.

Hoffbeck, Joseph P., and Sugiyama, Mark M., "Real-time FM Radio for Teaching DSP and Communication Systems," 2013 Frontiers in Education Conference (FIE2013), Oklahoma City, Oklahoma, October 23-26, 2013.

Hoffbeck, Joseph P., "Enhance your DSP Course with these Interesting Projects," American Society for Engineering Education Annual Conference and Exposition (ASEE2012), San Antonio, Texas, June 10 - 13, 2012.

Hoffbeck, Joseph P., "Teaching Communication Systems with Simulink and the USRP," American Society for Engineering Education Annual Conference and Exposition (ASEE2012), San Antonio, Texas, June 10 - 13, 2012.

Hoffbeck, Joseph P., "A Laboratory Method for Teaching Analog-to-Digital and Digital-to-Analog Conversion," American Society for Engineering Education Annual Conference and Exposition (ASEE 2010), Louisville, Kentucky, June 20 – 23, 2010.

Hoffbeck, Joseph P., "Teaching Communication Systems using the Universal Software Radio Peripheral (USRP) and GNU Radio," American Society for Engineering Education Annual Conference and Exposition (ASEE 2009), Austin, Texas, June 14 – 17, 2009.

Hoffbeck, Joseph P., "Using Real RF Signals Such as FM Radio to Teach Concepts in Communication Systems," American Society for Engineering Education Annual Conference and Exposition (ASEE 2008), Pittsburg, Pennsylvania, June 22 - 25, 2008.

Hoffbeck, Joseph P., "RF Signal Database for a Communication Systems Course," American Society for Engineering Education Annual Conference and Exposition (ASEE 2006), Chicago, Illinois, June 18-21, 2006.

Turner, John, and Hoffbeck, Joseph P., "Putting Theory into Practice with Simulink," American Society for Engineering Education Annual Conference and Exposition (ASEE 2005), Portland, Oregon, June 12-15, 2005.

Hoffbeck, Joseph P., "Using Real Signals with Simulated Systems," American Society for Engineering Education Annual Conference and Exposition (ASEE 2002), Montréal, Quebec, Canada, June 16-19, 2002.

Hoffbeck, J. P., and Landgrebe, D. A., "A Method for Estimating the Number of Components in a Normal Mixture Density Function," The 2000 International Geoscience and Remote Sensing Symposium (IGARSS'00), July 24 - 28, 2000, pp. 1675-1677.

Hoffbeck, J. P., and Landgrebe, D. A., "Covariance Estimation for Classifying High Dimensional Data," Proceedings of the 1995 International Geoscience and Remote Sensing Symposium (IGARSS'95), 1995, pp. 1023-1025.

Hoffbeck, J. P., and Landgrebe, D. A., "Effect of Radiance-to-Reflectance Transformation and Atmosphere Removal on Maximum Likelihood Classification Accuracy of High-Dimensional Remote Sensing Data," Proceedings of the 1994 International Geoscience and Remote Sensing Symposium (IGARSS'94), August 1994, pp. 2538-2540.

Hoffbeck, J. P., and Landgrebe, D. A., "Classification of High Dimensional Multispectral Image Data," Summaries of the Fourth Annual JPL Airborne Geoscience Workshop, JPL Publication 93-26, Vol. 1, October 1993, pp. 93-96.

PATENTS

Hoffbeck, Joseph P.; Meyers, Martin; Premji, Al-Nasir; Tarraf, Ahmed A.; Tracy, Kevin, "Method and apparatus for improving the quality of speech signals transmitted over wireless communication facilities", US Patent Number 6445686, September 3, 2002.

SERVICE – UNIVERSITY

Member of Committee on Rank and Tenure, 2022-2023, 2024-2025
Faculty Compensation Committee, 2019-2020
Faculty Compensation Task Force Member, Fall 2017 – Fall 2018
Secretary for Academic Senate, 2015-2016
Academic Senate, 2013-2016
Mentor for Honors Program, 2015-2016
Presidential Advisory Committee on Health and Safety, 2013-2014
Reflection Leader for Building Community: Serving to Learn, 2005 - 2014
Moreau Center Advisory Board, Member, Spring 2013
Enrollment Management, Facilities, and Infrastructure Sub-Task Force, 2011-2012
Teaching and Scholarship Committee (TAS), 2008 - 2011
On-line Course Evaluation Task Force, 2008 – 2012
Panel for New Faculty, February 15, 2012
Institutional Research Board (IRB), 2005 – 2008
Student Faculty Court, 2005 – 2006
Honors Program Review Committee, 2003 - 2005
Library and Information Services Self-Study Sub-Committee, 1999 - 2000
Traffic Court, 1998 - 2000

SERVICE – SCHOOL OF ENGINEERING

Chair of EGR111 Task Force, Fall 2025 – Spring 2026
Chair of Electrical Engineering Program, Spring 2025-present
Co-chair of Dean Search Committee (Spring 2025)
Chair of Hiring Committee for Electrical Engineering Technician (Fall 2024)
Sweo Faculty Fellowship Awards Committee (substitute member), Summer 2023
Mentor for Khondaker Salehin, Fall 2022
Shiley Grants Committee Member, 2017 – 2023
BME Committee, 2020-2023
Gave Presentation on Capstone Program to Daimler on 4/11/23
Chair of Electrical Engineering Program, 2019-2022
Chair of Electrical Engineering Search Committee, 2019-2022
Coordinator for EGR111, 2014, 2016-2020
KEEN Fellow for EE program, 2017-2019
Acting Chair of Electrical Engineering Program, Fall 2017
Electrical Engineering Search Committee, 2016 - 2017
Chair of EGR110/111 Committee, Fall 2016
Chair for Engineering Computer Committee, 1999 – 2001 and 2013-2016
Interdisciplinary Senior Design Committee, 2011-2012
Engineering Course-Embedded Assessment Committee, 2011-2012
EGR111 Committee, 2011-2012
Engineering Dean Search Committee, 2010-2011
School of Engineering Recruitment/Retention Committee, 2009 – 2010

School of Engineering Space Utilization Committee, 2007 - 2008
Engineering Computer Committee, 1998 – 1999 and 2001 – 2002
Faculty Committee on Assessment, 1999 - 2001
Dean Evaluation Committee 1999 - 2000
Engineering Probability and Statistics Committee 1998 - 1999
Faculty Mentor, 2015-2018
Supervised Undergraduate Research Assistant, 2012-2013, 2015-present
Supervised Biomedical Graduate Assistant, Spring 2016
Acting chair of Electrical Engineering and Computer Science Department, Spring 2008
Engineering World Health, Started the UP Chapter and served as Faculty Advisor, 2011 - 2017
Society of Women Engineers, Faculty Advisor, 2007 - 2011
IEEE Student Branch Counselor, 1999-2006
Mentor for Honors Project, Fall 2012
Presented talk on Graduate School with Tammy VanDeGrift for ACM Club, October 3, 2005
Co-Advisor for Robot Team, 2001 - 2002
Volunteer for MESA Day, University of Portland, May 22, 2004

SERVICE - PROFESSIONAL

Session Chair, Frontiers in Education, 2013
Presentation for Science Bowl students at Cathedral School, December 19, 2013
Judge for student projects for ITT's Tech Fest, May 18, 1999
Reviewed Abstracts, Papers, Chapters, or Book Proposals for the following publications:

- American Society for Engineering Education Annual Conference and Exposition (ASEE)
- ASEE PNW Section Conference
- Frontiers in Education Conference (FIE)
- IEEE Transactions on Image Processing
- IEEE Transactions on Pattern Analysis and Machine Intelligence
- Computers and Geosciences
- The Journal of Systems and Software
- IEEE Spectrum
- American Society for Engineering Education Annual Conference and Exposition
- McGraw-Hill
- Cengage Learning
- John Wiley and Sons
- Pearson Prentice Hall
- Oxford University Press
- Open Educational Resources (OER)

SERVICE - COMMUNITY

Oregon Food Bank
Go Baby Go
Solve

AWARDS AND HONORS

American Society for Engineering Education Pacific Northwest Section Teaching Award, 2004
University of Portland Outstanding Teaching Award, 2003
Club Advisor of the Year, 1999-2000 awarded by ASUP

PROFESSIONAL MEMBERSHIPS

Member of Institute of Electrical and Electronics Engineers (IEEE)
Member of American Society for Engineering Education (ASEE)

PROFESSIONAL DEVELOPMENT

Completed edX (online) course: The Inclusive STEM Teaching Project, 3/4/24 – 4/10/24
Completed LinkedIn Learning (online) course: Learning FPGA Development Course, 2/9/24 – 2/12/24
Completed LinkedIn Learning (online) course: Learning Verilog for FPGA Development, 2/12/24 – 2/14/24
Completed (online) STM32F7 Workshop MOOC, 6/5/23 - 6/6/23
Attended (online) webinar: Navigating the Airwaves: The Critical Role of Spectrum in Wi-Fi and Cellular Networks, Peter Rysavy, sponsored by IEEE ComSoc Oregon Chapter, 2/1/24.
Attended NETI-I Teaching Workshop at University of Portland, May 11-12, 2023
Watched the ASEE Level 1 Safe Zone Ally Training Workshop
Watched the ASEE Level 2 Safe Zone Ally Training Workshop
Watched the ASEE Safe Zone Trans Allyship
Watched IEEE 802.11be/Extremely High Throughput (EHT), Dr. Laurent Cariou (IEEE guest speaker), Intel Corporation., 4/11/23.
Attended (virtually) EAC 2021-22 Institutional Representative Webinar, August 19, 2021
Attended (virtually) Whiteness at Work - Organizational Reckonings: Past, Present and Future, June 15, 2021
Attended (virtually) MECOP University & Electronics Committee Meeting, June 2021
Attended (virtually) DEI Fireside Chat, April 29, 2021
Attended (virtually) A Conversation with Dr. Ibram X. Kendi, March 31, 2021
Attended (virtually) Comcast Labs Connect Inclusion Conference, July 22, 2020
Attended (virtually) IEEE Comsoc Talk: Reinventing Wi-Fi - Technologies & Trends of the Future, Dr. Carlos Cordeiro, CTO of wireless connectivity at Intel Corporation, August 10, 2020.
Attended (virtually) Exploring Anti-Racism & Social Justice in Engineering Curricula Workshop, by USD faculty, December 11, 2020
Completed Coursera Course “Machine Learning”, 2019
Completed Coursera course “Wireless Communication Emerging Technologies”, 2017
Attended “Blockchain: From Crypto Currency to the Enterprise” by Cian Montgomery, Intel’s Blockchain Program Office, December 6, 2017.
Attended KEEN ICE Workshop, Dearborn, MI, May 22 – 25, 2017.

Completed Coursera Course "Build a Modern Computer from First Principles: Nand to Tetris," 2016

Completed Coursera Course "Audio Signal Processing for Music Applications," 2015

Attended 5G Evolution and Candidate Technologies, by Dr. Rath Vannithamby, Intel, May 26, 2015

Attended Informal Teaching Circle Meetings, 2013-2014

Attended Teaching Lunches organized by Tammy VanDeGrift, 2013-2014

Attended Advanced National Effective Teaching Institutes (NETI-2), Seattle, WA, October 7-8, 2012

Completed Sequoia Leadership Development Program, 2012 – 2013

Attended Advanced National Effective Teaching Institute (NETI-2), Seattle, WA, Oct 7-8, 2012

Attended Oregon IEEE COMSOC Meeting - Cognitive Networks/Dynamic Spectrum Access in Wireless Networks, November 4, 2010

Attended a two-day Cognitive Radio Workshop at Intel, November 6 - 7, 2008

Attended Wireless PAN Technology and IEEE 802.15.4/Zigbee Workshop, November 18, 2005

Attended a talk on the P6 microprocessor architecture by Bob Colwell, April 21, 2005

Attended a half-day workshop on active-learning techniques by Dr. Richard Felder. April 24, 2004

Attended a one-day Digital Image Security and Watermarking workshop, August 8, 2002

Attended a 1-day seminar "IEEE 802.11 Wireless LAN Technology" on wireless networking technology for computers, April 25, 2002

Attended a 1-day seminar "Introduction to Bluetooth Technology" on emerging wireless technology, April 27, 2001

Attended a 1-day "HP Back to Basics" workshop on RF measurement techniques, May 20, 1999

Attended the 1-week teaching workshop "Preparing Engineering Faculty of the Future" at Carnegie Mellon University, sponsored by the NSF, July 19-24, 1998

Completed Teaching Methods in Engineering (3 Credit Hours), 1995

Completed College Teaching Workshop (1 Credit Hour), 1994