ROBERT J BARSANTI JR.

PROFESSOR OF ELECTRICAL AND COMPUTER ENGINEERING

THE CITADEL

Education:

B.S. Electrical Engineering, Polytechnic Institute of New York, June 1982

M.S. Electrical Engineering, Naval Postgraduate School, December 1996

M.S. Engineering Acoustics, Naval Postgraduate School, December 1996

Ph.D. Electrical Engineering, Naval Postgraduate School, June 2001

Academic Experience:

Joined The Citadel faculty January 2002 as Associate Professor

2015 – 2020, The Citadel, William States Lee Professor of Electrical and Computer Engineering, and Department Head.

2012- present, The Citadel, Professor of Electrical and Computer Engineering.

2002- 2012, The Citadel, Associate Professor of Electrical and Computer Engineering.

1997- 2001, Instructor and Assistant Professor of Electrical and Computer Engineering, Naval Postgraduate School, Monterey, CA.

Other Related Experience:

2001 – 2012, Senior Engineer, Scientific Research Corporation (part time and summers)

1981– 2001, U.S. Naval Officer with service in the nations submarine force.

Publications (*Citadel student co-author)

Peer Reviewed and Refereed Publications

a. Robert Barsanti, *"Teaching PID Controller Design using Matlab",* Proceedings of 2022 ASEE-SE Conference, March 2022.

b. Robert Barsanti, Ronald Hayne, Johnston Peeples, *"Hands on Remote Learning using a DC Motor Controller"*, Journal of Higher Education Theory and Practice, ISSN# 2158-3595, pp 190-197, volume 21(12), 2021.

c. Robert Barsanti, Ronald Hayne, Johnston Peeples, "Hands on Remote Learning using a DC Motor Controller", proceedings of 2021 ASEE-SE Conference, March 2021

d. Robert Barsanti, Gregory Mazzaro, Jason Skinner, Enhancing an Electrical Engineering Communication Course with a FM Demodulator Project, Transactions on Techniques in STEM Education, VOL. 5 No. , October- December 2019. ISSN: 2381-6498

e. Robert Rabb, Ronald Welch, Robert Barsanti, William Davis, "Supporting Regional Engineering Demand by Effective Transition of Veterans on Campus", proceedings of ASEE Conference, Tampa, FL, June 2019

f. Robert Barsanti, Ronald Hayne, Gregory Mazzaro, "Hands on Learning: A four Year Laboratory Sequence for Electrical Engineering Students", proceedings of ASEE-SE Conference, Raleigh, NC, March 2019

g. Robert Barsanti, Jason Skinner, Enhancing an Electrical Engineering Communication Course with a FM Demodulator Project, proceedings of ASEE-SE Conference, Daytona Beach, FL, March 2018

h. Timothy Little, Robert Barsanti, "YouTube Motor Lab for Electrical Engineering Students," proceedings of ASEE-SE Conference, Daytona Beach, FL, March 2018

i. Robert Barsanti, Jason Skinner, "Amplitude Modulation Circuit Implementation for use in a Communication Course for Electrical Engineering Students", proceedings of 2017 ASEE Conference, Columbus, OH, June 25-28, 2017

j. Robert Barsanti, Ronald Hayne, John Peeples, Kevin Bower "An Undergraduate Engineering Ethics and Leadership Education Program," proceedings of 2017 ASEE Conference, Columbus, OH, June 25-28, 2017

k. Robert Rabb, Kevin Bower, Robert Barsanti, Ron Welch "Veteran Students in Engineering Leadership Roles", proceedings of 2017 ASEE Conference, Columbus, OH, June 25-28, 2017

l. Ronald Welch, Kevin Bower, Robert Rabb, Ally Martin, Robert Barsanti, "STEM Scholarships to Engage Exceptional Students," proceedings of 2017 ASEE Conference, Columbus, OH, June 25-28, 2017

m. Robert Rabb, Ally Martin, Kevin Bower and Robert Barsanti, "A Math Review's Impact on Freshman Engineering Retention and Success", First Year Engineering Experience (FYEE) Conference, July 31 – August 2, 2016, Columbus, OH

n. Robert Barsanti, "Experiments with PID Controllers Using State Feedback Techniques", Short paper and poster presented at IEEE SoutheastCon 2015, Ft Lauderdale, FL, April 2015

o. *Robert Barsanti, Athanasios Athanason, "Signal Compression Using the Discrete Wavelet Transform and the Discrete Cosine Transform", Proceeding of IEEE SoutheastCon 2013, Jacksonville, FL, April 2013

p. Robert Barsanti, "Case Studies in Engineering Economics for Electrical Engineering Students," Proceedings of 2011 American Society of Engineering Educators (ASEE) Southeast Section Conference, Charleston, SC, April 2011.

q. Robert Barsanti, James LaRue, "Peak to Average Power Ratio Reduction for Digital Video Broadcast T2", Proceeding of IEEE SoutheastCon 2011, Nashville, TN, March 2011.

r. *Robert Barsanti, Jordon Gilmore, "Comparing Noise Removal in the Wavelet and Fourier Domains," Proceedings of 2011 IEEE International Conference on Industrial Technology and Southeastern Symposium on Systems and Technology, Auburn, AL, March 2011.

s. Robert Barsanti, "Wavelet Noise Removal from Baseband Digital Signals in Bandlimited Channels," Proceedings of IEEE 42nd Southeastern Symposium on Systems and Technology 2010, Tyler, TX, March 2010.

t. *Robert Barsanti, Charles Lehman, "Detection of M-ary FSK Signals in the Wavelet Domain", Abstract published in the Proceeding of IEEE SoutheastCon 2009, Atlanta, GA, March 2009.

u. *Robert Barsanti, Charles Lehman, "Application of a Wavelet-Based Receiver for the Coherent Detection of FSK Signals," Proceedings of IEEE 40th Southeastern Symposium on Systems and Technology 2008, New Orleans, LA, April 2008.

v. Robert Barsanti, "Teaching Nuclear Engineering to Electrical Engineering Students," Proceedings of 2007 American Society of Engineering Educators (ASEE) Annual Conference, Honolulu, HI, June 2007.

w. *Robert Barsanti, Smith T., Lee R., "Performance of a Wavelet-Based Receiver for BPSK and QPSK Signals in Additive White Gaussian Noise Channels," Proceedings of IEEE Southeastern Symposium on Systems and Technology 2007, Macon, GA, April 2007.

x. Robert Barsanti, "Undergraduate Research: Challenges, Rewards, and Lessons Learned," Proceedings of 2007 American Society of Engineering Educators (ASEE) Southeast Section Conference, Louisville, KY, April 2007.

y. Mark H. McKinney, Robert J. Barsanti, "Sparking Interest in Middle and High School Students Using a Robotics Competition", Proceeding of 2006 American Society of Engineering Educators (ASEE) Southeast Section Conference, Tuscaloosa, AL, April 2006.

z. *Robert Barsanti, Edwin Spencer*, Lucas Parobek*, and James Cares*, "Feature Matching and Signal Recognition Using Wavelet Analysis", Proceedings of IEEE 38th Southeastern Symposium on Systems and Technology 2006, Cookeville, TN, March 2006

aa. Robert Barsanti, "Removal of Colored Noise from Non-Stationary Signals using Wavelet Packet and Cosine Packet Decompositions", Proceedings of IEEE 37th Southeastern Symposium on Systems and Technology, Tuskegee, AL, March 2005

bb. Brent Munsell, Robert Barsanti, "Electrophoresis 2D Gel Residual Encoding using Adaptive Wavelets for Image Segmentation", Proceedings of IEEE Southeastern Conference, April 2005, Ft. Lauderdale, FL.

cc. Robert J. Barsanti and Murali Tummala "Wavelet-Based Time Delay Estimates for Transient Signals", Proceeding of IEEE 37th Asilomar Conference on Signals, Systems, and Computers, Monterey, CA, November 2003.

dd. Robert J. Barsanti, "Acoustic Signal Time Delay Estimation Using Wavelets", Proceeding of The 7th World Multi-conference on Systemics, Cybernetics and Informatics, Orlando, FL, July 2003.

ee. R. Barsanti and M. Tummula, "Combined Acoustic Target Tracking and Sensor Localization", Proceedings of IEEE Southeastern Conference, April 2002.

ff. R. Barsanti and M. Tummula, "Improved Acoustic Target Tracking Using Wavelet Based Time Difference of Arrival Information", Proceedings of IEEE Southeastern Conference, April 2002.

gg. R. Barsanti and M. Tummula, "Parameter Estimation for Target Tracking with Uncertain Sensor Positions", Proceedings of 2001 IEEE International Symposium on Circuits and Systems, May 2001. (5 pages)

hh. R. Barsanti and M. Tummula, "Passive Target Tracking with Uncertain Sensor Positions", Proceedings of IEEE 34th Asilomar Conference on Signals, Systems, and Computers, November 2000. (5 pages)

ii. M. Fargues, R. Barsanti, R. Hippenstiel, " Wavelet-Based Denoising: Comparison of Orthogonal and Non-Orthogonal Decompositions", Proceedings of 40th Midwest Symposium on Circuits and Systems, Aug 3-6, 1997, Sacramento, CA. (5 pages)

jj. R. Barsanti, M. Fargues, "Wavelet-Based Denoising of Acoustic Transients", Proceedings of 30th Asilomar Conference on Signals and Systems, Nov. 1996 (5 pages)

Technical Reports and White Papers

a. Mark McKinney, Ronald, Hayne, Robert Barsanti, ABET Self-Study Report for the Computer Engineering Program at The Citadel Charleston, SC, July 1, 2023

b. Robert Barsanti, ABET Self-Study Report for the Electrical Engineering Program at The Citadel Charleston, SC, July 1, 2020

c. John Peeples, Robert Barsanti, ABET Self-Study Report for the Electrical Engineering Program at The Citadel Charleston, SC, July 1, 2014

d.   "Burst Signal Processing using Wavelet Based Analysis and Bio-Inspired Signal Classification", *White Paper Response to BAA-10-06-RIKA*, Scientific Research Corporation, 2 August 2010. (10 pages)

e. "The Automated Transient Collection System", *Quad Chart Response to BAA-N65236-10-X-0023 Data Gathering Technologies*, Scientific Research Corporation,   2 August 2010. (8 pages)

f. "Treating Data Overload from A Speech Processing Point of View (An Audio/Visual IP Evaluator)", *White Paper Response to ONR CAA #2 Information Operations Enabling Capabilities*, Scientific Research Corporation, 28 June 2010. (10 pages)

g. "Automated Transient Signal Collection System for Rapid Classification and Localization", *White Paper Response to ONR CAA #2 Information Operations Enabling Capabilities*, Scientific Research Corporation, 28 June 2010. (11pages)

h. "Burst Signal Processing using Wavelet Based Analysis", *White Paper Response to ONR CAA #2 Information Operations Enabling Capabilities*, Scientific Research Corporation, 28 June 2010. (11 pages)

i. Dr. Robert Barsanti, and Dr. James LaRue, "PAPR Research Project Final Report", contract N65236-08-D-5806, Scientific Research Corporation, 8 December 2009.

j. Dr. Robert Barsanti, and Dr. James LaRue, "On Improving Peak to Average Power Ratio (PAPR) of Orthogonal Frequency Division Multiplexing (OFDM)", Scienctific Research Technical Report, July 2009.

k. Robert Barsanti, Charles Lehman, "Detection of M-ary FSK Signals in the Wavelet Domain", Abstract published in the *Proceeding of IEEE SoutheastCon 2009*, Atlanta, GA, March 2009.

l. "NST Capability for Mobile Ad Hoc and Adaptive Networks (MANCAP)", *Technical Proposal for BAA: W900KK-08-R-0018 Develop and Operate Netcentric test Tools in a Global Information Grid Environment*. Space and Naval Warfare System Center, Charleston, 22 August 2008.

m. Harvest Shield - Automated COMINT Collection Processing and Precision Geo-location Subsystem, *White Paper Response to BAA #05-05 IFKA Automated COMINT Collection and Processing*, Scientific Research Corporation, 28 June 2006. (7 pages)

n. R. Barsanti, M. Tummula, C. Therrien, "Enhanced Multi-Segment Tracker." Naval Postgraduate School Technical Report, NPS-EC-00-009, July 2000 (148 pages). THIS IS A D.O.D LIMITED DISTRIBUTION DOCUMENT

o. M. Fargues, R. Barsanti, "Wavelet-Based Denoising of Transients." Naval Postgraduate School Technical Report, NPS-EC-97-005, February 1997 (74 pages). THIS IS A D.O.D. LIMITED DISTRIBUTION DOCUMENT

p. M. Fargues, R. Bennet, R. Barsanti, "Classification of Ocean Acoustic Data Using AR Modeling and Wavelet Transforms", Naval Postgraduate School Technical Report, January 1997 (42 pages)

Other Publications

a. M. Tummula, C. Therrien, R. Barsanti, M. Shields, "Beartrap Post Mission Analysis System", Naval Postgraduate School Research, Vol. 11, No. 3, Oct. 2001, (8 pages)

b. R. Barsanti, "Passive Target Tracking with Uncertain Sensor Positions Using Wavelet-Based Transient Signal Processing," Naval Postgraduate School Dissertation, June 2001, (210 pages). THIS IS A D.O.D. LIMITED DISTRIBUTION DOCUMENT

c. R. Barsanti, "Denoising of Ocean Acoustic Signals Using Wavelet-Based Techniques." Naval Postgraduate School Masters Thesis, December 1996, (115 pages).

Invited Talks and Presentations

February 24, 2024 – Guess speaker, US Navy ROTC Warrior Night, Charleston, SC

November 2014 – What is Engineering? Junior Academy of Science, Charleston, SC

October 2013 – Image Processing Using Wavelet Analysis – Post Sabbatical Brief

July 2012 – Using Wavelet to Detect Digital Communication Signals, SRC, Charleston, SC

March 2011 – Wavelet Analysis of Electrical Signals, Sigma Xi, Charleston, SC

January 2009 – Wavelet Analysis of Electrical Signals, IEEE, Charleston, SC

January 2003- System 2000- Passive Acoustic target Tracking, IEEE, Charleston, SC

March 1997- Detecting Signals using Wavelet Analysis, NPS, Monterey, CA

November 1996 – Wavelet De-noising of Acoustic Signals, NUWC, Newport, RI

Grants

August 2023	REEF Grant for first year math readiness
Nov 2017	The Citadel Foundation Development Grant $404
June 2017	The Citadel Foundation Presentation of Research Grant $1,947
July 2016	The Citadel Foundation Development Grant $173
June 2016	The Citadel Foundation Development Grant $887
Nov 2015	The Citadel Foundation Development Grant $380
June 2015	The Citadel Foundation Development Grant $920
April 2014	The Citadel Foundation Presentation of Research Grant $748
April 2014	The Citadel Foundation Development Grant $750
July 2013	The Citadel Foundation Research Grant $2,978
Oct 2012	The Citadel Foundation Development Grant $1881
July 2012	The Citadel Foundation Research Grant $2,999
April 2013	The Citadel Foundation Presentation of Research Grant $1118
July 2012	The Citadel Foundation Research Grant $2,999
April 2011	The Citadel Foundation Development Grant $225
March 2011	The Citadel Foundation Presentation of Research Grant $902

March 2011	The Citadel Foundation Presentation of Research Grant $992
March 2010	The Citadel Foundation Presentation of Research Grant $982
July 2009	The Citadel Foundation Research Grant $1,854
March 2009	The Citadel Foundation Presentation of Research Grant $888
July 2008	The Citadel Foundation Research Grant $2,472
March 2008	The Citadel Foundation Presentation of Research Grant $1076
July 2007	The Citadel Foundation Research Grant $2,520
June 2007	The Citadel Foundation Development Grant $2000
March 2007	The Citadel Foundation Presentation of Research Grant $683
July 2006	The Citadel Foundation Research Grant $2,472
April 2006	The Citadel Foundation Faculty Development Grant $961
March 2006	The Citadel Foundation Presentation of Research Grant $952
June 2005	The Citadel Foundation Research Grant $2,850
April 2005	The Citadel Foundation Faculty Development Grant $983
March 2005	The Citadel Foundation Presentation of Research Grant $885
October 2004	The Citadel Foundation Faculty Development Grant $799
November 2003	The Citadel Foundation Presentation of Research Grant $1629
July 2003	The Citadel Foundation Presentation of Research Grant $1007
April 2002	The Citadel Foundation Presentation of Research Grant $522

Scientific and Professional Society Memberships

Phi Kappa Phi, Eta Kappa Nu, Tau Beta Pi Honor Societies.

Institute of Electrical and Electronic Engineers

- Signal Processing Society and Ocean Engineering Society

American Society for Engineering Education

The Military Officers Association

Academic Honors and Awards

- Phi Kappa Phi Honor Society

- William States Lee Professor of Electrical Engineering, 2015-2020

- J. Lawton and Emma S. Ellis Electrical and Computer Engineering Teaching Award, 2014

- Senior member IEEE, 2014

- Tau Beta Pi Engineering Honor Society, 2005

- Outstanding Instructional Performance, Naval Postgraduate School, 1997

- Naval Undersea Warfare Center Award for Excellence in Underwater Systems Technology, 1996

- Eta Kappa Nu Electrical Engineering Honor Society, 1981

Courses taught at The Citadel (*Recent-since 2015)

ELEC 104 *Engineering Fundamentals I, 1 hour, lecture* -discontinued

ELEC 105 *Engineering Fundamentals II, 2 hours, lecture* -discontinued

ELEC 106 *Fundamentals of Electrical Engineering, 3 hours, lecture*

*ELEC 201 *Electric Circuit Analysis, 3 hours, lecture*

*ELEC 206 *Computer Applications for Electrical Engineers, 3 hours, lecture*

ELEC 301 *Linear Systems Lab, 2 hours, laboratory* -discontinued

*ELEC 302 *Electrical Machinery Lab*, *2 hours laboratory*

*ELEC 306 *Electronics I, 3 hours, lecture*

*ELEC 307 *Nuclear Engineering, 3 hours, lecture*

ELEC 309 *Linear Circuit Analysis, 3 hours, lecture*

ELEC 312 *Systems I*, *3 hours, lecture*

*ELEC 313 *Electronic Laboratory, 2 hours, lecture*

*ELEC 316 *Electromechanical Energy Conversion*, *3 hours, lecture*

*ELEC 318 *Electromagnetic Fields*, *3 hours, lecture*

ELEC 401 *Electronics II, 3 hours, lecture*

*ELEC 407 *Systems II, 3 hours, lecture*

ELEC 412 *Probability and Statics for Electrical and Computer Engineers*

*ELEC 416 *Communications Engineering, 3 hours, lecture*

ELEC 423 *Digital Signal Processing, 3 hours, lecture*

*ELEC 413 *Advanced Topics in Electrical Engineering*

*ELEC 685 *Digital Control Systems*, *3 hours, lecture*

CIVL 314 *Engineering Administration, 2 hours, lecture*

MATH 119 *Pre-Calculus, 4 hours, lecture (CSI summer class)*

Professional & Community Service

Scientific Research Corporation

Senior Engineer for Scientific Research Corporation (SRC) (2001-2011) (summers & part-time)

2011- Data Engineer for ISR-Lite Mini Cloud Afloat project.
2010 – Contributed to proposals, grants, and white papers seeking funding for S&T group.
2009 – Developed algorithms to improve the peak to average power ratio in OFDM systems.
2008 – Coordinated Ad Hoc Mobile Network Test-bed Facility (MANET) proposal.
2007 – Contributed simulation software (Matlab & Simulink) for project Harvest Spear.
2005 & 2006 Developed Top Secret signal collection software for US Navy at SPAWAR.
2004- Performed SRC funded research on information and signal collection capabilities.
2003 – Worked on terrorist threat simulation software for SPAWAR Realistic Threat project.
2002 – Created Visual C++ 3-D audio simulator

Reviewer for Journals
Circuits, Systems and Signal Processing Journal (2002-present)
IEEE Signal Processing Letters (2002 –present)
EURASIP Journal on Advances in Signal Processing (2009-present)
International Journal on Communications Systems (2010-present)

Book Chapters Reviewed
SciTech Publishing: Matlab for Electrical and Computer Engineering Students, by Roland Priemer, Chapters 1 Matlab Environment, Chapter 2 Programs and Functions, and Chapter 6 Complex Numbers. April 2011

McGraw Hill: Signals and Systems, Analysis Using Transform Methods and Matlab, by M.J. Roberts, Chapter 11, The Z Transform, and Chapter 12, Z Transform of Signals and Systems. May 2003

Reviewer for Conferences
IEEE Southeast Conference (2001- present)
ASEE Conference (2001 – present)
The annual World Multi-conference on Systemics, Cybernetics and Informatics (2001 -2005)
IEEE Frontiers in Education Conference (2002-2008)
IEEE Southeastern Symposium on Signals and Systems (2005-2011)
International Conference on Computing, Communications, and Control Technologies (2011)

Institutional Service

Tenure and Promotion Committee (2023-
Faculty Awards Committee (2020-
Faculty Senate (2016-2021)

ECE Department Head (2015-2020)
Graduate Committee (2015-2021)
Academic Board (2015)
Leadership Day Moderator, Lifecycle Engineering INC. (2014 & 2018)
Tenure and Promotion Committee (2012 -2014)
Scholarship Committee (2011- 2014)
Committee on Committees (2010 – 2013)
Faculty Council (2007-2011)
Faculty Development Committee (2003-2008) (*Chair 2006 – 2008*)
Awards Committee (2003-2009) (*Chair 2009*)
ECE Department Search Committee (2003 – 2005)
International Student advisor (2003-2008)
Seaman to Admiral student advisor (2002 - 2015)

Community Service

Charleston STEM Festival (2015, 2016, 2017, 2018, 2019)
Citadel Robotics camp instructor (2013 & 2014)
Advisory board member for *Wando H.S. Project Lead The Way* (2003- 2009)
Member of *Laing Middle School Neighborhood Planning Team* (2008- 2010)
FIRST Robotics Judge (2011& 2012)
Engineers Week Robotics Competition (2002-2023)

Professional Development Activities

Advanced Online Teaching Certificate, The Citadel, 2/2024
IGVC 2019, Rochester MI, 6/2019
American Society of Eng. Educators (ASEE) Southeast Section Conf., 4/2019
Electrical and Computer Engineering Department Heads (ECEDHA) Annual Meeting, Tuscon, CA, 3/2019
ABET Workshop (ECEDHA Conference), Tuscon, CA, 3/2019
Southeastern Association of Electrical and Computer Engineering Department Heads (SECEDHA) Annual Meeting, Gainesville, FL, 11/2018
IGVC 2018, Rochester MI, 6/2018
American Society of Eng. Educators (ASEE) Southeast Section Conf., 4/2018
Electrical and Computer Engineering Department Heads (ECEDHA) Annual Meeting, Monterey, CA, 3/2018
Southeastern Association of Electrical and Computer Engineering Department Heads (SECEDHA) Annual Meeting, Atlanta, GA, 11/2017
ECEDHA, Oscilloscopes in the Classroom webinar, 8/2017
SoCon Lead 2017 Webinar, Charleston, SC 8/2017
American Society of Eng. Educators (ASEE) National Conference, 6/2017
Southeastern Association of Electrical and Computer Engineering Department Heads (SECEDHA) Annual Meeting, Atlanta, GA, 11/2016
SoCon Lead 2016, Spartanburg, SC, 7/2016

IGVC 2016, Rochester MI, 6/2016
Southeastern Association of Electrical and Computer Engineering Department Heads (SECEDHA) Annual Meeting, Atlanta, GA, 11/2015
IGVC 2015, Rochester MI, 6/2015
Electrical and Computer Engineering Department Heads (ECEDHA) Annual Meeting, Hilton Head, SC, 3/2015
Southeastern Association of Electrical and Computer Engineering Department Heads (SECEDHA) Annual Meeting, Atlanta, GA, 11/2014
Electrical and Computer Engineering Department Heads (ECEDHA) Annual Meeting, Orlando, FL, 3/2014
IEEE SoutheastCon 2015, 4/2015
IEEE SoutheastCon 2013, 4/2013
IEEE 2012 ICIP International Conference on Image Processing, Orlando, FL, 10/2012
American Society of Eng. Educators (ASEE) Southeast Section Conf., 4/2011
IEEE SoutheastCon 2011, 3/2011
IEEE Southeastern Symposium on Systems and Technology Conference, 3/2011
IEEE Southeastern Symposium on Systems and Technology Conference, 3/2010
IEEE SoutheastCon 2009, 3/2009
IEEE Southeastern Symposium on Systems and Technology Conference, 3/2008
American Society of Engineering Educators (ASEE) Annual Conference, 6/2007
American Society of Eng. Educators (ASEE) Southeast Section Conf., 4/2007
IEEE Southeastern Symposium on Systems and Technology Conference, 4/2007
Southeastern Association of Electrical and Computer Engineering Department Heads (SECEDHA) Annual Meeting, Atlanta, GA, 11/2006
Citadel School of Engineering A.B.E.T. Workshop, 10/2006
American Society of Eng. Educators (ASEE) Southeast Section Conf., 4/2006
IEEE Southeastern Symposium on Systems and Technology Conference, 3/2006
IEEE Southeastern Symposium on Systems and Technology Conference, 3/2005
IEEE Frontiers in Education Conference, 10/ 2004
The 7th World Multiconference, SCI 2003, 7/ 2003
37th Asilomar Conference on Signals, Systems, and Computers, 11/ 2003 IEEE SoutheastCon 2002, 4/ 2002
34th Asilomar Conference on Signals, Systems, and Computers, 11/2000

Short courses
HTML Basics 9/2004, Dreamweaver I 9/2004, Dreamweaver II 9/2004
Writing for Professional Publication Workshop, 2/ 2002

Senior Project Advisor & Student Research

2023 Automated Grill Project

2022 Stem Demo System

2020 E-Bike Design Project

2019 E-Porpoise System

2018 K-Cup recycling project

2017 Forget Me Not Automatic Alert System for Car Passengers and Pets

2016 Homestead Portable Power Management System

2015 Haptic Feedback Communication System (1 Place – Citadel Research Conference)

2015 Portable Battery Charging and Monitoring System

2014 The e-Porpoise System – Autonomous rescue ship. (CRC participant)

2014 The CAR – Intelligent Ground Vehicle Competition (IGVC participant)

2012 Regenerative Braking System (CRC participant)

2011 Touch Screen Automatic Control System

2010 Rem Bot

2009 Bathwater Control System

2008 Auto Dog

2007 Autonomous Submarine

2006 Water and Moisture Detection System

2005 Blue Tooth Submarine

2004 Yellow Submarine

2003 Fire Detection and Control System

2003 Stand Alone DivX Player

Courses taught at Naval Postgraduate School (Jan. 1997-Oct. 2001)

Undergraduate courses

Introduction to Matlab® (EC 1010)

Circuit Analysis (EC 2100)

Introduction to Circuit and Power System Analysis (EO 2102)

Control Systems (EC 2300)

Linear Systems (EC 2320)

Discrete Systems (EC 2400)

Introduction to Linear Systems (EO 2402)

Analysis of Signals and Systems (EC 2410)

Communications Systems (EC 2500)

Introduction to Communications Systems Engineering (EO 2413)

Probabilistic Analysis of Signals and Systems (EC 2010)

Graduate courses

Communications Systems Engineering (EO 3513)

Introduction to Communications Systems Engineering (EO 3516)

Communications Systems Analysis (EO4516)

Committee Service at Naval Postgraduate School (Jan. 1997-Oct. 2001)
Undersea Warfare Academic Group
Signal Processing Technical Academic Group

Military Awards (1981 – 2001)

Meritorious Service Medal, Navy Commendation Medal (3), Navy Achievement Medal (2), National Defense Medal, Sea Service Ribbon (3), Humanitarian Service Medal.