SIRIPONG POTISUK, Ph.D.

Dept. of Electrical & Computer Engineering
The Citadel, the Military College of South Carolina
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EDUCATION:

Doctor of Philosophy (1990-1995)
> Purdue University, West Lafayette, Indiana
> Major: Digital Signal Processing and Computer
> Thesis: *Prosodic Disambiguation in Automatic Speech Understanding of Thai*

Master of Science in Electrical Engineering (1985-1986)
> Purdue University, West Lafayette, Indiana
> Major: Communications

Bachelor of Science in Electrical Engineering (Magna Cum Laude) (1980-1984)
> The Citadel, Charleston, South Carolina

APPOINTMENTS:

2011-present
Associate Professor
Dept. of Electrical & Computer Engineering
The Citadel, Charleston, South Carolina
- Teach undergraduate courses and labs in electrical and computer engineering
- Participate in student advisement and curriculum development;
- Service on faculty committees and provide technical leadership to the department

2005-2011
Assistant Professor
Dept. of Electrical & Computer Engineering
The Citadel, Charleston, South Carolina
- Teach undergraduate courses and labs in electrical and computer engineering
- Participate in student advisement and curriculum development;
- Service on faculty committees and provide technical leadership to the department

2003-2005
Associate Head
Department of Electrical & Computer Engineering, Academic Division
Chulachomklao Royal Military Academy, Nakon-nayok, Thailand
- Responsible for oversight and strategic direction of the academic affairs of the department
- Oversee planning and implementation of the overall academic policies according to the academy standards of excellence set forth by the Quality Assurance in Education Act.

2001-2003
Chair
Telecommunications Section
Department of Electrical & Computer Engineering, Academic Division
Chulachomklao Royal Military Academy, Nakon-nayok, Thailand
- Oversee the implementation of the telecommunications program under the electrical & computer engineering curriculum
- Provide technical leadership to the program

1998-2005	**Adjunct Faculty Member**

Faculty of Engineering,
Assumption University, Bangkok, Thailand
- Teach undergraduate courses on Electromagnetic Fields and Waves, Transmission Lines, and Data Communications & Networking (Classes are conducted in English)

1996-2005	**Faculty Member**

Department of Electrical & Computer Engineering, Academic Division
Chulachomklao Royal Military Academy, Nakon-nayok, Thailand
- Teach a variety of undergraduate courses and labs in electrical and computer engineering;
- Participate in student advisement and curriculum development;
- Service on faculty committees and provide technical leadership to the department

1990-1995	**Graduate Research Assistant**

Department of Audiology and Speech Sciences, Purdue University
- Process, and analyze (statistically) speech data for acoustic experiments on speech production and perception in Thai;
- Responsible for the acquisition, implementation, and customization of a suite of standard statistical software for research needs.

1986-1989	**Lecturer**

Department of Electrical Engineering, Academic Division,
Chulachomklao Royal Military Academy, Nakon-nayok, Thailand
- Teach undergraduate courses and labs in electrical engineering

HONORS & AWARDS:

- Invited speech on 'Recent Advances in Methods of Signal Decomposition,' International Conference on Signal and Image Processing, Beijing, The People's Republic of China, August 2016
- Best Presentation Award, International Conference on Signal and Information Processing, Bangkok, Thailand, July 2015
- J. Lawton and Emma S. Ellis Electrical & Computer Engineering Teaching Award, The Citadel, March 2013
- Outstanding Achievement Award (Top of the Class), Royal Thai Army Signal Officer Advanced Course, 1998
- Outstanding Achievement Award (Top of the Class), Royal Thai Army Signal Officer Basic Course, 1989
- *Who's Who in American Colleges and University Award*, 1984
- *Phi Kappa Phi* Academic Honor Society Award, 1983
- *Sigma Epsilon Pi* Physics Honor Society Award, 1983
- *Tau Beta Pi* Engineering Honor Society Award, 1982
- Royal Thai Army Scholarship (1990-1995)
- Royal Thai Army Scholarship (1980-1986)

TEACHING OVERVIEW:

Courses taught at the Citadel:	18 different courses out of a total of 34 courses listed

Aug 2016	Fall:	ELEC 313 Electronics laboratory
		ELEC 421 Design I
		ELEC 423 Digital Signal Processing
Aug 2015 – May 2016	Spring:	ELEC 312 Systems I
		ELEC 413 Adaptive Signal Processing
		ELEC 422 Design II

	Fall:	ELEC 106 Fundamentals of Electrical Engineering
		ELEC 421 Design I
		ELEC 423 Digital Signal Processing
Aug 2014 – May 2015	Spring:	Sabbatical Leave
	Fall:	ELEC 421 Design I
		ELEC 423 Digital Signal Processing
Aug 2013 – May 2014	Spring:	ELEC 204 Electrical Laboratory
		ELEC 312 Systems I
		ELEC 308 Elements of Electrical Engineering
	Fall:	ELEC 106 Fundamentals of Electrical Engineering
		ELEC 412 Applied Probability & Statistics for Engineers
		ELEC 423 Digital Signal Processing
Aug 2012 – May 2013	Spring:	ELEC 202 Electric Circuit Analysis II
		ELEC 204 Electrical Laboratory
		ELEC 312 Systems I
	Fall:	ELEC 201 Electric Circuit Analysis I
		ELEC 412 Applied Probability & Statistics for Engineers
		ELEC 423 Digital Signal Processing
Aug 2011 – May 2012	Spring:	ELEC 202 Electric Circuit Analysis II
		ELEC 204 Electrical Laboratory
		ELEC 312 Systems I
	Fall:	ELEC 313 Electronics Laboratory
		ELEC 412 Applied Probability & Statistics for Engineers
		ELEC 423 Digital Signal Processing
		CIVL 314 Engineering Economy
Aug 2010 – May 2011	Spring:	ELEC 202 Electric Circuit Analysis II
		ELEC 204 Electrical Laboratory
		ELEC 308 Elements of Electrical Engineering
	Fall:	ELEC 104 Electrical Engineering Fundamentals I
		ELEC 201 Electric Circuit Analysis I
		ELEC 313 Electronics Laboratory
Aug 2009 – May 2010	Spring:	ELEC 202 Electric Circuit Analysis
		ELEC 204 Electrical Laboratory
		ELEC 318 Electromagnetics
	Fall:	ELEC 206 Computer Applications for Electrical Engineering
		ELEC 309 Signals & Systems
		ELEC 423 Digital Signal Processing
Aug 2008 – May 2009	Spring:	ELEC 202 Electric Circuit Analysis
		ELEC 204 Electrical Laboratory
		ELEC 206 Computer Applications for Electrical Engineering
		ELEC 308 Elements of Electrical Engineering
	Fall:	ELEC 309 Signals & Systems
		ELEC 423 Digital Signal Processing
Aug 2007 – May 2008	Spring:	ELEC 202 Electric Circuit Analysis
		ELEC 204 Electrical Laboratory
		ELEC 206 Computer Applications for Electrical Engineering
		ELEC 308 Elements of Electrical Engineering
	Fall:	ELEC 309 Signals & Systems
		ELEC 423 Digital Signal Processing
Aug 2006 – May 2007	Spring:	ELEC 202 Electric Circuit Analysis II
		ELEC 204 Electrical Laboratory
		ELEC 301 Systems Laboratory
		ELEC 308 Elements of Electrical Engineering
	Fall:	ELEC 309 Signals & Systems
		ELEC 313 Electronics Laboratory
		ELEC 423 Digital Signal Processing

Aug 2005 – May 2006   Spring: ELEC 202 Electric Circuit Analysis
                                 ELEC 204 Electrical Laboratory
                                 ELEC 206 Computer Applications for Electrical Engineering
                                 ELEC 416 Communications
                        Fall: ELEC 412 Applied Probability & Statistics for Engineers
                                 ELEC 423 Digital Signal Processing

Courses taught at Assumption University, Thailand (1998–2005)
- Electromagnetic Fields and Waves
- Communication Networks & Transmission Lines

Courses taught at Chulachomklao Royal Military Academy, Thailand (1986–1989, 1996–2005)
- Electric Circuit Analysis I & II
- Electrical Laboratory
- C++ Programming for Engineers
- Discrete Mathematics
- Advanced Mathematics for Electrical Engineers
- Signals and Systems
- Probabilistic Methods & Stochastic Processes
- Digital Circuits and Logic Design
- Digital and Logic Design Laboratory
- Digital System Design
- Microprocessor Systems and Interfacing
- Analog & Digital Communications
- Satellite Communications
- Optical Communications
- Communication Electronics
- Data Communications & Networking
- Senior Projects for Electrical & Computer Engineering

Other teaching activities:
- Develop laboratory experiments on Communication Electronics using TMS320C5X Digital Signal Processing Starter's Kit by Texas Instruments, 1996-1997
- Guest Lecturer on "*Analog and Digital Communications*," Signal School, Royal Thai Army, Bangkok, Thailand, April 1996

SCHOLARLY AND PROFESSIONAL ACTIVITES

RESEARCH EXPERIENCE OVERVIEW:

2005-present   **Principal Investigator**
- Conduct research on the design and implementation of a spoken language understanding system for Thai at the department of Electrical and Computer Engineering, The Citadel. Works include:
  (1) System integration between acoustic and language models using spoken language constraint network
  (2) Extension to a CDG (Constraint Dependency Grammar) parser for continuous Thai speech.
  (3) Investigation on the use of Multi-core processors for parallel implementation of the system
- Investigate language modeling using Lexicalized Tree-adjoining grammar (LTAG) as an alternative to CDG
- Conduct acoustic experiments to quantify accents of non-native speakers of English
- Investigate the development of a computer-aided pronunciation teaching software for non-speakers of English

1998-2002	**Principal Investigator**

- Develop a spoken language system for continuous Thai speech, which integrates a phone recognition component based on hidden Markov model with a tone classification component;
- Develop a prosody-generating unit based on an extension to the Fujisaki's model for F_0 contour synthesis to be used in a text-to-speech synthesizer and a tone classifier in automatic speech recognition of continuous Thai speech;
- Conduct acoustic experiments to study the influence of perseverative coarticulation on unstressed syllables in continuous Thai speech;
- Develop a speech corpus to be used in the implementation (training and testing) of an automatic speech recognition system for continuous Thai speech;
(Supported by Thailand Research Fund, Grant Number RSA-3/2541)

1993-1995	**Doctoral Student**

- Conduct research on the design and implementation of an automatic speech understanding system for Thai at the School of Electrical and Computer Engineering, Purdue University. Works include:
(1) A classifier for continuous Thai tones using an analysis-by-synthesis method; and
(2) An extension to a CDG (Constraint Dependency Grammar) parser for continuous Thai speech.
(Supported in part by the National institute on Deafness and other communication disorders under Grant DC00515-07 and the United States Information Agency in Conjunction with Thailand-United States Educational Foundation)

1990-1995	**Graduate Research Assistant**

- Collect, process, and analyze (statistically) speech data for acoustic experiments on speech production and perception in Thai at the Department of Audiology & Speech Sciences, Purdue University.
(Supported in part by the National institute on Deafness and other communication disorders under Grant DC00515-07 and the United States Information Agency in Conjunction with Thailand-United States Educational Foundation)

SCHOLARLY PUBLICATIONS

I. Peer-reviewed Journals

S. Potisuk, *A New Method for Instantaneous F0 Speech Extraction Based on Modified Teager Energy Algorithm.* International Journal of Computer Science and Electronics Engineering (IJCSEE), Vol. 4, Issue 2 (2016), pp.117-121, September 2016. ISSN 2320-401X (Printed Version) ISSN 2320-4028 (Online Version)

S. Potisuk, "Obstruent Consonant Landmark Detection in Thai Continuous Speech." International Journal of Signal Processing Systems, Vol. 4, No.3, pp. 214-219, June 2016. (ISSN: 2315-4535)

S. Potisuk, M. P. Harper, and J. T. Gandour, "Classification of Thai tones sequences in syllable-segmented speech using the analysis-by-synthesis method," in IEEE Transactions on Audio and Speech Processing, January, 1999.

S. Potisuk, J. T. Gandour, and M. P. Harper, "Vowel length and stress in Thai," Acta Linguistica Hafniensa, 30, pp. 39-62. 1998

S. Potisuk, J. T. Gandour, and M. P. Harper, "Contextual variations in tri-syllabic sequences of Thai tones," Phonetica, vol. 54, pp. 22-42. 1997.

S. Potisuk, J. T. Gandour, and M. P. Harper, "Acoustic correlate of stress in Thai," Phonetica, vol. 53, pp. 200-220. 1996.

J. T. Gandour, **S. Potisuk,** and S. Dechongkit, "Tonal coarticulation in Thai," Journal of Phonetics, vol. 22, pp. 477-492. 1995.

S. Potisuk, J. T. Gandour, and M. P. Harper, "F_0 correlate of stress in Thai," Journal of Linguistics of the Tibeto-Burman Area, vol. 17-2, pp.1-27. 1994.

J. T. Gandour, S. Ponglorpisit, F. Khunadorn, S. Dechongkit, P. Boongird, R. Boonklam, and **S. Potisuk, "**Anticipatory tonal coarticulation in Thai noun compounds after unilateral brain damage," Brain and Language, vol. 45, pp. 1-20. 1993.

J. T. Gandour, **S. Potisuk,** S. Dechongkit, and S. Ponglorpisit**, "**Anticipatory tonal coarticulation in Thai noun compounds," Journal of Linguistics of the Tibeto-Burman Area, vol. 15-1, pp.93-110.1992.

J. T. Gandour, **S. Potisuk,** S. Dechongkit, and S. Ponglorpisit**, "**Perseverative tonal coarticulation in Thai noun compounds," Journal of Linguistics of the Tibeto-Burman Area, vol. 15-1, pp.111-124.1992.

J. T. Gandour, S. Ponglorpisit, F. Khunadorn, S. Dechongkit, P. Boongird, R. Boonklam, and **S. Potisuk, "**Lexical tones in Thai after unilateral brain damage," Brain and Language, vol. 43, pp. 275-307.1992.

J. T. Gandour, **S. Potisuk,** and S. Dechongkit, "Inter- and Intraspeaker variability in fundamental frequency of Thai tones," Speech Communication, vol. 10, pp. 355-372.1991.

II. Peer-reviewed Conference Proceedings

S. Potisuk, "A System for Extracting F0 Contours of Lexical Tones Using Adaptive IIR Notch Filter with Harmonic Suppression," in proceedings of the 20th International Conference on Asian Language Processing (IALP 2016), 21-23 November 2016, Tainan, Taiwan.

S. Potisuk, "A New Method for Instantaneous F0 Speech Extraction Based on Modified Teager Energy Algorithm,", in Proceedings of the 2016 International Conference on Electronics, Computer and Information Technology (ECIT-16), 8-9 August 2016, Pattaya, Thailand.

S. Potisuk, "Experiential Learning in Engineering Education through Senior Capstone Design," in Proceedings of the 4th international conference on language, innovation, culture & education, 30-31 July 2016, Bangkok, Thailand.

S. Potisuk, "A Novel Method for Blind Segmentation of Thai Continuous Speech." In Proceedings of the 2015 IEEE Signal Processing & Signal Processing Education Workshop (SP/SPE). 9-12 August 2015, Snowbird Ski & Summer Resort, Salt Lake City, Utah.

S. Potisuk, "Obstruent Consonant Landmark Detection in Thai Continuous Speech." In Proceedings of the 6th International Conference on Signal and Information Processing, 6-7 July 2015, Bangkok, Thailand. (Best presentation award)

S. Potisuk, "The Impact of a Partnership between Corporation and Post-secondary Institution to Promote Interest in STEM Education: The Lowcountry Perspective." In Proceedings of the 2015 Hawaii University International Conference on STEM Education, 12-15 June 2015, Honolulu, Hawaii.

S. Potisuk, "Acoustic Description of Successive Non-identical Nasal Sounds for Automatic Segmentation of Continuous Thai Speech," in 2010 Proceedings of the Thirteenth Australasian International Conference on Speech Science and Technology. La Trobe University, Melbourne, Australia, December 14th – 16th, 2010.

S. Potisuk, "A Conceptual Model for Spoken Language Understanding System for Thai," in 2010 Proceedings of the Thirteenth Australasian International Conference on Speech Science and Technology. La Trobe University, Melbourne, Australia, December 14th – 16th, 2010.

S. Potisuk, "Typed Dependency Relations for Syntactic Analyses of Thai Sentences," in 2010 Proceedings of the 24th Pacific Asia Conference on Language, Information and Computation. Tohoku University, Sendai, Japan, November 4th– 7th, 2010.

S. Potisuk, "A lexicalized Tree-Adjoining Grammar for Thai," in 2009 Proceedings of the 23rd Pacific Asia Conference on Language, Information and Computation. City University of Hong Kong, Hong Kong, The People's Republic of China, December 3rd– 5th, 2009.

S. Potisuk, "Integrating Prosodics into a Language Model for Spoken Language Understanding of Thai," in 2008 Proceedings of the 22nd Pacific Asia Conference on Language, Information and Computation. De LaSalle University, Cebu city, The Philippines, November 20th – 22nd, 2008.

S. Potisuk, "Prosodic Annotation in a Thai Text-to-speech System," in 2007 Proceedings of the 21st Pacific Asia Conference on Language, Information and Computation. Seoul National University, Korea, November 1st – 3rd, 2007.

S. Potisuk, M. P. Harper, and J. T. Gandour, "Using stress to disambiguate Thai sentences containing syntactic ambiguity," 1996 Proceedings of the International Conference on Spoken Language Processing, Philadelphia, Pennsylvania. October 3-6, 1996.

S. Potisuk, and M. P. Harper, "CDG: An alternative formalism for parsing written and spoken Thai," in 1996 Proceedings of the Fourth International Symposium on Language and Linguistics. Bangkok, Thailand, January 8-10, 1996.

J. T. Gandour, **S. Potisuk**, and M. P. Harper, "Effects of stress on vowel length in Thai" in 1996 Proceedings of the Fourth International Symposium on Language and Linguistics. Bangkok, Thailand, January 8-10, 1996.

S. Potisuk, M. P. Harper, and J. T. Gandour, "Speaker-independent automatic classification of Thai tones in connected speech by analysis-synthesis method," in 1995 Proceedings of the International Conference on Acoustic, Speech, and Signal Processing, Detroit, Michigan. May 1995.

M. P. Harper, L. H. Jamieson, C. D. Mitchell, G. Ying, **S. Potisuk**, P. N. Srinivasan, R. Chen, C. B. Zoltowski, L. McPheters, and R.A. Helzerman, "Integrating language models With speech recognition," Proceedings of the AAAI-94 Workshop on the Integration of Natural Language and Speech processing, Seattle, Washington, July 31-August 1, 1994.

III. Technical Reports

S. Potisuk, "A novel method for integrating tone classification with a Thai phone recognizer: a lexical decoder design," in Thailand Research Fund (TRF) technical report (RSA-3/2541), January 2002.

S. Potisuk, "Automatic classification of Thai tones in continuous speech," in TRF Technical report (RSA-3/2541), January 2001.

S. Potisuk, "Acoustic characteristics of unstressed syllables under the influence of perseverative tonal coarticulation in continuous Thai speech," in TRF technical report (RSA-3/2541), January 2000.

S. Potisuk, "Design and analysis of acoustic-phonetic speech database for Thai," in TRF technical report (RSA-3/2541), January 2000.

IV. Accepted (but not presented) Conference Articles

S. Potisuk, "Automatic Formant Tracking of Successive Nasal Sounds Using Nonlinear Teager Energy Operator", accepted for publication with minor revision to the 4th International Conference on Electronics, Communications and Networks (IEEE index #32026) during December 12–15, 2014 in Beijing, The People Republic of China. (Not presented due to a lack of travel funding)

S. Potisuk, "Using Web 2.0 Materials in the Design of a Computer Assisted Language Learning System for Thai Learners of English," accepted for publication and presentation at the 27th Pacific Asia Conference on Language, Information and Computation, Taipei, Taiwan, Nov. 2013. (Not presented due to a lack of travel funding)

S. Potisuk, "Towards A Thai Dependency Treebank: Syntactic Annotation of the Thai ORCHID Corpus Based on the Constraint Dependency Grammar Formalism," accepted for publication and presentation at the 11th International Workshop on Treebanks and Linguistic Theories. November 30 – December 1, 2012, Lisbon, Portugal (Not presented due to a lack of travel funding)

V. Scholarly Publications Review

April 2016	A manuscript entitled "Parallel algorithms for acoustic processing of speech signals," International Conference on Signal and Image Processing, Beijing, People's Republic of China
April 2016	A manuscript entitled "Adaptive speech enhancement research in discrete cosine transform Parallel algorithms for acoustic processing of speech signals," International Conference on Signal and Image Processing, Beijing, People's Republic of China
March 2006	A manuscript entitled "Thai Speech Processing Technology: A Review," (manuscript reference no: SPECOM-D-06-00028) Journal of Speech Communication, a publication of the European Association for Signal Processing (EURASIP), which can be located at http://www.eurasip.org and the International Speech Communication Association (ISCA), which can be located at http://www.isca-speech.org .
December 2002	Doctoral dissertation entitled " *A Study of Various Linguistic Effects on Tone Recognition in Continuous Thai Speech*," Department of Computer Engineering, Chulalongkorn University, Thailand.

CONFERENCE PRESENTATIONS:

I. Peer Reviewed

November 2016	**Oral** "A System for Extracting F0 Contours of Lexical Tones Using Adaptive IIR Notch Filter with Harmonic Suppression," in proceedings of the 20th International Conference on Asian Language Processing (IALP 2016), Tainan, Taiwan.
August 2016	**Oral** "A New Method for Instantaneous F0 Speech Extraction Based on Modified Teager Energy Algorithm,", in Proceedings of the 2016 International Conference on Electronics, Computer and Information Technology (ECIT-16), Pattaya, Thailand.
July 2016	**Oral** "Experiential Learning in Engineering Education through Senior Capstone Design," in Proceedings of the 4th international conference on language, innovation, culture & education, Bangkok, Thailand.
August 2015	**Poster** "A Novel Method for Blind Segmentation of Thai Continuous Speech." In Proceedings of the 2015 IEEE Signal Processing & Signal Processing Education Workshop (SP/SPE). Snowbird Ski & Summer Resort, Salt Lake City, Utah.
July 2015	**Oral** "Obstruent Consonant Landmark Detection in Thai Continuous Speech." In Proceedings of the 6th (2015) International Conference on Signal and Information Processing, 6-7 July, Bangkok, Thailand. (**Best presentation award**)
June 2015	**Poster** "The Impact of a Partnership between Corporation and Post-secondary Institution to Promote Interest in STEM Education: The Lowcountry Perspective." In Proceedings of the 2015 Hawaii University International Conference on STEM Education, Honolulu, Hawaii.
December 2010	**Oral** "Acoustic Description of Successive Non-identical Nasal Sounds for Automatic Segmentation of Continuous Thai Speech," The Thirteenth Australasian International Conference on Speech Science and Technology. La Trobe University, Melbourne, Australia.

December 2010	**Oral** "A Conceptual Model for Spoken Language Understanding System for Thai," The Thirteenth Australasian International Conference on Speech Science and Technology. La Trobe University, Melbourne, Australia
November 2010	**Poster** "Typed Dependency Relations for Syntactic Analyses of Thai Sentences," The 24th Pacific Asia Conference on Language, Information and Computation. Tohoku University, Sendai, Japan,
December 2009	**Oral** "A lexicalized Tree-Adjoining Grammar for Thai" The 23rd Pacific Asia Conference on Language, Information and Computation. Hong Kong, The Republic of China.
November 2008	**Oral** "Integrating Prosodics into a Language model for Spoken Language Understanding of Thai" The 22nd Pacific Asia Conference on Language, Information and Computation. Cebu City, The Philippines.
December 2007	**Poster** "Towards Quantifying the Accent of Thai Speakers of English" The 12th English in South-East Asia Conference. Bangkok, Thailand.
November 2007	**Oral** "Prosodic Annotation in a Thai Text-to-speech System" The 21st Pacific Asia Conference on Language, Information and Computation. Seoul, South Korea.
October 1996	**Oral** "Using Stress to Disambiguate Thai Sentences Containing Syntactic Ambiguity," The 1996 International Conference on Spoken Language Processing, Philadelphia, Pennsylvania, USA.
January 1996	**Oral** "CDG: An Alternative Formalism for Parsing Written and Spoken Thai," The Fourth Pan-Asiatic International Symposium on Languages and Linguistics, Bangkok, Thailand.
May 1995	**Oral** "Automatic Classification of Thai Tones in Connected Speech using the Analysis-by-Synthesis Method," The 1995 IEEE International Conference on Acoustic, Speech & Signal Processing (ICASSP), Detroit, Michigan, USA.

II. Invited Presentations

August 2016	**Oral** "Recent Advances in Methods of Signal Decomposition," International Conference on Signal and Image Processing, Beijing, People's Republic of China
July 2015	**Oral** "Introduction to English Connected Speech", English Language Training Workshop for Executives of the Supreme Command, Royal Thai Armed Forces Headquarters, Bangkok, Thailand
April 2012	**Oral** "Machine Learning Techniques in Automatic Speech Recognition," Sigma Xi Brown-bag Lunch Presentation, The Citadel
November 1998	**Oral** "The Future of Speech Technology Research in Thailand," The National Electronics and Computer Technology Center, Ministry of Science, Technology, and Environment, Bangkok, Thailand.

RESEARCH-RELATED GRANTS:

- Research presentation grant from The Citadel Development Foundation in the amount of $2117.88 to present research paper at The 20th International Conference on Asian Language Processing (IALP 2016), 21-23 November 2016, Tainan, Taiwan.

- Presentation grant from The Citadel Development Foundation in the amount of $1995.17 to give an invited speech at The 7th International Conference on Signal and Image Processing, August 13-15, 2016, Beijing, People's Republic of China.
- Research presentation grant from The Citadel Development Foundation in the amount of $585.54 to present research paper at The 2016 International Conference on Electronics, Computer and Information Technology (ECIT-16), 8-9 August 2016, Pattaya, Thailand.
- Research presentation grant from The Citadel Development Foundation in the amount of $655.54 to present research paper at The 4th international conference on language, innovation, culture & education, 30-31 July 2016, Bangkok, Thailand.
- Research presentation grant from The Citadel Development Foundation in the amount of $1587.87 to present research paper at The 2015 IEEE Signal Processing & Signal Processing Education Workshop (SP/SPE). 9-12 August 2015, Snowbird Ski & Summer Resort, Salt Lake City, Utah.
- Research presentation grant from The Citadel Development Foundation in the amount of $912.13 to present research paper at The 6th International Conference on Signal and Information Processing, 6-7 July 2015, Bangkok, Thailand.
- Research & development grant in the amount of $2324.00 from The Citadel Development Foundation for a 2014-2015 research project entitled Incorporating Automatic Speech Recognition (ASR) into Software Development of a Computer-aided Language Learning (CALL) System for Thai Learners of English to Promote Learner Autonomy."
- Research presentation grant from The Citadel Development Foundation in the amount of $2500.00 to present research paper at The 2015 Hawaii University International Conference on STEM Education, 12-15 June 2015, Honolulu, Hawaii.
- Research presentation grant from The Citadel Development Foundation in the amount of $2500.00 to present research paper at The Thirteenth Australasian International Conference on Speech Science and Technology. La Trobe University, Melbourne, Australia. December 14-16, 2010
- Research presentation grant from The Citadel Development Foundation in the amount of $1700.60 to present research paper at the 23rd PACLIC conference, Hong Kong, The Republic of China. December 3-5, 2009.
- Research presentation grant from The Citadel Development Foundation in the amount of $2203.70 to present research paper at the 22nd PACLIC conference, Cebu City, The Philippines. November 20-22, 2008.
- Research presentation grant from The Citadel Development Foundation in the amount of $2055.01 to present research paper at the 21st PACLIC conference, Seoul National University, Seoul, South Korea during November 1-3, 2007.
- Research & development grant in the amount of $2578.93 from The Citadel Development Foundation (through the Dean of Engineering) for a purchase of research instruments (computer and software).
- Research & development start-up grant in the amount of $15,000 from The Citadel (through the ECE department) for a purchase of research instruments (computer and software).
- Research development grant (1999-2001) in the amount of 1,080,000 Baht ($27,000) from Thailand Research Fund (TRF) – a Thai Equivalence to NSF– for a proposed research project entitled "Tone Classification and Its Impact on the Design of Speaker- independent Automatic Speech Recognition of Continuous Thai Speech."

PROFESSIONAL SERVICE:

August 2016   **Session Chair**
"*Communication Technology and Network Technology,*" The 7th International Conference on Signal and Image Processing, Beijing, People's Republic of China

July 2016   **Session Chair**
"Experiential Learning," The 4th international conference on language, innovation, culture & education, Bangkok, Thailand.

December 2000 **<u>Session Chair</u>**
"*Speech Technology Research Forum*," The National Conference on Information Technology, National Science and Technology Development Agency, Bangkok, Thailand.