

UB STUDENTS SWEEP AWARDS AT THE 2013 REGIONAL AMERICAN SOCIETY OF ENGINEERING EDUCATION (ASEE) ANNUAL CONFERENCE.

The School of Engineering had a historic day on Friday, March 15, 2013 in Norwich University, at the 2013 regional American Society of Engineering Education (ASEE) annual conference. The UB SOE students were awarded ALL the awards for the graduate research project competition. Not only did UB SOE win the first, second and third place awards, which has actually happened before, but this year UB students won ALL the graduate research poster awards (6 awards were given total). Not only is this unprecedented, but it speaks volumes about the innovation, quality and dedication of the SOE students and their supervising faculty!



1st Place

Laili Almazaydeh

“SVM-Based Sleep Apnea Identification using Optimal RR-Interval Features of the ECG Signal”

Advisors: Khaled Elleithy and Miad Faezipour

2nd Place

Isam Hameed

“Vessel Segmentation in Retinal Images with a Novel Network Tracking Algorithm”

Advisors: Buket Barkana

3rd Place

Nazar A. Fadhil and Deleer S. Saber

“Power Harvesting from Arteries using Nano-scale PVDF for Implanted Devices”

Advisor: Prabir Patra

4th Place

Can Ozan Gulcihan and Ece Haznedaroglu

“Reverse Logistics Operation Management via Radi Frequency Identification-Based (RFID-Based) Information Network for End-of-Life Pharmaceutical Products”

Advisor: Elif Kongar

5th Place

Deleer S. Saber and Nazar A. Fadhil

“Intravascular Multi-layered Glucose Sensor for an Artificial Pancreas”

Advisor: Prabir Patra

6th Place

Xiaowei Yu

“Voltage-Downscaling with Logic Shut-Down for Low-Power VLSI Design”

Advisor: Xingguo Xiong ■



Tarek Sobh reports, “The attendees at the conference were very complimentary of UB SOE students and faculty and the comments from other faculty, students, and Engineering administrators were gratifying and should make all of us very proud of our students and faculty.”

FACULTY Publications



A Sample of Book Chapters Published

K. Elleithy and T. Sobh

"Innovations and Advances in Computer, Information, Systems Sciences, and Engineering," Springer, 2013.

T. Sobh and K. Elleithy

"Emerging Trends in Computing, Informatics, Systems Sciences, and Engineering," Springer, 2013.

A. Razaque and K. Elleithy

"Detection of Attacks for Restoring Privacy of Users to Improve Mobile Collaborative Learning (MCL) Over Heterogeneous Network," Communications in Computer and Information Science, Springer, Volume 294, 2012.

A. Razaque and K. Elleithy

"Ambient Intelligence Paradigm to support pedagogical activities over wireless sensor networks," Ubiquitous Computing and Ambient Intelligence (UCAmI), Springer, 2012.

A. Razaque, A. Alotaibi, K. Elleithy

"Location Based Overlapped Mobility Aware network Model," Innovations and Advances in Computer, Information, Systems Sciences, and Engineering, Springer, September 2012.

T. Sobh, X. Xiong (editors)

"Prototyping of Robotic Systems: Applications of Design and Implementation," (ISBN10: 1466601760), Feb. 29, 2012, IGI Global publishing company.

L. Almazaydeh, K. Elleithy, M. Faezipur and A. Abushakra

"An Automated Classification Model using Voice Activity Detection (VAD) Algorithm to Detect Sleep Apnea," Mobile Health(mHealth): The Technology Road Map, Springer (in press), 2013.

G. Eschenbach; N. Lewis, C. Hartman, E. Lynn

"The Economic Evaluation of Industrial Projects," 3rd edition, accepted for publication by Oxford University Press.

G. Selig

"The Impact of Threats and Catastrophes on Corporate Governance: How to Minimize Disruption, Mitigate Risks and Manage Business Recovery and Continuity Proactively," David H. McIntyre and William Hancock, Editors, Business Continuity and Homeland Security, Edward Elgar Publishers, London, England, 2012.

A Sample of Conference and Journal Papers

L. Almazaydeh, K. Elleithy, M. Faezipour, H. Ocbagabir

"SVM-Based Sleep Apnea Identification Using Optimal RR-Interval Features of ECG Signal," special issue of IEEE Journal on Translational Engineering in Health and Medicine, 2013.

A. Abushakra, M. Faezipour

"Acoustic Signal Classification of Breathing Movements to Virtually Aid Breath Regulation," in IEEE Transactions on Information Technology in BioMedicine (TITB), also newly named as IEEE Journal of Biomedical and Health Informatics (JBHI), Vol. 17, No. 2, pp. 493-500, March 2013.

I. Alshalabi, S. Hamada, K. Elleithy

"Research Learning Theories that Entail M-Learning Education Related to Computer Science and Engineering Courses," International Journal of Engineering Sciences, March 2013.

W. Elmannai, A. Razaque, K. Elleithy

"Deployment of TCP University of Bridgeport (UB) to Control Law Enforcement Depart-

ment over Wireless Mesh Network," Journal of Communications and Computer Engineering, Volume 3, Issue 1, pp. 40-47, 2013.

Z. Nossire, K. Elleithy, B. Ammourah

"A New Improved Storage Model of Wireless Devices using the Cloud," International Journal of Computer Networks & Communications (IJCNC), Vol. 5, No. 1, pp. 69 - 80, January 2013.

A. Razaque K. Elleithy

"Controlling Attacks of Rogue Dynamic Host Configuration Protocol (DHCP) to Improve Pedagogical Activities in Mobile Collaborative Learning (MCL) Environment," International Journal of Communication and Computer Engineering, Volume 3, Issue 1, pp. 15-29, 2013.

A. Alajlan, B. Dasari, Z. Nossire, K. Elleithy, V. Pande

"Topology Management in Wireless Sensor Networks: Multi-State Algorithms," International Journal of Wireless & Mobile Networks (IJWMN) Vol. 4, No. 6, pp. 17-25, December 2012.

A. Elrashidi, K. Elleithy, H. Bajwa

"Performance Analysis of a Microstrip Printed Antenna Conformed on Cylindrical Body at Resonance Frequency 4.6 GHz for TM01 Mode," Procedia Computer Science, Elsevier, Volume 10, pp. 775-784, 2012.

L. Zhang, X. Xiong

"Design and Implementation of a Renewable Energy Laboratory Course," 2013 ASEE Northeast Section Conference, March 14-16, 2013, Norwich University, Northfield, VT.

C. Zhang, X. Kang, X. Xiong, S. Zhang

“Design and Simulation of a Three-way Micro-fluidic Mixer based on Pressure Disturbance,” Proceedings of 2012 ASEE Northeast Section Conference, April 27-28, 2012, University of Massachusetts Lowell, MA, USA.

Z. He, X. Xiong, W. Quan

“Design and Analysis of a Novel MEMS Dual Axis Accelerometer,” Proceedings of 2012 ASEE Northeast Section Conference, April 27-28, 2012, University of Massachusetts Lowell, MA, USA.

R. Alataas, K. Elleithy

“Quantum Computing Hardware Implementation Methods: A Survey over Categories,” International Conference on Quantum Information Science and Engineering, Berlin, Germany during May 22-23, 2013.

V. Pande, W. Elmannai, K. Elleithy

“Classification and Detection of Fire on WSN Using IMB400 Multimedia Sensor Board,” 2013 IEEE Long Island Systems, Applications and Technology Conference, Farmingdale State College - State University of New York, May 3, 2013.

A. Odeh, K. Elleithy, M. Faezipour

“Steganography in Arabic Text Using Kashida Variation Algorithm (KVA),” 2013 IEEE Long Island Systems, Applications and Technology Conference, Farmingdale State College - State University of New York, May 3, 2013.

R. Alataas, K. Elleithy

“Cloud Computing Algebra Homomorphic Encryption Scheme Based on Fermat’s Little Theorem,” The American Society of Engineering Education, ASEE 2013, March 14-16 2013, Northfield, VT, USA.

A. Odeh, K. Elleithy, M. Faezipour

“Text Steganography Using Language Remarks,” The American Society of Engineering Education, ASEE 2013, March 14-16 2013, Northfield, VT, USA.

L. Almazaydeh, K. Elleithy, M. Faezipour

“A Panoramic Study of Obstructive Sleep Apnea Detection Technologies,” 28th International Conference on Computers and Their

Applications, CATA-2013, March 4-6, 2013, Honolulu, Hawaii, USA.

A. Odeh, K. Elleithy

“Steganography in Text by Merge ZWC and Space Character,” 28th International Conference on Computers and Their Applications, CATA-2013, March 4-6, 2013, Honolulu, Hawaii, USA.

A. Razaque, K. Elleithy

“Efficient Search (RES) for One-Hop Destination over Wireless Sensor Networks,” 28th International Conference on Computers and Their Applications, CATA-2013, March 4-6, 2013, Honolulu, Hawaii, USA.

L. Almazaydeh, K. Elleithy, V. Pande, M. Faezipour

“OSA Screening Test at the Patient’s Home,” IEEE EMBS Conference on Micro and Nanotechnology in Medicine (IEEE MNMC 2012), Hawaii, USA, December 3-7, 2012.

A. Razaque, K. Elleithy

“Ambient Intelligence Paradigm to support pedagogical activities over wireless sensor networks,” Ubiquitous Computing and Ambient Intelligence (UCAmI), Gasteiz, Spain, December 3-5, 2012.

A. Odeh, K. Elleithy

“Steganography in Arabic Text Using Full Diacritics Text,” 25th International Conference on Computers and Their Applications in Industry and Engineering (CAINE-2012), New Orleans, Louisiana, USA, November 14-16, 2012.

L. Almazaydeh, K. Elleithy, V. Pande, M. Faezipour

“Development of OSA Event Detection Using Threshold Based Automatic Classification,” 25th International Conference on Computers and Their Applications in Industry and Engineering (CAINE-2012), New Orleans, Louisiana, USA, November 14-16, 2012.

V. Pande, W. Elmannai, K. Elleithy

“Optimized Algorithm for Fire Detection over WSN using Micaz Motes,” 25th International Conference on Computers and Their Applications in Industry and Engineer-

ing (CAINE-2012), New Orleans, Louisiana, USA, November 14 - 16, 2012.

W. Elmannai, K. Elleithy, V. Pande

“Efficient and Optical Character Recognition Algorithm for Signature Recognition,” 25th International Conference on Computers and Their Applications in Industry and Engineering (CAINE-2012), New Orleans, Louisiana, USA, November 14 - 16, 2012.

V. Pande, K. Elleithy, and L. Almazaydeh

“Parallel Processing for Multi Face Detection and Recognition,” 25th International Conference on Computers and Their Applications in Industry and Engineering (CAINE-2012), New Orleans, Louisiana, USA, November 14-16, 2012.

L. Almazaydeh, K. Elleithy, M. Faezipour, H. Ocbagabir

“SVM-Based Sleep Apnea Identification Using Optimal RR-Interval Features of ECG signal,” IEEE Healthcare Technology Conference: Translational Engineering in Health & Medicine (IEEE HIC 2012), Houston, Texas, USA, November 7-9, 2012.

L. Almazaydeh, K. Elleithy, M. Faezipour

“Obstructive Sleep Apnea Detection Using SVM-Based Classification of ECG Signal Features,” 34th Annual International Conference of the IEEE Engineering in Medicine and Biology (IEEE EMBC’12), San Diego, California, USA, August 28 - September 1, 2012.

A. Elrashidi, K. Elleithy, H. Bajwa

“Performance Analysis of a Microstrip Printed Antenna Conformed on Cylindrical Body at Resonance Frequency 4.6 GHz for TM01 Mode,” The 9th International Conference on Mobile Web Information Systems, Niagara Falls, Ontario, Canada, August 27-29, 2012.

A. Odeh, K. Elleithy and M. Faezipour

“Steganography in Arabic Text Using Kashida Variation Algorithm (KVA),” in Proceedings of the 9th IEEE Long Island Systems and Applications and Technology Conference (IEEE LISAT’13), Long Island, NY, May 2013.

FACULTY Publications

A. Al-Rahayfeh, M. Faezipour

"Enhanced Frame Rate for Real-Time Eye Tracking Using Circular Hough Transform," in Proceedings of the 9th IEEE Long Island Systems and Applications and Technology Conference (IEEE LISAT'13), Long Island, NY, May 2013.

D. Saber, N. Fadhil, P. Patra, M. Faezipour

"Intravascular Multi-Layered Glucose Sensor for an Artificial Pancreas," in Proceedings of the 9th IEEE Long Island Systems and Applications and Technology Conference (IEEE LISAT'13), Long Island, NY, May 2013

H. Ocbagabir, K. Aboalayon and M. Faezipour

"Efficient EEG Analysis for Seizure Monitoring in Epileptic Patients," in Proceedings of the 9th IEEE Long Island Systems and Applications and Technology Conference (IEEE LISAT'13), May 2013. Long Island, NY, May 2013.

O. Abuzaghle, M. Faezipour, B. D. Barkana

"SKINaid: A Virtual Reality System to Aid in the Skin Cancer Prevention and Pain Treatments," in Proceedings of the 9th IEEE Long Island Systems and Applications and Technology Conference (IEEE LISAT '13), Long Island, NY, May 2013.

A. Abushakra, M. Faezipour

"Conceptual Framework of a Virtual Reality Environment to Assist Lung Cancer Patients," in Proceedings of the IEEE EMBS Micro and Nanotechnology in Medicine Conference (IEEE MNM'12), pp. 20, Westin Maui, HI, Dec. 2012.

A. Abushakra, M. Faezipour

"Estimating Lung Capacity from Acoustic Signal of Respiration," in Proceedings of the IEEE EMBS Micro and Nanotechnology in Medicine Conference (IEEE MNM'12), pp. 19, Westin Maui, HI, Dec. 2012.

A. Abushakra, M. Faezipour

"Lung Capacity Estimation Through Acoustic Signal of Breath," in Proceedings of the 12th IEEE International Conference on Bio Informatics and Bio Engineering (IEEE BIBE), pp. 386-391, Larnaca, Cyprus, Nov. 2012.



A. Abushakra, M. Faezipour

"An Automated Approach Towards Estimating Lung Capacity from Respiration Sounds," in Proceedings of the IEEE Healthcare Innovations Conference (IEEE HIC'12), pp. 232-235, Houston, TX, Nov. 2012.

A. Abushakra, M. Faezipour, A. Abumunshar,

"Efficient Frequency - Based Classification of Respiratory Movements," in Proceedings of the IEEE International Conference on Electro/Information Technology (IEEE EIT'12), pp.1-5, Indianapolis, IN, May 2012.

L. Almazaydeh, K. Elleithy, M. Faezipour

"Detection of Obstructive Sleep Apnea through ECG Signal Features," in Proceedings of the IEEE International Conference on Electro/Information Technology Conference (IEEE EIT 2012), pp.1-5, Indianapolis, IN, May 6-8, 2012.

L. Almazaydeh, K. Elleithy, M. Faezipour

"Obstructive Sleep Apnea Detection Using SVM-Based Classification of ECG Signal Features," in Proceedings of the 34th Annual International Conference of the IEEE Engineering in Medicine and Biology (IEEE EMBC'12), pp. 4938-4941, San Diego, CA, Aug.-Sep. 2012.

S. Bhosale, A. Aphale, I. Macwan

M. Faezipour, P. Bhosale and P. Patra

"Computer Assisted Detection of Liver Neoplasm (CADLN)," in Proceedings of the 34th Annual International Conference of the IEEE Engineering in Medicine and Biology (IEEE EMBC '12), pp. 1510-1513, San Diego, CA, Aug.-Sep. 2012.

L. Almazaydeh, K. Elleithy M. Faezipour, H. Ocbagabir

"SVM-Based Sleep Apnea Identification Using Optimal RR-Interval Features of ECG Signal," in Proceedings of the IEEE Healthcare Innovation Conference, (IEEEHIC 2012), pp. 278-281, Houston, TX, Nov. 2012.

L. Almazaydeh, K. Elleithy, V. Pande, M. Faezipour

"Development of OSA Event Detection Using Threshold Based Automatic Classification," in Proceedings of 25th International Conference on Computer Applications in Industry and Engineering (CAI N E 20 12), New Orleans, LA, Nov. 2012.

L. Almazaydeh, K. Elleithy, V. Pande, M. Faezipour

"OSA Screening Test at the Patient's Home," in Proceedings of the IEEE EMBS Conference on Micro and Nanotechnology in Medicine (IEEE MNMC 2012), pp. 17, Westin Maui, HI, Dec. 2012.

K. Rangarajan, S. Long, N. Ziemer, N. Lewis,

"An Evaluative Economic Development Typology for Sustainable Rural Economic Development." Community Development, Vol. 43, No. 3, July 2012, pp. 320-332.

G. Eschenbach, N. Lewis,

"Using When to Start Collecting Social Security as a Student Case Study," Advances in Financial Education, Vol. 10, No. 1&2, 2012.

G. Selig, E. Kongar, N. Lewis, C. Bach, T. Sobh

"The Proposed Ph.D. in Technology Management at the University of Bridgeport - A Case Study," International Journal of Information and Operations Management Education (accepted for publication; available online).

G. Selig, E. Kongar, N. Lewis, C. Bach

“The Proposed Ph.D. in Technology Management at the University of Bridgeport: A Case Study of Why, What and How?” International Journal of Information and Operations Management Education, April-May, 2013.

G. Selig

“Critical Success Factors for Winning Entrepreneurs: Do You Have What It Takes to Become a Bill Gates?” Edith Wheeler Memorial Library Presentation, May 14, 2013.

G. Selig

“Excellence in Program, Project and Portfolio Management: Lessons learned and Critical Success Factors from World Class Case Study Companies,” SNECPM Annual Conference, Hartford, CT, April 29, 2013.

G. Selig

“Achieving and Measuring IT Value to the Business: Why, What, How Much and How? (Based on Current and Emerging Best Practices and Case Studies), Webinar for Computer Aid Inc. (CAI), March 27, 2013.

G. Selig

“Successful Business/IT Alignment, Execution and Governance Best Practices: Why, What and How?” Webinar for Computer Aid Inc. (CAI), October, 9, 2012.

G. Selig

“New Service Delivery Model Strategy and Implementation: How to Minimize Risk and Maximize Opportunity,” in Proceedings of World BPO/ITO Forum, New York Athletic Club, New York City, June 26-27, 2012.

G. Selig

“An Overview of Current and Emerging Program and Project Management Best Practices and Lessons Learned,” Webinar for Citibank, NA, May 15, 2012.

G. Selig

“Implementing a Winning IT Governance Strategy and Program,” Webinar for Computer Aid Inc. (CAI), February 29, 2012.

N. Lewis, G. Nicholls, Z. Jiang

“Investigating the Real Option Volatility Parameter,” 2012 Industrial and Systems Engineering Research Conference, Orlando, Florida, May 2012 (presentation only).

G. Nicholls, N. Lewis, L. Zhang, J. Hartman

“Breakeven Volatility for Real Option Valuation,” 2012 Industrial and Systems Engineering Research Conference, Orlando, Florida, May 2012 (presentation only).

M. Weng, T. Eschenbach, N. Lewis

“What's the Right Inputs for the WACC?” 2012 Industrial and Systems Engineering Research Conference, Orlando, Florida, May 2012 (presentation only).

T. Eschenbach, G. Nicholls, N. Lewis

“Is PW Useful for the Lorie-Savage Oil Pump Problem?” 2012 Industrial and Systems Engineering Research Conference, Orlando, Florida, May 2012 (presentation only).

T. Eschenbach, N. Lewis, Y. Zhang

“When to Start Collecting Social Security: Designing a Case Study,” 2012 National Conference, American Society for Engineering Education, San Antonio, Texas, June 2012. Winner of the Engineering Economy Division Best Paper Award. Winner of the ASEE Professional Interest Council #1 Best Paper Award. One of six finalists (out of 1506 submitted papers) for conference best paper.

T. Eschenbach, N. Lewis

“Using When to Start Collecting Social Security as a Student Case Study,” 2012 Financial Education Association Annual Conference, Academy of Business Education, Charleston, South Carolina, September 2012. Won Honorable Mention in conference best paper competition.

T. Oun, N. Lewis, T. Eschenbach

“The Mean Reversion Tendency of Oil Prices,” 2012 National Conference, American Society for Engineering Management, Virginia Beach, VA, October 2012.

G. Nicholls, N. Lewis, L. Zhang

“Breakeven Volatility for Real Option Valuation,” 2012 National Conference, American Society for Engineering Management, Virginia Beach, VA, October 2012.

N. Lewis, G. Nicholls, Z. Jiang

“The Real Option Volatility Parameter,” 2012 National Conference, American Society for Engineering Management, Virginia Beach, VA, October 2012.

Y. Xiaowei, X. Xingguo

“Voltage Downscaling with Logic Shut-Down for Low-Power VLSI Design,” poster in 2013 ASEE Northeast Section Conference, March 14-16, 2013, Norwich University, Northfield, VT.

M. Zankhanaben, X. Xingguo

“A Novel Magnetic BioMEMS Micropump-mixer with Continuously-adjustable Mixing Ratio,” poster in 2013 ASEE Northeast Section Conference, March 14-16, 2013, Norwich University, Northfield, VT.

X. Jingyun, Y. Lile, X. Xingguo, P. Prabir

“A Magnetic Micropump with Tri-membrane Fully Differential Structure,” poster in 2013 ASEE Northeast Section Conference, March 14-16, 2013, Norwich University, Northfield, VT.

M. Xiao, X. Xingguo

“Implementation of Genetic Algorithm in Matlab for VLSI Partitioning,” poster in 2013 ASEE Northeast Section Conference, March 14-16, 2013, Norwich University, Northfield, VT.

P. Umatri, X. Xingguo

“Pre-computation based Logic Shut-down Technique for Low Power Multiplier,” poster in 2013 ASEE Northeast Section Conference, March 14-16, 2013, Norwich University, Northfield, VT. ■