

Faculty Scholarship 2013-2016

Anaya, Leticia – Senior Lecturer

Conference Publications

1. Anaya, L. Visinescu, L., (2013), "International Engineering Education Journals: Past, Present and Potential Research Directions," 2013 ASEE Annual Conference, June 23 - 26, 2013. Atlanta, Georgia
2. Alfadhli, H., and Anaya, L., "Newspaper Vendor Problem Simulation of Manufacturing Operations," ASEE Southeastern Section Conference , March 10-12, 2013, Tennessee Technological University, Cookeville, TN.
3. Canchola, R. and Anaya, L. (2014) "Technology Acceptance Model (TAM) for Engineering 3D CAD Systems", 2015 ASEE Midwest Section Conference, University of Arkansas, Fort Smith, Arkansas, September 24-26, 2014.

Barbieri, Enrique – Professor & Chair

Conference Publications

1. S. Yousefi, N. Joshua, H. Bostanci, E. Barbieri, "Automation of a Heat-Shrink Tubing Process", IAJC/ISAM Joint International Conference, Orlando, FL, September 2014.
2. E. Barbieri, "Answering a Renewed Call for Action in Engineering Technology", ASEE Annual Conference and Exposition, Indianapolis, IN, June 2014.

Funding

1. United Engineering Foundation, "Inventiones de Nuestra Inventiva: Employing KUHf-s -Engines of Our Ingenuity- to Increase Engineering Awareness and Education Opportunities in the Hispanic Community", \$336,350, 2011-2014 Project websites:
<http://www.uh.edu/engines/episodes-spanish.html> ; <http://inventiones.coe.uh.edu/index.cfm>;
http://www.kntu.com/index.php?option=com_content&view=category&id=34&Itemid=69
 - a. E. Barbieri and A. Boggiano, University of North Texas, \$50,000 Jan-Dec 2014.
 - b. E. Barbieri, A. Boggiano, and A. Albarran, \$103,850 (University of North Texas \$87,950; A. Bencomo and B. Robin, University of Houston \$15,900), Jan-Dec 2013.
 - c. A. Bencomo, E. Barbieri, A. Boggiano, and B. Robin, \$92,000 (University of Houston \$70,200; University of North Texas \$21,800), Jan-Dec 2012.
 - d. E. Barbieri, A. Boggiano, and M. Soliño, \$90,500, University of Houston , Jan-Dec 2011.
2. Labinal/Safran Inc.*, Denton, Texas. H. Bostanci, A. Nouri, and E. Barbieri, "Automated Heat Shrink Harnessing Device (AHSHD), \$14,356 (2013)

Bostanci, Huseyin – Assistant Professor

Journal Publications

1. Bostanci, H., Rini, D.P., Kizito, J.P., Singh, V., Seal, S., Chow, L.C., "High Heat Flux Spray Cooling with Ammonia: Investigation of Enhanced Surfaces for HTC," International Journal of Heat and Mass Transfer, vol. 75, pp. 718-725, 2014.
2. Bostanci, H., Singh, V., Seal, S., Kizito, J.P., Rini, D.P., Chow, L.C., "Micro Scale Surface Modifications for Heat Transfer Enhancement," ACS Applied Materials and Interfaces, 5 (19), pp. 9572-9578, 2013.
3. Wu, W., Bostanci, H., Chow, L.C., Hong, Y., Ding, S.J., Su, M., Kizito, J.P., "Jet Impingement Heat Transfer Using

Faculty Scholarship 2013-2016

Air-Laden Nanoparticles with Encapsulated Phase Change Materials," ASME Journal of Heat Transfer, vol. 135, pp. 052202-1-8 , 2013.

4. Wu, W., Bostanci, H., Chow, L.C., Hong, Y., Ding, J.S., Su, M., Kizito, J.P., "Heat Transfer Enhancement of PAO in Microchannel Heat Exchanger using Nano-Encapsulated Phase Change Indium Particles," International Journal of Heat and Mass Transfer, vol. 58, pp. 348– 355, 2013.

Conference Publications

1. Obuladinne, S.S.*, Bostanci, H., "Two-Phase Spray Cooling with Water/2-Propanol Binary Mixture: Investigation of Mass Diffusion Resistance," Proc. ASME IMECE 2016, Phoenix, AZ, November 11-17, 2016.
2. Kurwitz, R.C., Bostanci, H., Yang, X., Poston, J., Peddicord, K., "Systems Engineering Initiative- Undergraduate Education Enhancement in a Regional Education Network," Proc. 3rd IAEA International Conference on Nuclear Knowledge Management, Vienna, Austria, November 7-11, 2016.
3. Bagheri, A.*, Kondapally, S., Bostanci, H., Foster, P.R., Yu, C., "Simulation and Visualization of an Innovative Rotary Displacer Stirling Engine Operation," Proc. 2016 ASEE- GSW Annual Conference, Fort Worth, TX, March 6-8, 2016.
4. Harikrishnan, M.S., Hayes, R.G., Bostanci, H., Barbieri, E., "Control and Automation of a Heat Shrink Tubing Process," Proc. 2016 ASEE-GSW Annual Conference, Fort Worth, TX, March 6-8, 2016.
5. Bostanci, H., Joshua, N.E.*, "Nucleate Boiling of Dielectric Liquids on Hydrophobic and Hydrophilic Surfaces," Proc. ASME IMECE 2015, Houston, TX, November 13-29, 2015.
6. Bagheri, A.*, Bostanci, H., Foster, P.R., "Preliminary Analysis of an Innovative Rotary Displacer Stirling Engine," Proc. ASME IMECE 2015, Houston, TX, November 13-29, 2015.
7. Yaddanapudi, S.J.*, Bostanci, H., "Spray Cooling with HFC-134a and HFO-1234yf for Thermal Management of Automotive Power Electronics," Proc. ASME IMECE 2015, Houston, TX, November 13-29, 2015.
8. Joshua, N.E.*, Ajakumar, D.K.*, Bostanci, H., "Nucleate Boiling of Dielectric Liquids on Hydrophobic-Patterned Surfaces," Proc. ASME IMECE 2014, Quebec, Canada, November 14-20, 2014.
9. Yousefi-Darani, S., Joshua, N.E.*, Bostanci, H., Barbieri, E., "Automating a Heat Shrink Tubing Process," Proc. IAJC/ISAM Joint Int. Conf., ISBN 978-1-60643-379-9, Orlando, FL, September 25-27, 2014.

Funding

1. "Experimental Evaluation of an Innovative Rotary Displacer Stirling Engine as Heat-to-Power Generator," H. Bostanci (PI), UNT ORED Research Seed Grant, 2/2016-8/2016, \$10,000
2. "NPI-UNT Partnership on Nuclear Education Program and Systems Engineering Initiative Team," H. Bostanci (PI), J. Davis (SP), Nuclear Power Institute-Texas A&M Engineering Experiment Station, 9/2015-10/2016, \$40,774 (+ \$29,436 amendment for FY17 is pending)
3. "Planning for the Establishment of Systems Engineering Initiative Teams at UNT," H. Bostanci (PI), J. Davis (SP), Nuclear Power Institute-Texas A&M Engineering Experiment Station, 5/2015-7/2015, \$5,000
4. "Spray Cooling System," H. Bostanci (PI), American Science & Engineering, Inc., 2-7/2015, \$26,577 (Phase I)
5. "Spray Cooling: An Advanced Thermal Management Technique for Space Applications," H. Bostanci (PI), NASA Texas Space Grant Consortium, New Investigator Program, 9/2013-3/2015, \$10,000
6. "Advanced Thermal Management of Hybrid Vehicle Electronics," H. Bostanci (PI), UNT ROP (Research Opportunity Program) Grant, 9/2013-8/2014, \$7,500
7. "Energy Assessment on a Small-Scale House via Air Infiltration and Thermography Tests," H. Bostanci (PI), ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) Senior Undergraduate Project Award, 9/2013-4/2014, \$5,000

Faculty Scholarship 2013-2016

8. "Development of an Automated Heat Shrink Harnessing Device," H. Bostanci (PI), A. Nouri (Co-PI), E. Barbieri (Co-PI), Labinal Power Systems, Inc., 6/2013-11/2013, \$14,356 (Phase I)
9. "Development of Novel Surfaces for Enhanced Thermal Management of High Power Devices," H. Bostanci (PI), UNT RIG (Research Initiation Grant), 1/2013-8/2013, PI, \$7,500

Boubekri, Nourredine – Professor

Journal Publications

1. Boubekri, M, Boubekri, N, "Current State of –the– Art Smart Glazing and Building Skin Materials for Energy Efficiency and Greener Buildings; The Journal of MacroTrend in Energy and Sustainability; Vol 4 issue 1 2016
2. Boubekri, N, Vasim Shaikh, "Nanofluids Technology Applications", The Journal of Macro Trends in Technology and innovation, Vol 4, No1, 2016
3. Boubekri, N. Ian Cole "Mist characterization in Drilling 1018 steel". The Journal of Macro Trends in Technology and innovation; Vol 3, issue 1, 2015.
4. Boubekri, N. Ian Cole "A Technology Enabler in Machining: Nanofluids in Minimum Quantity Lubrication". The Journal of Macro Trends in Technology and innovation; Vol 3, issue 1, 2015.
5. Boubekri, M; Boubekri, N; "Use of 3D printing Technology in Architectural Research" ; Journal of Engineering and Architecture; Vol 3, No 2, 2015.
6. Boubekri, N, Alqahtani, M, "Economics of Additive Manufacturing" Int'l Journal of Advances in Mechanical & Automotive Engg. (IJAMAE) Vol 2, issue 1 (2015).
7. Boubekri, N., Shaikh, V., "Minimum Quantity Lubrication (MQL) in Machining: Benefits and Drawbacks", Journal of Industrial and Intelligent Information, Vol 3, No 3 2015.
8. Shaikh, V., Boubekri, N., Sharf, T.W., "Analyzing the Effectiveness of Microlubrication Using Vegetable Oil-Based Metal Working Fluid During End Milling", International Journal of Manufacturing Engineering, V 2014 13 pages
9. Shaikh, V., Boubekri, N., and Scharf, T. W., "Microlubrication Effects During End Milling AISI 1018 Steel", International Journal of Manufacturing, Materials and Mechanical Engineering, 3(4), (2014), pp. 14-29.
10. Nourredine Boubekri, Vasim Shaikh, "Minimum Quantity Lubrication (MQL) in Machining,"; Journal of Management and Engineering Integration, Vol 6, No2, pp 51-61, 2013

Conference Publications

1. Boubekri, N, "Sustainable Design and Manufacturing", 4th Macro Trends Conference on Technology and Innovation, Paris France Dec 2016; Keynote speaker
2. Nourredine Boubekri, Vasim Sheikh "Nanofluids Technology Applications"; 4th MacroTrend Conference on Technology and Innovation; Paris (France), Dec 2016.
3. Mohamed Boubekri, Nourredine Boubekri "Current State of –the– Art Smart Glazing and Building Skin Materials for Energy Efficiency and Greener Buildings"; 4th MacroTrend Conf. on Tech. & Innov. Paris (France), Dec 2016
4. Boubekri, N, "Green Design and Green Manufacturing"; 3rd International Conference Recent trends in Engineering and Technology (ICRET) Istanbul, Turkey, September 2 and 3, 2015. Keynote speaker
5. BOUBEKRI, N. "Managing Cost of Additive Manufacturing"; 3rd International Conference Recent trends in Engineering and Technology (ICRET) Istanbul, Turkey, September 2 and 3, 2015.
6. BOUBEKRI, N. VASIM, SHAIKH, FOSTER, P. "Management of Lubricants in Machining"; 19 Annual International Conference on Industry, Engineering, and Management Systems; FI March 2013

Faculty Scholarship 2013-2016

7. SHAIKH, V., BOUBEKRI, N. and SCHARF, T.W., (2013), "Microlubrication Effects in Milling AISI 1018 steel: An Approach Towards Green Manufacturing", 120th ASCE Annual Conference and Exposition.

Funding

1. "Research and Development in Additive manufacturing (3D Printing)"; (Principal Investigator), Emerson Corp.; \$24,000, 2014-2015

Huang, Zhenhua – Associate Professor

Journal Publications

1. Zhenhua Huang, Xingang Fan, Liping Cai, Sheldon Q. Shi (2016). Tornado hazard for structural engineering, *Natural Hazards (NHAZ)*, 83(3): 1821-1842.
2. Zhenhua Huang, Kaoshan Dai, Jianze Wang, H. Felix Wu (2016). Investigations of Structural Damage Caused by the Fertilizer Plant Explosion at West, Texas. I: Air-Blast Incident Overpressure, *ASCE - Journal of Performance of Constructed Facilities (JPCF)*, 30(4): 04015064(16).
3. Kaoshan Dai, Jianze Wang, Zhenhua Huang, H. Felix Wu (2016). Investigations of Structural Damage Caused by the Fertilizer Plant Explosion at West, Texas. II: Ground Shock, *ASCE - Journal of Performance of Constructed Facilities (JPCF)*, 30(4): 04015065(10).
4. Kaoshan Dai, Xiaofeng Li, Chuan Lu, Qingyu You, Zhenhua Huang, H. Felix Wu (2015). A Low-Cost Energy-Efficient Cableless Geophone Unit for Passive Surface Wave Surveys, *Sensors*, 15(10): 24698-24715.
5. Kaoshan Dai, Yichao Huang, Changqing Gong, Zhenhua Huang, Xiaosong Ren (2015). Rapid seismic analysis methodology for in-service wind turbine towers, *Earthquake Engineering and Engineering Vibration (EEEV)*, 14(3): 539-548.
6. Kaoshan Dai, Anthony Bergot, Chao Liang, Wei-Ning Xiang, Zhenhua Huang (2015). Environmental issues associated with wind energy - A review, *Renewable Energy*, 75: 911-921.
7. Kaoshan Dai, Xuehang Song, Xiaofeng Li, Zhenhua Huang, Yongdong Pan (2015). Application of the Surface Wave Survey Method on Multi-Scale Engineering Problems: Laboratory and Field Testing Case Studies, *ASTM – Journal of Testing and Evaluation (JOTE)*, 43(2): 443-4515
8. Kaoshan Dai, Xiaofeng Li, Xuehang Song, Gen Chen, Yongdong Pan, Zhenhua Huang (2014). Monitoring of CO₂ geological storage based on the passive surface waves, *International Journal of Mining Science and Technology (IJMST)*, 24(5): 707–711.
9. Zhenhua Huang, Sheldon Q Shi, Liping Cai (2014). Experimental analysis on strength and failure modes of wood beam-column connections, *Frontiers of Structural and Civil Engineering (FSCE)*, 8(3): 260–269.
10. Zhenhua Huang, Qutaibah Al-Saad, Seifollah Nasrazadani, H. Felix Wu (2014). Understanding and Optimizing the Geosynthetic-Reinforced Steep Slopes, *Electronic Journal of Geotechnical Engineering (EJGE)*, 19(T): 5793-5811.
11. Titilola Adeleye, Meng Huang, Zhenhua Huang, Lili Sun (2013). Predicting Loss for Large Construction Companies, *ASCE - Journal of Construction Engineering and Management (JCEM)*, 139(9): 1224-1236.

Conference Publications

1. Zhenhua Huang, Elias Kougiianos, Shuping Wang (2016). A New Interdisciplinary Engineering/Technology Education Strategy Using State-of-the-art Wireless Sensor Networks, *Envisioning the Future of Undergraduate STEM Education (EnFUSE): Research and Practice*, April 27-29, 2016, Washington, DC.
2. Kaoshan Dai, Ying Wang, Andrew Hedric, Zhenhua Huang (2016). Dynamic behaviors of historical wrought iron

Faculty Scholarship 2013-2016

truss bridges – a field testing case study, Proceedings of 2016 SPIE Smart Structures/NDE, Vol. 9804: 98040F, March 20-24, 2016, Las Vegas, Nevada.

3. Kaoshan Dai, Xiaofeng Li, Chuan Lu, Qingyu You, Zhenhua Huang, H. Felix Wu (2015). Development of a low-cost cableless geophone and its application in a micro-seismic survey at an abandoned underground coal mine. Proceedings of 2015 SPIE Smart Structures/NDE SSN09, Vol. 9437: 94371I, March 8-12, 2015, San Diego, California.
4. Kaoshan Dai, Xiaofeng Li, Chuan Lu, Qingyu You, Zhenhua Huang (2014). Application of a Low-cost Wireless Seismological Sensor for the Surface Wave Survey in a Wind Farm, Proceeding of 5th Asia-Pacific Workshop on Structural Health Monitoring Conference (APWSHM 2014), December 4-5, 2014, Shenzhen, China.
5. Kaoshan Dai, Zhenhua Huang (2014). Bridge Field Testing by Using Wireless and Laser Doppler Sensing Technologies – Case Studies. Proceedings of 7th International Conference on Bridge Maintenance, Safety and Management (IABMAS 2014), Paper ID: 0269P, July 7-11 2014, Shanghai, China.
6. Kaoshan Dai, Yichao Huang, Zhenhua Huang, Gang Zong, Weixing Shi (2013). Experimental case studies on wireless and wired sensors, Proceedings of 2013 SPIE Smart Structures/NDE SSN09, Vol. 8694: 86941N, March 10-14, 2013, San Diego, California.
7. Zhenhua Huang, H. Felix Wu (2013). Full-scale testing of civil structures using wireless sensing technologies, Proceedings of 2013 SPIE Smart Structures/NDE SSN09, Vol. 8694: 86941M, March 10-14, 2013, San Diego, California.

Funding

1. NSF: CIF21DIBBS: EI: VIFI: Virtual Information-Fabric Infrastructure for Data-Driven Decisions from Distributed Data, 2016-2020, UNT budget \$102,559, UNT PI
2. NSF-TUES: A New Interdisciplinary Technology Education Strategy Using State-of-art Wireless Sensor Network, 2013-2016, DUE-1244129, \$199,309, PI
3. NSF-RAPID: Investigation of the Blast Loading for the Fertilizer Plant Explosion at West, Texas, 2013-2014, CMMI-1342469, \$10,000, PI
4. Industrial Contract for Beijing Zeyang Fine Art Building Finishing Corporation: Synthesis and Education on U.S. Building Finishing Materials, Designs, and Constructions, 2014, \$10,000, PI.
5. UNT-IGRO: Global Discovery: Workshops and Collaborative Research Activities on Global Wind and Earthquake Hazard Mitigations, 2014, \$9,715, PI

Kougianos, Elias – Professor

Book Chapters

1. E. Kougianos and S. P. Mohanty, "SPICEless RTL Design Optimization of Nanoelectronic Digital Integrated Circuits", in Nano-CMOS and Post-CMOS Electronics: Circuits and Design, A. Srivastava and S. P. Mohanty (Editors), Institution of Engineering and Technology (IET), 2016, ISBN: 978-1-84919-999-5
2. V. P. Yanambaka, S. P. Mohanty, E. Kougianos and D. Ghai, "Nanoscale high- κ /metal gate CMOS and FinFET based logic libraries", in Nano-CMOS and Post-CMOS Electronics: Devices and Modelling, S. P. Mohanty and A. Srivastava (Editors), Institution of Engineering and Technology (IET), 2016, ISBN: 978-1-84919-997-1
3. S. P. Mohanty and E. Kougianos, "Polynomial Metamodel-Based Fast Optimization of Nanoscale PLL Components", in Models, Methods, and Tools for Complex Chip Design: Selected Contributions from FDL 2012, Jan Haase (Editor), Springer, 2014, pp. 179-200. ISBN: 978-3-319-01417-3

Faculty Scholarship 2013-2016

Patents

1. S. P. Mohanty and E. Kougianos, "Methodology for Nanoscale Technology based Mixed-Signal System Design", US Patent 9,053,276 issued on June 9, 2015.
2. S. P. Mohanty, E. Kougianos and G. Zheng*, "An Intelligent Metamodel Integrated Verilog-AMS for Fast and Accurate Analog Block Design Exploration", US Patent 9,026,964 issued on May 5, 2015.

Journal Publications

1. U. Albalawi*, S. P. Mohanty and E. Kougianos, "A New Region Aware Invisible Robust Blind Watermarking Approach", Springer Multimedia Tools and Applications Journal, 2017, Accepted on 12 Oct. 2016.
2. S. Joshi*, S. P. Mohanty and E. Kougianos, "Everything You Wanted to Know about PUFs", IEEE Potentials, 2016, Accepted on 11 Oct. 2015 – to appear in the March/April 2017 issue.
3. S. P. Mohanty, U. Choppali and E. Kougianos, "Everything You Wanted to Know about Smart Cities", IEEE Consumer Electronics Magazine, Vol. 6, No. 3, pp. 60-70, July 2016. DOI: 10.1109/MCE.2016.2556879
4. S. Joshi*, S. P. Mohanty and E. Kougianos, "Simscape® based ultra-fast design exploration: graphene-nanoelectronic circuit case studies", Springer Analog Integrated Circuits and Signal Processing Journal, Vol. 87, No. 3, pp. 407-420, June 2016. DOI: 10.1007/s10470-016-0732-2
5. E. Kougianos, S. P. Mohanty, G. Coelho*, U. Albalawi* and P. Sundaravadivel*, "Design of a High Performance System for Secure Image Communication in the Internet of Things" (Invited Paper), IEEE Access, Vol. 4, pp. 1222 – 1242, 2016. DOI: 10.1109/ACCESS.2016.2542800
6. M. L. Rajaram*, E. Kougianos, S. P. Mohanty and U. Choppali, "Wireless Sensor Network Simulation Frameworks: A Tutorial Review", IEEE Consumer Electronics Magazine, Vol. 5, No. 2, pp. 63 – 69, April 2016. DOI: 10.1109/MCE.2016.2519051
7. E. Kougianos, and S. P. Mohanty, "A Nature-Inspired Firefly Algorithm Based Approach for Nanoscale Leakage Optimal RTL Structure", VLSI Integration Journal (Elsevier), Vol. 51, September 2015, pp. 46 – 60 DOI: 10.1016/j.vlsi.2015.05.004
8. S. P. Mohanty, and E. Kougianos, "Polynomial Metamodel Based Fast Optimization of Nano-CMOS Oscillator Circuits", Analog Integrated Circuits and Signal Processing (Springer), Vol. 79, No. 3, June 2014, pp. 437-453 DOI: 10.1007/s10470-014-0284-2
9. O. Okobiah*, S. P. Mohanty, and E. Kougianos, "Fast Design Optimization through Simple Kriging Metamodeling: A Sense Amplifier Case Study", IEEE Transactions on Very Large Scale Integration Systems (TVLSI), Vol. 22, No. 4, April 2014, pp. 932-937 DOI: 10.1109/TVLSI.2013.2256436
10. O. Okobiah*, S. P. Mohanty, and E. Kougianos, "Nano-CMOS Thermal Sensor Design Optimization for Efficient Temperature Measurement", VLSI Integration Journal (Elsevier), Vol. 47, No. 2, March 2014, pp. 195-203 doi:10.1016/j.vlsi.2013.10.001
11. S. P. Mohanty and E. Kougianos, "Incorporating Manufacturing Process Variation Awareness in Fast Design Optimization of Nanoscale CMOS VCOs", IEEE Transactions on Semiconductor Manufacturing (TSM), Vol. 27, No. 1, February 2014, pp. 22-31 DOI: 10.1109/TSM.2013.2291112
12. S. P. Mohanty, M. Gomathisankaran, and E. Kougianos, "Variability-Aware Architecture Level Optimization Techniques for Robust Nanoscale Chip Design", Elsevier International Journal on Computers and Electrical Engineering (IJCEE), Vol. 40, No. 1, January 2014, pp. 168-193 doi:10.1016/j.compeleceng.2013.11.026
13. U. Choppali, E. Kougianos, S. P. Mohanty and B. Gorman, "Influence of Annealing on Polymeric Precursor ZnO Thin Films on Sapphire", Elsevier Journal of Thin Solid Films (TSF), Vol. 545, October 2013, pp. 466-470 doi:10.1016/j.tsf.2013.07.085
14. O. Okobiah*, S. P. Mohanty, and E. Kougianos, "Geostatistical-Inspired Fast layout Optimization of a Nano-

Faculty Scholarship 2013-2016

CMOS Thermal Sensor”, IET Circuits, Devices & Systems (CDS), Vol. 7, No. 5, September 2013, pp. 253-262 DOI: 10.1049/iet-cds.2012.0358

Conference Publications

1. M. L. Rajaram*, E. Kougianos, S. P. Mohanty, and P. Sundaravadivel* ,“A Wireless Sensor Network Simulation Framework for Structural Health Monitoring in Smart Cities”, in proceedings of the 6th IEEE International Conference on Consumer Electronics - Berlin, (ICCE – Berlin), 2016, pp. 78-82. DOI:10.1109/ICCE-Berlin.2016.7684722
2. U. Albalawi*, S. P. Mohanty and E. Kougianos, “Energy-Efficient Design of the Secure Better Portable Compression Architecture for Trusted Image Communication in the IoT”, in proceedings of the 15th IEEE Computer Society Annual Symposium on VLSI (ISVLSI), 2016, pp. 302-307. DOI: 10.1109/ISVLSI.2016.21
3. P. Sundaravadivel*, S. P. Mohanty, E. Kougianos and U. Albalawi*, “An Energy Efficient Sensor for Thyroid Monitoring through IoT”, in proceedings of the 17th IEEE International Conference on Thermal, Mechanical and Multi-Physics Simulation and Experiments in Microelectronics and Microsystems (EuroSimE), 2016, pp. 1-4. DOI: 10.1109/EuroSimE.2016.7463377
4. U. Albalawi*, S. P. Mohanty and E. Kougianos, “SBPG: A Better Portable Graphics Compression Architecture for High Speed Trusted Image Communication in IoT”, in proceedings of the 17th IEEE International Conference on Thermal, Mechanical and Multi-Physics Simulation and Experiments in Microelectronics and Microsystems (EuroSimE), 2016, pp. 1-5. DOI: 10.1109/EuroSimE.2016.7463377
5. G. Coelho*, E. Kougianos and S. P. Mohanty, “An IoT-Enabled Modular Quadrotor Architecture for Real-Time Aerial Object Tracking”, in proceedings of the 1st IEEE International Symposium on Nanoelectronic and Information Systems, 2015, pp. 197 – 202 (blind review) DOI: 10.1109/iNIS.2015.10
6. U. Albalawi*, S. P. Mohanty and E. Kougianos, “A Hardware Architecture for Better Portable Graphics (BPG) Compression Encoder”, in proceedings of the 1st IEEE International Symposium on Nanoelectronic and Information Systems, 2015, pp. 291 – 296 (blind review) DOI: 10.1109/iNIS.2015.12
7. E. Kougianos, S. Joshi*, and S. P. Mohanty, “Multi-Swarm Optimization of a Graphene FET Based Voltage Controlled Oscillator Circuit”, in proceedings of the 14th IEEE Computer Society Annual Symposium on VLSI (ISVLSI), 2015, pp. 567 – 572 (blind review) DOI: 10.1109/ISVLSI.2015.24
8. S. Joshi*, E. Kougianos and S. P. Mohanty, “Simscape based Ultra-Fast Design Exploration of Graphene-Nanoelectronic Systems”, in proceedings of the 14th IEEE Computer Society Annual Symposium on VLSI (ISVLSI), 2015, pp. 292 – 296 (blind review) DOI: 10.1109/ISVLSI.2015.25
9. S. P. Mohanty, E. Kougianos and V. P. Yanambaka*, “Ultra-Fast Variability-Aware Optimization of Mixed-Signal Designs using Bootstrapped Kriging”, in proceedings of the 16th IEEE International Symposium on Quality Electronic Design (ISQED), 2015, pp. 239 – 242, 2015 (blind review) DOI:10.1109/ISQED.2015.7085432
10. O. Okobiah*, S. P. Mohanty, and E. Kougianos, “Exploring Kriging for Fast and Accurate Design Optimization of Nanoscale Analog Circuits”, in proceedings of the 13th IEEE Computer Society Annual Symposium on VLSI (ISVLSI) 2014, pp. 244 – 247, 2014 (blind review) DOI: 10.1109/ISVLSI.2014.12
11. E. Agu*, S. P. Mohanty, E. Kougianos, and M. Gautam*, “Simscape Based Design Flow for Memristor Based Programmable Oscillators”, in proceedings of the 23rd ACM/IEEE Great Lakes Symposium on VLSI (GLSVLSI) 2014, pp. 223-224 (blind review, 29 regular papers, 20 short papers, and 27 poster papers accepted out of 79 submissions, acceptance rate 42.4%).
12. T. S. Das, P. Ghosal, S. P. Mohanty, and E. Kougianos, “A Performance Enhancing Hybrid Locally Mesh Globally Star NoC Topology”, in proceedings of the 23rd ACM/IEEE Great Lakes Symposium on VLSI (GLSVLSI) 2014, pp. 69-70 (blind review, 29 regular papers, 20 short papers, and 27 poster papers accepted out of 79 submissions, acceptance rate 42.4%).

Faculty Scholarship 2013-2016

13. O. Okobiah*, S. P. Mohanty, and E. Kougianos, "Kriging Bootstrapped Neural Network Training for Fats and Accurate Process Variation Analysis", in proceedings of the 15th IEEE International Symposium on Quality Electronic Design (ISQED) 2014, pp. 365-372 (blind review) DOI: 10.1109/ISQED.2014.6783349
14. A. Khan*, S. P. Mohanty, and E. Kougianos, "Statistical Process Variation Analysis of a Graphene FET based LC-VCO for WLAN Applications", in proceedings of the 15th IEEE International Symposium on Quality Electronic Design (ISQED) 2014, pp. 569-574 (blind review) DOI: 10.1109/ISQED.2014.6783377
15. O. Okobiah*, S. P. Mohanty, and E. Kougianos, "Fast Statistical Process Variation Analysis Using Universal Kriging Metamodeling: A PLL Example", in proceedings of the 56th IEEE International Midwest Symposium on Circuits & Systems (MWSCAS) 2013, pp. 277-280 DOI:10.1109/MWSCAS.2013.6674639
16. G. Zheng*, S. P. Mohanty, E. Kougianos, and O. Okobiah* "Polynomial Metamodel Integrated Verilog-AMS for Memristor-Based Mixed-Signal System Design", in proceedings of the 56th IEEE International Midwest Symposium on Circuits & Systems (MWSCAS) 2013, pp. 916-919 DOI:10.1109/MWSCAS.2013.6674799
17. G. Zheng*, S. P. Mohanty, E. Kougianos, and O. Okobiah* "iVAMS: Intelligent Metamodel-Integrated Verilog-AMS for Circuit-Accurate System-Level Mixed-Signal Design Exploration", in proceedings of the 24th IEEE International Conference on Application-specific Systems, Architectures and Processors (ASAP) 2013, pp. 75 – 78, 2013 (61 papers accepted out of 125 submissions, acceptance rate 48.8%) DOI: 0.1109/ASAP.2013.6567553
18. O. Okobiah*, S. P. Mohanty, and E. Kougianos, "Geostatistics Inspired Fast Layout Optimization of a Nanoscale CMOS Phase Locked Loop", in proceedings of the 14th IEEE International Symposium on Quality Electronic Design (ISQED) 2013, pp. 546 – 551, 2013 (blind review) DOI:10.1109/ISQED.2013.6523664

Funding

1. Z. Huang, E. Kougianos, and S. Wang. A New Interdisciplinary Technology Education Strategy Using State-of-art Wireless Sensor Network NSF \$199K (Total) (Kougianos, 33%) 10/15/2013 – 09/30/2016
2. S. Mohanty and E. Kougianos. Low-Latency Embedded Vision Processor (LLEVS), Air Force STTR Phase I, \$45K (Total) (Kougianos, 50%) 08/03/2015 – 04/29/2016
3. E. Kougianos and S. P. Mohanty (UNT), R. Mahapatra (TAMU). Introduction of Nanoelectronics Courses in Undergraduate Computer Science and Computer Engineering Curricula. NSF \$180K (Total), (Kougianos, 50%) 5/1/10 – 4/30/13

Mirshams, Reza - Professor

Journal Publications

1. Mehrooz. Zamanzadeh, Edward Larkin, Reza Mirshams, "Fatigue Failure Analysis Case Studies," Journal of Failure Analysis and Prevention, December 2015, Volume 15, Issue 6, 803-809.
2. Reza A. Mirshams, Zhenghang Zhao, Zhiqiang Wang, "Experimental Analysis and Computational Modeling of Pile-Up Formation in Nanoindentation," Mex. J. Mat. Sci. Eng. 1 (2014) 1-11.
3. Aleksandra Fortier, Vikranth Gullapalli, Reza A Mirshams, "Review of Biomechanical Studies of Arteries and Their Effect on Stent Implant Performance," International Journal of Cardiology, 2014.
4. Fang Wang, Boshen Fu, Huiyang Luo, Sarah Staggs, Reza A. Mirshams, William L. Cooper, Seong Y. Park, Moon J. Kim, Craig Hartley, Hongbing Lu, "Characterization of the Grain-Level Mechanical Behavior of Eglin Sand by Nanoindentation," Journal of Experimental Mechanics, 2014.
5. Reza Mirshams and Ashish Srivastava, "Effect of Pile-Up on Nanoindentation Measurements of Polycrystalline Bulk Metals," Advanced Materials Research, Vol. 853, (2014), pp. 143-150.

Faculty Scholarship 2013-2016

Conference Publications

1. Mehrooz. Zamanzadeh, Reza Mirshams, Peyman Taheri, "Cathodic Protection, Defective Coatings, Corrosion Pitting, Stress Corrosion Cracking, Soil," NACE - Corrosion Risk Management Conference Proceedings, Houston, Texas, May 23-25, 2016.
2. Pashupati Adhikari and Reza Mirshams, ASEE-GSW, "Knowledge Based System and Optimization of Ashby's Methodology in Materials Selection for Aircraft Cabin Metallic Structures, " ASEE-GSW, Texas Christian University (TCU), Fort Worth, Texas, March 6-8, 2016.
3. Reza Mirshams, Yong Tao, Xun Yu, Azize Akcayoglu, "Assessment Development for Accreditation of an Innovative Mechanical and Energy Engineering Program," Proceedings of IMECE, ASME, November 14-20, 2014, Montreal, Quebec, Canada.
4. Melissa Maria Monroy-Hernandez, Lorena Romero-Salazar, Reza Mirshams, Juan Carlos Arteaga-Arcos, "Determination of Mechanical Properties on Different Mexican Composite Portland Cements by Atomic Force Microscopy Nanoindentation," ATINER CONFERENCE PAPER SERIES No: CIV2014-1232.
5. Uzochukwu. C. Okafor, Reza Mirshams, "Mechanical Properties of D2 and A2 Tool Steels Evaluated using Nanoindentation," 2013 ECTC Proceedings ASME Early Career Technical Conference, Tulsa, Oklahoma. 2013.

Nasrazadani, Seifollah – Professor & Associate Chair

Book Chapters

1. CHAPTER 2 of "Handbook of Oil and Gas Industries," S. Nasrazadani, Sh. Hassani, "Modern Analytical Techniques and Materials Characterizations in Failure Analysis," Elsevier Publishing Company (2015) USA.

Journal Publications

1. Seifollah Nasrazadani, Venkata Venkatesh Nagulakonda*, Javier Barnes*, Andres, Garcia*, Amaal, Al-Shenawa*, and Nandika Ann D'Souza, "Effects of Heat Treatment Processes on Corrosion Resistance of Epoxy-Coated Rebar Steel", Journal of Failure Analysis and Prevention, October 2016, Vol. 16 Issue 5, pp. 896-901.
2. S. Nasrazadani, S. Nakka*, "Characterization of Corrosion Products in RTPF and All-Aluminum Microchannel Heat Exchangers", Journal of Failure Analysis and Prevention, April 2016, Volume 16, issue 2, pp 189-196.
3. S. Nasrazadani, R. Eghtesad*, E. Sudoi*, S. Vupputuri*, J.D. Ramsey, M. T. Ley, "Application of Fourier transform infrared spectroscopy to Study Concrete Degradation Induced by Biogenic Sulfuric Acid", Materials and Structures, May 2016, Volume 49, Issue 5, pp 2025-2034.
4. Sravanthi Vupputuri*, Badu Z. Fathepure, Gregory G. Wilber, Elias Sudoi*, Seifollah Nasrazadani, M. Tyler Lay, Joshua D. Ramsey, "Isolation of a Sulfur-Oxidizing Streptomyces sp. From Deteriorating Bridge Structures and its Role in Concrete Deterioration" International Biodeterioration & Biodegradation Vol. 97, January-February (2015) pp. 128-134.
5. Changlei Xia*, Sheldon Q Shi, Liping Cai, Seifollah Nasrazadani "Increasing the Nanoparticle Loading Efficiency by Introducing External Pressure during the Inorganic Nanoparticle Impregnation Process for Natural Fibers," International Journal of Industrial Crops and Products vol. 69 (2015) pp. 395-399.
6. Z. Huang, Q. Al-Saad*, and S. Nasrazadani, Understanding and Optimizing Geosynthetic-Reinforced Steep Slopes, Electronic Journal of Geotechnical Engineering Vol. 19, 2014.
7. S. Nasrazadani and Tyler Springfield*, " Application of Infrared Spectroscopy in Cement Alkali Quantification", Journal of Materials and Structures, Vol.47, pp. 1607-1615 (2014).

Faculty Scholarship 2013-2016

8. S. Nasrazadani and P. White*, "Failure Analysis of a Fractured Wrench Socket", Journal of Failure Analysis and Prevention, Vol. 13: pp. 673-677 (2013).
9. S. Nasrazadani, K. Kallenberger*, and H. Vaughan*, Design and Construction of a Cost Effective Jominy Bar Testing Setup, Journal of Materials Education, Vol. 35 (3-4): pp. 57-70 (2013).

Conference Publications

1. S. Nasrazadani, N. Gupta*, A. Bastola*, "Flow Accelerated Corrosion of Welded Small Bore A106 Carbon Steel Pipe," CORROSION 2015- annual conference of National Association of Corrosion Engineers, March 15-19 Dallas TX (2015)
2. S. Nasrazadani, "Advanced Analytical Techniques for Characterization of Rusted Steels," CORROSION 2015- annual conference of National Association of Corrosion Engineers, March 15-19 Dallas TX (2015)
3. Waleed K. Yaseen* . Mustafa A. Rawshdeh*. Teresa D. Golden, Seifollah Nasrazadani, and Mohammad A. Omary, "Utilizing Hydrophobic Coatings in Corrosion Protection and Anti-Icing, Poster session of ACS Southeast (SERMACS)/Southwest (SWRM) regional meeting 2015.
4. S. Nasrazadani, Elias Sudoi*, "Effect of Welding on Flow Accelerated Corrosion of Carbon Steel Pipes", Proceedings of Corrosion 2014 Conference & Expo, San Antonio Texas March 9-13, 2014.
5. S. Nasrazadani and Devon Henkis*, "A recent experience in utilization of online resources in teaching undergraduate dynamics", Proceedings of the 2013 ASEE Gulf-Southwest Annual Conference, The University of Texas at Arlington, March 21-23, 2013.

Funding

1. ARMY Tactical Shelter (Sept. 2016-Sept. 2018) \$860,000 Co-PI (with 5 other co-PIs)
2. EPM Materials Characterization (Sept. through Dec. 2016) \$2000
3. NACE (DFW) Research scholarship award (matched with ETEC 5K) \$5000
4. ASHRAE Development of New Accelerated Corrosion \$179,250, Test(s) for All-Aluminum Microchannel and Tube and Fin Heat Exchangers (April 2014 through April 2017)
5. Niki Golf Materials Selection of Golf Club Heads \$5000, (January – May 2015)
6. EPM Characterization of regulators coating system \$3200, (May 2014)
7. NACE-DFW Scholarship award sponsored by DFW (2014) \$5000
8. PEPSICO Characterization of Packaging materials (2013) \$10,000
9. EPM Failure Analysis of Regulator and Screw Sets \$6000 (2013)

Wang, Shuping – Associate Professor

Journal Publications

1. S. Wang, C. Zhang, M. Alt, C. Davis, M. L. Gardner, Z. Ji, "Optomechanical Design for Precision Lens Positioning and Mounting," Optics and Photonics Journal, 6, 1-7. (2016).

Conference Publications

1. S. Wang, C. Zhang, C. Davis, M. Alt, Z. Ji, Y. Han, and M. L. Gardner, "Optical metrology techniques and apparatus for lens assembly," Proc. SPIE, vol. 9272, (Invited, 2014).

Faculty Scholarship 2013-2016

Funding

1. "Testing of Sugru for Fiber Optic Communication Applications," \$1,000, Sanmina Corporation, 10/15/2015 – 12/30/2015.
2. "The Development of Innovative Optical Metrology Techniques and Apparatus - Phase II," \$15,000, Sanmina Corporation, 3/1/2014 – 6/30/2014.
3. Co-PI, "A New Interdisciplinary Technology Education Strategy Using State-of-Art Wireless Sensor Network," \$199,309, National Science Foundation, 10/15/2013 – 4/14/2016.
4. "The Development of Innovative Optical Metrology Techniques and Apparatus," \$38,000, Sanmina Corporation, 3/1/2013 – 8/31/2013.

Yu, Cheng – Professor

Journal Publications

1. Yang, Q., Lu, X., Yu, C., Gu, D. (2016). "Experimental Study and Finite Element Analysis of Energy Dissipating Outriggers." *Advances in Structural Engineering*. DOI: 10.1177/1369433216677122
2. Zhang, W.*, Madsavian, M.*, Li, Y., Yu, C. (2016). "Experiments and Simulations of Cold-Formed Steel Wall Assemblies using Corrugated Steel Sheathing subjected to Shear and Gravity Loads." *ASCE, Journal of Structural Engineering*. 10.1061/(ASCE)ST.1943-541X.0001681 , 04016193.
3. Yu, C., Yu, G.* (2016). "Experimental Investigation of Cold-Formed Steel Framed Shear Wall using Corrugated Steel Sheathing with Circular Holes." *ASCE, Journal of Structural Engineering*. 10.1061/(ASCE)ST.1943-541X.0001609 , 04016126.
4. B.W. Schafer , D. Ayhan, J. Leng, P. Liu, D. Padilla-Llano, K.D. Peterman, M. Stehman, S.G.
5. Buonopane, M. Eatherton, R. Madsen, B. Manley, C.D. Moen, N. Nakata, C. Rogers, and C. Yu. (2016). "Seismic Response and Engineering of Cold-Formed Steel Framed Buildings." Elsevier, *Structures*. DOI: <http://dx.doi.org/10.1016/j.istruc.2016.05.009>
6. Yu, C., Yousof, M.*, Mahdavian, M.*, Zhang, W.* (2016). "Behavior and Design of Thin-Walled Cold-Formed Steel Clip Angles subjected to Shear Load." *ASCE, Journal of Structural Engineering*. 10.1061/(ASCE)ST.1943-541X.0001493 , 04016040.
7. Dara, M.*, Yu, C. (2016). "Direct Strength Method for Web Crippling of Cold-Formed Steel C- and Z- Sections Subjected to One-Flange Loading." *Journal of Steel Structure and Construction, OMICS International*, 1: 105. doi:10.4172/jssc.1000105.
8. Zhang J., Dong, H., Cao, W., Yu, C., Chi, Y. (2016). "Shaking Table Tests of Low-Rise Shear Walls Made of Recycled Aggregate Concrete." *Structural Engineering International, IABSE* (In press). DOI:10.2749/101686616X14480232444441.
9. Lu, X., Xie, L., Yu, C., Lu X., (2016). "Development and Application of a Simplified Model for the Design of a Super-Tall Mega-Braced Frame-Core Tube Building." Elsevier, *Engineering Structures*, 110 (2016) 116-126.
10. Tian, H.W., Li, Y.Q., Yu, C. (2015). "Testing of Steel Sheathed Cold-Formed Steel Trussed Shear Walls." *Thin-Walled Structures*, 09/2015; 94(2015), 280-292.
11. Yu, C., Li, C.* (2015). "Behavior and Strength of Cold-Formed Steel Shear Walls using Composite Panels." *Advances in Structural Engineering*, Vol 18, No. 7 (2015), 1063-1070.
12. Zhang, J., Cao, W., Meng, S., Yu, C., Dong, H. (2014). "Shaking Table Experimental Study of Recycled Concrete Frame-Shear Wall Structures." *Earthquake Engineering and Engineering Vibration*, Springer, June 2014,

Faculty Scholarship 2013-2016

13(2):257-267.

13. Zhang, J., Cao, W., Yu, C., Dong, H. (2014). "Shake Table Test of Reinforced Concrete Wall Structure with Concealed Bracings." Structures and Buildings, ICE Publishing. Vol. 167, Issue 10, October 2014, 598-609.
14. Balh, N., DaBreo, J., Ong-Tone, C., El-Saloussy, K., Yu, C., Rogers, C.A. ! (2014). "Design of Steel Sheathed Cold-Formed Steel Framed Shear Walls." Thin-Walled Structures 75 (2014), 76-86.
15. Yanagi, N.* , Yu, C. (2014). "Effective Strip Method for the Design of Cold-Formed Steel Framed Shear Wall with Steel Sheet Sheathing." ASCE, Journal of Structural Engineering, 140(4).
16. Ahmadi, M., Zhang, H. !, Yu, C., Wahrmund, J. (2014). "Determining Elastic and Shear Moduli of cold-Formed Steel at Elevated Temperatures Using a New Sonic Resonance Method." Nondestructive Testing and Evaluation, Volume 29, No. 1, 1-13.
17. Yu, C., Panyanouvong, M.X.* (2013). "Bearing Strength of Cold-Formed Steel Bolted Connections with a Gaps." Elsevier, Thin-Walled Structures, 67 (2013), 110-115.
18. De Leon, D., Reyes, A., Yu, C. (2013). "Probabilistic Assessment of the Structural Safety of Bolted and Welded Connection for Seismic Zones." Elsevier, Journal of Constructional Steel Research, 88 (2013), 15-20.
19. Yu, C., Xu, K.* , (2013). "Shear Strength of Cold-Formed Steel Sheet in Bolted Connections Using Oversized Holes." ASCE, Journal of Structural Engineering, 139 (2013), 860-864.

Conference Publications

1. Jia, P.* , Zhang, W.* , Mahdavian, M.* , Derrick, N.* , Yu, C. (2016). "Behavior of Steel Sheet Sheathed Cold-Formed Steel Walls Subjected to Combined Lateral and Vertical Loads." Proceedings of the 23rd International Specialty Conference on Cold-Formed Steel Structures, Baltimore, MD, November 9 - 10, 2016.
2. Zhang, W.* , Mahdavian, M.* , Li, Y, Yu, C. (2016). "Simulating the Seismic Performance of Cold-Formed Steel Framed Buildings using Corrugated Sheet Shear Walls." Proceedings of the 23rd International Specialty Conference on Cold-Formed Steel Structures, Baltimore, MD, November 9 -10, 2016.
3. Mahdavian, M.* , Zhang, W.* , Yu, C. (2016). "Sheathing Overlapping and Attachment Methods for Cold-Formed Steel Shear Walls with Corrugated Steel Sheathing." Proceedings of the 23rd International Specialty Conference on Cold-Formed Steel Structures, Baltimore, MD, November 9 - 10, 2016.
4. Johnson, A.* , Ramirez, R.* , Yu, C. (2016). "Advancing BIM for Cold-Formed Steel Structures." Proceedings of the 23rd International Specialty Conference on Cold-Formed Steel Structures, Baltimore, MD, Nov. 9 - 10, 2016.
5. Yu, C., Yousof, M.* , Mahdavian, M.* , Zhang, W.* (2016). "Screw Connections in Cold-Formed Steel Clip Angles Subjected to Uplift Forces." Keynote presentation, 2nd World Congress and Exhibition on Construction and Steel Structure, Las Vegas, NV, September 22-24, 2016.
6. Mahdavian, M.* , Zhang, W.* , Ding, Chu, Moen, C., Yu, C. (2016). "Cyclic Simulation of Cold-Formed Steel Shear Walls with Corrugated Steel Sheathing." Proceedings of Annual Stability Conference, Structural Stability Research Council, Orlando, FL, April 12-15, 2016.
7. Bagheri, A.* , Kondapally, S.* , Bostanci, H., Foster, P.R., Yu, C. (2016), "Visualization and Simulation of an Innovative Rotary Displacer Stirling Machine Operation," Proc. 2016 ASEE-GSW Annual Conference, Fort Worth, TX, March 6-8, 2016.
8. Zhang, W.* , Wang, J.* , Mahdavian, M.* , Yu, C. (2016). "Seismic Performance of Cold-Formed Steel Framed Buildings using Corrugated Sheet Shear Walls." Proceedings of the 2016 ASCE Geotechnical and Structural Engineering Congress, Phoenix, AZ, February 14-17, 2016.
9. Yu, C., Yousof, M.* (2015). "Behavior and Design of Thin-Walled Cold-Formed Steel Clip Angles subjected to Compression Load." Proceedings of the IJSSD Symposium on Progress in Structural Stability and Dynamics, Lisbon, Portugal, July 22 – 24, 2015.

Faculty Scholarship 2013-2016

10. Yu, C., Vora, H.* , Li, C.* (2015). "High-Strength Cold-Formed Steel Framed Shear Walls Sheathed with Noncombustible Panels." Proceedings of the Eighth International Conference on Advances in Steel Structures, Lisbon, Portugal, July 22 – 24, 2015.
11. Yu, C., Yu, G.* , Wang, J.* (2015). "Optimization of Cold-Formed Steel Framed Shear Wall Sheathed with Corrugated Steel Sheets: Experiments and Dynamic Analysis." Proceedings of the 2015 ASCE Structures Congress, Portland, OR, April 23 – 24, 2015.
12. Yu, C., Yousof, M.* , Mahdavian, M.* (2015). "Behavior and Design of Thin-Walled Cold-Formed Steel Clip Angles Subjected to Shear Load." Proceedings of Annual Stability Conference, Structural Stability Research Council, Nashville, TN, March 24 – 27, 2015.
13. Yu, C., Yu, G.* , Wang, J.* (2014). "Innovative Cold-Formed Steel Framed Shear Wall Sheathed with Corrugated Steel Sheets: Experiments and Dynamics Analysis." Proceedings of the 22st International Specialty Conference on Cold-Formed Steel Structures, St. Louis, MO, November 5 – 6, 2014.
14. Schafer, B.W., Ayhan, D., Leng, J., Liu, P.* , Padilla-Lllano D., Peterman, K.D., Stehman, M., Buonopane, S.G., Eatherton, M., Madsen R., Manley, B., Moen, C.D., Nakata, N., Yu, C. (2014). "The CFS-NEES Effort: Advancing Cold-Formed Steel Earthquake Engineering." Proceedings of 10th U.S. National Conference on Earthquake Engineering, Anchorage, AK, July 21 – 25, 2014.
15. Choy, M.Y.* , Jia, X.F.* , Yuan, X.* , Zhou, J.* , Wang, H.S.* , Yu, C. (2014). "Direct Strength Method for Web Crippling of Cold-Formed Steel C- and Z- Sections Subjected to Two-Flange Loading." Proceedings of Annual Stability Conference, Structural Stability Research Council, Toronto, Canada, March 25 – 28, 2014.
16. Yu, C., Li, C.* , Elliott, C. (2014). "Behavior and Design of Cold-Formed Steel Framed Shear Walls using Structural Composite Panels." Proceedings of the 2014 ASCE Structures Congress, Boston MA, April 3 – 4, 2014.
17. Yanagi, N.* , Yu, C. (2013). "Effective Strip Model for Cold-Formed Steel Shear Wall using Steel Sheet Sheathing." Proceedings of the 21st International Specialty Conf. on Cold-Formed Steel Structures, St. Louis, MO, April 2013.

Funding

1. Co-PI, "Light Weight Composite Structures for Advanced Tactical." Northeastern University, September 2016 – August 2017, \$873,283. GF40016. PI Schultz. Co-PIs Mukherjee, Nasrazadani, Voevodin, Zhang.
2. PI, "Structural Performance of Cold-Formed Steel Framed ROK-ON Walls." MagBoard, LLC, May 2016 – May 2017, \$25,000.
3. PI, "GOALI-Supplement: Achieving a Novel Cold-Formed Steel Shear Wall System from Lab to Construction Site." National Science Foundation, August 2016 – January 2017, \$39,928.
4. PI, "Load Bearing Clip Angle Design – Phase Two." American Iron and Steel Institute, March 2016 – March 2018, \$57,643.
5. PI, "Development of LOD Specification for Building Information Models of Metal Building Systems." AISI Standards Council Small Project Fellowship Program, American Iron and Steel Institute, May 2016 – August 2016, \$5,000.
6. PI, "REU-Supplement: Deflection Characteristics of Innovative Cold-Formed Steel Shear Walls Using Corrugated Steel Sheet Sheathing." Proposal # 1541570, National Science Foundation, August 2015 – January 2016, \$12,000.
7. PI, "REU-Supplement: Effect of Non-Structural Materials to the Behavior of Corrugated Steel Sheet Shear Walls." Proposal # 1520457, National Science Foundation, May 2015 – August 2016.
8. PI, "Experimental Study on System Reliability of Cold-Formed Steel Roof Trusses." American Iron and Steel Institute, June 2015 – May 2016, \$20,000.
9. PI, "Advancing Building Information Modeling (BIM) for Cold-Formed Steel Structures." AISI Standards Council

Faculty Scholarship 2013-2016

Small Project Fellowship Program, American Iron and Steel Institute, May 2015 – August 2015, \$6,000.

10. PI, "NSF PFI:AIR-TT Innovative High-Performance Cold-Formed Steel Walls for Light Framed Construction." Grant # 1445065, National Science Foundation, 2014 – 2016, \$199,653. Co-PI Jeff Martin, Verco Decking.
11. PI, Master Research Contract with KEYMARK Enterprises, LLC, (2013 – present), total grant as of August 2015, \$25,300.
12. PI, "CAREER: Comprehensive Research on Cold-Formed Steel Sheathed Shear Walls: Special Detailing, Design, and Innovation." National Science Foundation, 2010 – 2016 (NCE), \$433,610. (\$400,010 NSF, \$33,600 UNT matching).
13. PI, Research Contract with FRAMECAD America, (2014), \$500.
14. PI, "Load Bearing Clip Angle Design." American Iron and Steel Institute, September 2013 – December 2014, \$20,000.

Zhang, Haifeng – Associate Professor

Journal Publications

1. Chen Zhang* and H. F. Zhang and Suresh Kalauvan, "PZN-PT based Smart Probe for High Temperature Fluid Viscosity Measurements," *Measurement*, pp. 753-758, 2016.
2. Thanh Tuong Pham* and H. F. Zhang, "A new apparatus for the measurement of force frequency effect of crystal resonators," *Measurement*, 93, pp. 524–528, 2016.
3. H.F. Zhang, J. A. Kosinski, and L. Zuo, "Analysis of contributions of material constants to temperature velocity shifts of quartz surface acoustic wave resonators," *Ultrasonics*, 71,189-193, 2016.
4. L. J. Yang*, H. F. Zhang, "Experimental study on a wide-band piezoelectric energy harvester with rotating beams vibrating in perpendicular directions," *Integrated Ferroelectrics*, vol. 168.1, pp. 85-96, 2016.
5. L. J. Yang*, H. F. Zhang, "A new method for frequency adjustment of piezoelectric energy harvesters," *Ferroelectrics*, vol. 486.1, pp. 49-56, 2015.
6. B., Y. Ye*, H. F. Zhang, and J. A. Kosinski, " Experimental measurement of the frequency shifts of degenerate thickness-shear modes in a rotated Y-cut quartz resonator subject to diametrical forces," *IEEE Transaction on Ultrasonics, Ferroelectrics and Frequency Control*, vol. 62, no. 3, pp. 560-564, 2015.
7. H. F. Zhang and K. Afazul*, "Design and analysis of a connected broadband multipiezoelectric bimorph beams energy harvester," *IEEE Transaction on Ultrasonics, Ferroelectrics and Frequency Control*, vol. 61, pp. 1016-1023, 2014.
8. M. Ahmadi*, H. F. Zhang, and J. Tian, "Investigation of piezoelectric Energy harvesting at Elevated Temperatures, *Ferroelectrics*, vol. 460, pp. 138-148, 2014.
9. Y. Y. Bao* , H. F. Zhang, M. Ahmadi*, K. M. Afazul*, and F. H. Wu, "Measurements of Young's and Shear Moduli of Rail Steel at Elevated Temperatures, *Ultrasonics*, vol.54 pp.867-873, 2014.
10. H. F. Zhang and Y. Y. Bao*, "Sensitivity analysis of multi-layered C-Axis inclined Zig-zag zinc oxide thin film resonators as a viscosity sensor," *IEEE Transaction on Ultrasonics, Ferroelectrics and Frequency Control*, vol. 61, pp. 525-534, 2014.
11. H. F. Zhang and M. Ahmadi*, "Resonance tuning of a multi-piezoelectric bimorph beams energy harvester connected by springs," *Ferroelectrics*, vol. 460, pp. 34-48, 2014.
12. M. Ahmadi*, H. F. Zhang, Y. Cheng, and J. Wahrmund, "Determining elastic and shear moduli of cold-formed steel at elevated temperatures using a new sonic resonance method," *Nondestructive Testing and Evaluation*, vol. 29, pp. 1-13, 2013.

Faculty Scholarship 2013-2016

13. H. F. Zhang, J. A. Turner, J. S. Yang and J. A. Kosinski, "Experimental measurements of the force-frequency effect of thickness mode langasite resonators," IEEE Transaction on Ultrasonics, Ferroelectrics and Frequency Control, vol. 60, pp. 1475-1478, 2013.
14. H. F. Zhang, "Optimal Cuts to extract the third-order piezoelectric constants and electrostrictive constants of langasite single crystals through the electroelastic effect," IEEE Transaction on Ultrasonics, Ferroelectrics and Frequency Control, vol. 60, pp. 1453-1466, 2013.
15. H. F. Zhang, J. A. Kosinski, and K. Afazul*, "Apparatus for measurement of acoustic wave propagation under uniaxial loading with application to measurement of third-order elastic constants of piezoelectric single crystals," Review of Scientific Instrument, vol. 84, pp.054901-1-5, 2013.
16. H. F. Zhang, "Analysis of thickness vibrations of C-Axis inclined Zig-Zag multi-layered zinc oxide thin film resonators," Ferroelectrics, vol. 445, pp. 96-106, 2013.
17. H. F. Zhang, J. A. Turner, J. S. Yang and J. A. Kosinski, Y. Y. Bao*, "Experimental measurement of the electroelastic effect in thickness mode langasite resonators," IEEE Transaction on Ultrasonics, Ferroelectrics and Frequency Control, vol. 60, pp. 970-974, 2013.
18. H. F. Zhang, J. A. Kosinski, "Analysis of contributions of nonlinear material constants to stress-induced velocity shifts of quartz and langasite surface acoustic wave resonators, IEEE Transaction on Ultrasonics, Ferroelectrics and Frequency Control, vol. 60, pp. 975-985, 2013.
19. H. F. Zhang, J. A. Kosinski, Y. Xie*, and J. A. Turner, "Drive level dependence of doubly rotated langasite resonators with different configurations," IEEE Transaction on Ultrasonics, Ferroelectrics and Frequency Control, vol. 60, pp.963-969, 2013.

Conference Publications

1. S. Kaluvan, J. Y. Park, H. F. Zhang, U. Mangalanathan, and S. B. Choi. "A new resonance based method for the measurement of magnetic field intensity." In SPIE Smart Structures and Materials+ Nondestructive Evaluation and Health Monitoring, pp. 97992V-97992V. International Society for Optics and Photonics, 2016.
2. S. W. Bi, N. Wu, J. C. Zhou, H. F. Zhang, and X. W. Wang. "All-optically driven system in ultrasonic wave-based structural health monitoring." In SPIE Smart Structures and Materials+ Nondestructive Evaluation and Health Monitoring, pp. 98030K-98030K. International Society for Optics and Photonics, 2016.
3. C. Zhang and H. F. Zhang. "Piezoelectric-based smart sensing system for I-type steel structural health monitoring." In SPIE Smart Structures and Materials+ Nondestructive Evaluation and Health Monitoring, pp. 98052C-98052C. International Society for Optics and Photonics, 2016.
4. N. Wu, L. J. Yang, H. F. Zhang, and X. W. Wang, "Optical excitation and detection of a quartz crystal resonator," in SPIE Smart Structures conference, pp. 94360L-94360L, 2015.
5. J. A. Kosinski, H. F. Zhang, Y. Y. Bao, "Measurement of the Second Order Elastic Constant of Langasite Crystals," In ASME Conference on Smart Materials, Adaptive Structures and Intelligent Systems pp. V001T01A035-V001T01A035, 2014.
6. B. Y. Ye and H. F. Zhang. "1A15 Feasibility Study of Langasite Wafer Active Sensors for High Temperature Structural Health Monitoring (The 12th International Conference on Motion and Vibration Control)." 「運動と振動の制御」シンポジウム講演論文集 2014, no. 12 (2014).
7. H. F. Zhang, Tinghui Fan*, "Wireless electric field sensor based on a langasite resonator," in European Frequency and Time Forum & International Frequency Control Symposium (EFTF/IFC), 2013pp. 458-461, 2013.

Faculty Scholarship 2013-2016

Funding

1. "Real-Time Gas Monitoring Of The Pyrolysis Process Of Biomass With Novel Wireless High-Temperature Saw Sensors To Improve Production Efficiency", \$500,000, US Department of Agriculture (USDA), PI: Sheldon Shi (UNT, 59%), Co-PI Haifeng Zhang (UNT, 41%), 01/2017-01/2022
2. "Self-powered Wireless Through-wall Data Communication for Nuclear Environments," US Department of Energy (DOE) Nuclear Engineering University Program, PI L Zuo (VT, 34%), co-PIs H Zhang (U. of N. Texas, 28%), Roger Kisner and Ericson Nance (ORNL, 25%), Michael Heibal (Westinghouse Electric Corporation, 13%) \$1,000,000, 01/2017-01/2020
3. "Light weight Composite Structures for Advanced Tactical Shelters", \$925k, US ARMY NATIC, PI: Schultz David (UNT), Co-PIs (UNT): Yu Cheng, Zhang Haifeng (12%), Mishra Rajiv, Mukherjee Sundeep, Nasrazadani Seifollah, and Voevodin Andrey, 11/2016-11/2017
4. "Self-powered Wireless Dual-mode Langasite Sensor for Pressure/Temperature Monitoring of Nuclear Reactors", US Department of Energy (DOE) Nuclear Engineering University Program, PIs L Zuo (VT, 45%), co-PIs H Zhang (U. of N. Texas, 36%) and J Lian (RPI, 18.7)), \$800,000, 09/2015-05/2018
5. "GOALI: Collaborative Research: Energy harvesting nanorods-enhanced MEMS temperature-insensitive gas sensor for combustion monitoring and control," National Science Foundation (NSF), \$499,469, PI: Haifeng Zhang (38%), Co-PIs: Wang Guoan (University of South Carolina), Lei Zuo (Virginia Tech.), David Lin (GE global research), 07/01/2015-06/30/2018
6. "GOALI: Collaborative research: Self-powered dual-mode piezoelectric resonant pressure/temperature sensors for oil and gas field explorations", National Science Foundation (NSF), \$399,898, PI: Haifeng Zhang (52%), Co-PIs: Lei Zuo (Virginia Tech.) and Bikash Sinha (Schlumberger Research Center), 09/2014-08/2017
7. "Bioinspired fibers as templates for multifunctional performance," \$12,000, PI: Nandika Anne D'Souza, Co-PIs: Sheldon Shi and Haifeng Zhang (30%), Dec, 1, 2016-Dec 1, 2017, UNT AMMTI seed grant
8. "Integrated analysis of piezoelectric resonators as components of electronic system", Army Research Office (ARO), \$386,673, PI: Haifeng Zhang (100%) 09/01/2010 - 09/01/2014