

SEAS Vitae July 2019 – June 2020

Peer-Reviewed Publications

Piccinni, G, G Avitabile, G Coviello, and **C Talarico** (2020) "Real-Time Distance Evaluation System for Wireless Localization," IEEE Transactions on Circuits and Systems I: Regular Papers, March, (doi: 10.1109/TCSI.2020.2979347).

Piccinni, G, **C Talarico**, G Avitabile, and G Coviello (2019) "Innovative Strategy for mixer design optimization based on gm/ID methodology," Electronics Journal, 8(9), Special Issue on Nanoscale CMOS Technologies, August.

Tian, Y, F Shen, J Scholer, **Y Ji**, and U Rogers (accepted 2019). "Utilizing Graphics Processing Unit to Accelerate Drug-Symptom Association Mining," Computers and Electrical Engineering.

Kearns JP, **KK Shimabuku**, DR Knappe, RS Summers (2019) "High Temperature Co-pyrolysis Thermal Air Activation Enhances Biochar Adsorption of Herbicides from Surface Water." Environmental Engineering Science, 36(6), pp 710-23, June.

Ahmed, M, G Yang, S Gaweesh, **R Young**, and F Kitchener (2019) "Performance Evaluation Framework of Wyoming Connected Vehicle Pilot Deployment Program: Summary of Phase 2 Pre-Deployment Efforts and Lessons Learned," J Intelligent and Connected Vehicles (JICV-03-2019-0006.R1), June.

Schultz, JA and J Jesse (in press 2019) "Simplified Strength Design of Helicoidal HSS Beams," J Architectural Engineering.

Milacek, MS, **JA Schultz**, and **MR Muszynski** (in press 2019). "Multi-objective Comparative Analysis of Alternative Structural Systems for Low-income Housing," J Architectural Engineering. **(STUDENT)**

Shimabuku, KK and T Henrie (2019) "Inorganic Contaminants Prompt Widespread Concerns.," J American Water Works, 111(10), pp 62-64. October.

Peer-Reviewed Conference Proceedings

Abolhasani, B, **J Tadrus**, and A Eryilmaz (2020) "Achieving Freshness in Single/Multi-User Caching of Dynamic Content over the Wireless Edge", to appear on IEEE Xplore, The 18th International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt 2020), Greece, June.

Piccinni, G, G Avitabile, G Coviello, and **C Talarico** (2019) "FPGA-Based Implementation of a Real-Time Distance Evaluation Algorithm for Wireless Localization Systems," IEEE Asia Pacific Conference on Circuits and Systems (APCCS), Bangkok, Thailand, November.

Piccinni, G, G Avitabile, G Coviello, and **C Talarico** (2019) "Implementation of a Real-Time Distance Evaluation Algorithm for Wireless Localization Systems," IEEE 62nd Midwest Symposium on Circuits and Systems (MWSCAS), Dallas, TX, August.

Krukovich, H, B Bladow, J Varness, and **S Schennum** (2019) "Center-Fed Circularly Polarized Omnidirectional Open-Helical Element Optimization," IEEE Antennas and Propagation/URSI Conference, Atlanta, GA, July. (**STUDENT**)

Ahmed, Y, S. Hosny, **J Tadrour**, M Nafie, and M Ibrahim (2019) "Enhanced Proactive Caching through Content Recommendation," 53rd IEEE Asilomar Conference on Signals, Systems, and Computers, CA, November.

Dorie, BL (2019) What is engineering? First-year students' preconceptions about their chosen profession. First Year Engineering Experience Conference Proceedings, Penn State, July.

Dorie, BL (2019) Major exposure through engineering innovations. First Year Engineering Experience Conference Proceedings, Penn State, July.

Milacek, M, JA Schultz, and **MR Muszynski** (in press, 2019). "Revisiting Low Income Residential Construction Options in Spokane," The Evolving Metropolis, Proceedings of the 2019 IABSE Congress, International Association of Bridge and Structural Engineers, NY. (**STUDENT**)

Schultz, JA and S Hickman (2019) "Experimental Characterization and Material Optimization of 3-Ply CLT Panels for Residential Use," Proceedings of the 2019 IABSE Congress, International Association of Bridge and Structural Engineers, NY.

Chen, T (2019) "Investigation of Condensation Heat Transfer on a Tube with Wavy Fins," Proceedings of ASME Summer Heat Transfer (paper HT2019-3735), Bellevue, WA, July.

M. Jeannot, L Yang, and **P Ferro** (2019) "Internationalizing the Faculty in the US and Other Countries: A Review of Recent Experiences", accepted for publication, 67th Annual Conference of the Japan Society of Engineering Education (JSEE), Tohoku University, Sendai, Japan, September.

Roache, A, M Cousins, and **MR Muszynski** (accepted 2019) "Evaluation of the 2018 Father's Day Flood using Technology-Based Tools," *ASCE 2020 Geo-Congress*, Minneapolis, MN, February.

Lerch KJ, LN Cayton, and **S Ganzerli** (2019) "Failure mechanism of top corner in unreinforced masonry" 13th North American Masonry Conference, Salt Lake City, June. (**STUDENTS**)

Perkins, E and **T Fitzgerald** (2019) "Intrinsic localized P-mode in forced nonlinear oscillator array," in Proceedings of the 5th International Conference on Applications in Nonlinear Dynamics, pp 294–299.

Krantz, J, M Dulin, and **P De Palma** (2019) "language-Agnostic Syllabification with Neural Sequence Labeling," Proceedings of the 18th International Conference on Machine Learning and Applications, Boca Raton, December.

Olivares, D, RFL de Mello, O Adesope, V Rolim, D Gaevic, and C Hundhausen (2019) "Using Social Network Analysis to Measure the Effect of Learning Analytics in Computing Education," 2019 IEEE 19th International Conference on Advanced Learning Technologies.

Gellger, A, **G Sprint**, A Andrews, D Weeks, and E Crooks (to appear 2019) "Nighttime Sleep Duration Prediction for Inpatient Rehabilitation Using Similar Actigraphy Sequences," in 2019 IEEE Healthcare Innovations and Point-of-Care Technologies.

Sprint, G and J Conci (to appear 2019) "Mining GitHub Classroom Commit Behavior in Elective and Introductory Computer Science Courses," in J Computing Sciences in Colleges.

Books & Book Chapters

Ansari, KA and B Dichone (2019) An Introduction to Numerical Methods Using MATLAB, SDC Publications.

Indigenous Communities and Access to Graduate Degrees in STEM, in New Directions in Higher Education, editors: **KA Hoo** and S Windchief, number 187, Fall 2019, Wiley Co, Hoboken, NJ

Conference Presentations (contributed, invited, abstracts, extended abstracts)

Niezgoda, S (2019) "Restoring Rivers to Stage 0: A Process-Based Approach to Returning a Depositional River Valley to an Anastomosing Channel Network". Sustaining Colorado Watershed Conference, CO, October.

Shimabuku, KK and RS Summers (2019) "Comparison of Activated Carbon and Biochar for Stormwater Reuse: Role of Organic Contaminant, Adsorbent, and Stormwater Organic Matter," American Water Works Association: Water Quality Technology Conference, Dallas, TX, November.

Hoo, KA (2019) "PNW COSMOS – An NSF funded project to support STEM Opportunities for American Indian/ Alaska Native graduate students," Sixth Biennial Ethnicity, Race, and Indigenous Peoples Conference," Spokane, WA, September.

Workshops/Short Course/Seminars

Talarico, C (2019) "Hardware Description Languages (HDL) for the design of Very-Large-Scale-Integration (VLSI) System-on-Chip," Politecnico di Bari, Italy, June 24 – July 5.

Niezgoda, N, J Castro, C Thorne, and M Beardsley (2019) "Stage 0 Restoration," Sustaining Colorado Watershed Conference, Colorado, October.

Ferro, P (2019) Seminar: SME Tooling U – Ford Motor Co, Detroit, MI, July.

Ferro, P (2019) Seminar: Materials testing for Smart Antennae Radio Laboratory, Spokane, WA, November.

Ferro, P (2019) Seminar: Design for Manufacturing, SME 248 – Haskins Steel, Spokane, WA, November.

Honors & Awards

Young, RK (2019) Awarded Outstanding Educator by the Institute of Transportation Engineers, Western District.

Schultz, JA (2019) Selected as an ExCEED (Excellence in Civil Engineering Education) Fellow by the American Society of Civil Engineers.

Talarico, C (2019) Awarded grade of Institute of Electrical and Electronic Engineers Senior Member.

Muszynski, MR (2020) Awarded “Engineer of Merit” award by the Inland Empire Section of the American Society of Engineers.

Funded Research

Schultz, JA (2020) *Experimental Investigation of Glass Failure Prediction Model for Point Loads*, Murdock Charitable Trust, Total \$15,000/24-months.

Young, RA (2019) *Characterization of Blowover Risk in the Wyoming Highway System* (PI: Rhonda Young and Noriaki Ohara) Wyoming Department of Transportation Research Committee, Total: \$119,762/24-months, Gonzaga: \$10,500/24-months.

Young, RA (2019) US Department of Transportation University Transportation Center (UTC) Program. *PacTrans Regional University Transportation Center*. (Lead PI: University of Washington).

Schultz, JA (2019) *Experimental Investigation of Distortional Buckling of Cold Form Flexural Members*. AISI Fellowship Grant, Total: \$9,000

Shimabuku, KK (2020) *Filtration Media for Stormwater Harvesting*, SEAS SEED funds, Total: \$23,500/12-months.

Sprint, G (2020) *Developing an Online Machine Learning Intervention to Increase Physical Activity and Sleep Duration for Healthcare Application*, SEAS SEED funds, Total: \$10,000/12-months.

Khare, H (2020) *Linking Nanoscale Mechanics to Macroscale Wear of Polymer Nanocomposites: A Framework for Predictive Design of Materials for Articular Prosthesis*, SEAS Innovation grant, Total: \$9,114/12-months.

Khare, H (2019) *Acquisition of an Atomic Force Microscope for Transforming Undergraduate Research in Engineering, Biochemistry and Biology at Gonzaga University*, National Science Foundation Major Research Instrumentation, \$266,000

Other Scholarly Activity

Tadrous, J: Associate Editor Institute of Electrical and Electronic Engineers Access, April 2019–present.

Tadrous, J: Counselor Institute of Electrical and Electronic Engineers Gonzaga Club, 2019—present.

Yi, J: Editor J Digital Signal Processing, 2013–present.

Chen, T: Faculty Advisor American Society of Mechanical Engineers student section, 2012–present.

Ganzerli, S: Faculty Advisor Society of Women Engineers.

Sprint, G: Member of GU Honors Curriculum committee.

Accomplishments: Students

Eugene Krug (CS'20) earned the SEAS Student of the Year award.

Charles "CJ" DeBiase (ME'20) was named by President McCulloh as the recipient of the 2020 Carl Lindberg Loyalty Award.

Vincent Lombardi (CS'20) earned NSF undergraduate research opportunity at New Mexico Tech (Socorro, New Mexico) in summer 2019.

Max Sherman (CS'20) earned NSF undergraduate research opportunity at Embry-Riddle Aeronautical University (Daytona, Florida) in summer 2019.

Allison Fellger (CS'20) applied and received travel funds from Computing Research Association – Women to present her research at 2019 IEEE Healthcare and Point-of-Care Technologies, Washington D.C.

Crystal Murray-Weston (EE'19), Joseph Wilson (ME'19), Jordan Cossette (ME'19), Patrick Jauregui (ME'19), Theodore Mangrum (ME'19): Team 'ENSC 31' placed 2nd at the 2019 SERAD's (safety engineering & risk analysis) National Safety competition for senior design project: *Laser-induced Spectroscopy Air Monitor*.

Emily Ellwein (EE'22) and Hayden Saalfeld (EE'22) each received IEEE Power & Energy scholarships, which comes with the honor of being Power & Energy Scholars.

Charles DeBiase (ME'20), Joseph Heston (ME'20), Bassel Mufarreh (Human Physiology), Megan Nakamura (Human Physiology), Madeline Robinson (ME'20): Team "Magna Hip" placed 3rd in the *2020 Northwest Entrepreneur Competition, Avista Technology category*, for prototype design and concept of a magnetically repulsed artificial hip.

Sean McCurdy (ME'20), Evan Cox (CE'20), Jack Burns (ME'20), John Harvey (ME'20), Team "Volt-On," SEED award for senior design project: *EV Motorcycle Bolt-On Conversion Kit*.

Charles DeBiase (ME'20), Joseph Heston (ME'20), Bassel Mufarreh (Human Physiology), Megan Nakamura (Human Physiology), Madeline Robinson (ME'20), Team "Magna Hip", SEED award for senior design project: *Magnetically Repulsed Joint Replacement*.

Jack Breese (EM'20), Nicholas Walker (EE'20), Jacob Lieske (ME'20), Team "ENSC 41" received Honorable Mention in the 2020 SERAD Student Safety Innovation Challenge for senior design project: *Prototype Web-enabled Smartlock*.