Contributors

Dr. Huda Al-Ghaib

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Contribution area: machine learning within information systems and technology chapter *Contributor summary:* Assistant Professor, Utah Valley University, College of Technology and Computing. Alghaib received her undergraduate degree in computer engineering from the University of Technology in Baghdad-Iraq in 2006. She worked in the Ministry of Higher Education and Scientific Research from 2007-2009. She is a recipient of a Fulbright Scholar in 2009 for which she earned her Masters' degree in electrical engineering in 2011 from the University of Alabama in Huntsville (UAH) and the Ph.D. in electrical engineering from the same institute in 2015. During her graduate studies at UAH she was awarded an outstanding graduate student in engineering in 2014. Dr. Al-Ghaib's research interests are in the area of pattern recognition with applications in medical imaging. She is the author/co-author of more than 10 journal and conference articles. She is a member of IEEE.

Jonathan Allred

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Contribution area: three dimensional printing within advanced manufacturing and production chapter

Contributor summary: Jonathan Allred, MEd, is an Assistant Professor for the Engineering Design Technology Department at Utah Valley University. He teaches different types of engineering design software, principles of mechanical design, and Statics. Jonathan has taught in multiple departments at Utah Valley University as an adjunct instructor. He has over 12 years of professional experience as a project manager / designer. Mr. Allred continues to consult on design projects when he is not in the classroom. He received his Master of Education (MEd) in Instructional Technology and Learning Sciences from Utah State University with an emphasis in distance education. He obtained his Bachelor of Arts (BA) in Technology Management from Utah Valley University.

Cory Chamberlain

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Contribution area: aerospace and transportation chapter

Contributor summary: Cory Chamberlain is a Utah native. He grew up working at a small airport in Utah County where he was able to obtain his Private Pilot Certificate before his senior year of High School. His 30 plus year flying career includes a dozen years flying air ambulance missions in the intermountain west, work at two on demand charter services, two airlines and corporate flight department. Cory is type rated in Boeing, Gulfstream, Learjet and several Citation jet aircraft models. He is also a rated Airframe and Powerplant Mechanic (AMT). His career took him to all fifty states, the Caribbean, Central America, Canada and many other international destinations. Cory's undergrad education includes a degree in Psychology from the University of Utah and an Applied Science degree in Aviation Maintenance from Salt Lake Community College. His graduate work is in Aeronautics with specialties in Human Factors and Safety from Embry Riddle University. Cory is currently an Associate Professor and Associate Department Chair in the School of Aviation Sciences at Utah Valley University. Cory has two college age children and enjoys the outdoors, skiing, waterskiing and flying an old Cessna 172 that took him several years to restore.

Wendy Ellison

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Contribution area: Proofreading and review

Author summary: Wendy Ellison has a Bachelor of Science in English with an emphasis in Creative Writing from Utah Valley University where she works as tier three administrative support in Technology Management. She recently published in Lady Blue, an online and hardcopy literary arts journal. Prior to receiving her bachelor's degree, she worked as a licensed Certified Pharmacy Technician (CPT) for seven years at Central Valley Medical Center in Nephi, Utah. Formerly, Wendy also served as president for the Delta chapter of League of Utah Writers (LUW). She then spearheaded the creation of a Leamington chapter of LUW after noting the amount of writers gathered in that small central Utah community.

Dustin Fife, MLS

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Contribution area: research and literature review for definition and curriculum chapters *Author summary:* Dustin Fife was the Outreach and Patron Services Librarian at Utah Valley University Library. Prior to coming to UVU Library, Dustin spent six years as a public library director for San Juan County, Utah. He now works as the director of library services at Western State Colorado University. Dustin also previously served as the library's representative to the UVU Faculty Senate and as the President of the Utah Library Association. He has published in several scholarly library journals and magazines.

Dr. Elena Laricheva

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Contribution area: business intelligence and analytics

Contributor summary: Elena N. Laricheva, Ph.D is currently a full-time Lecturer in Chemistry at Utah Valley University. She obtained her BSc and MSc degrees in organic chemistry from St-Petersburg State University in Russia, followed by a PhD in computational chemistry from the Center of Photochemical Sciences at Bowling Green State University and graduate certificate in Bioinformatics from University of Toledo. Prior to joining UVU, Elena was a Post-Doctoral Research and Teaching Scholar at University of Michigan where she split her time between solving challenging biochemical problems and teaching undergraduate general and physical chemistry courses. Her research interests span different areas of computational biochemistry and biophysics, with the focus on understanding atomic-level mechanisms underlying protein functions for in silico design of proteins with desired tunable properties. In her spare time, she enjoys writing about science and de-jargonizing a complex scientific context to make science appealing to and understandable by everyone.

Donna Milakovic

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Contribution area: design thinking chapter

Contributor summary: Donna Milakovic is an outreach director at the Utah Science Technology and Research Agency (USTAR) and works to connect innovative technologies with the resources and path to commercialization. Before launching a Robotics and Internet of Things technology acceleration program for USTAR, she was executive vice president at the Utah Valley Chamber

of Commerce and worked for more than 5 years in non-profit management and government advocacy. Donna has a BA in English with a minor in Korean from Brigham Young University. Her professional career has run the gambit from government affairs and journalism to executive management. She attributes her belief that anything is possible to growing up between Sea World and Disney World in Florida where the ocean is vast and imagination is unleashed.

Mary Naylor, MS

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Contribution area: research and literature review for definition and curriculum chapters *Author summary:* Mary Naylor is an Instruction and Evening Reference Librarian at Utah Valley University Library. Mary is a member of UVU Library's executive research service and head of library assessment.

Dr. James Smith

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Contribution area: nanotechnology chapter

Contributor summary: Dr. James S Smith received his PhD in Materials Science and Engineering from the University of Utah while specializing in the molecular modeling of nanocomposite materials using multiscale techniques spanning the quantum to the continuum level of detail. He is an Assistant Professor of engineering at Salt Lake Community College where he developed microscopy and nanotechnology certificates of proficiency for students interested in working in the nanotech and microscopy industries. Dr. Smith also works as an Associate Instructor of Mechanical Engineering at the University of Utah and as the education specialist at the University of Utah's Nanofab one of Utah's premier university cleanroom manufacturing education facilities. Prior to returning to academia, he worked for over 15 years helping to found multiple technology companies developing micro electro mechanical devices for communications and microfluidic devices for highly multiplexed biosensing applications