Bios for New Faculty 2015
College of Engineering and Applied Science

Matthew Bethancourt is an instructor in the ATLAS Institute, and joins us from the City University of New York where he taught game design fundamentals and explored game design effects on culture. He was at CUNY for the past three years, and came there from the Parsons New School of Design in NYC where he received his MFA and taught in their boot camp program. Matt came to NYC from the west coast where he earned his BA in motion picture production from Biola University in La Mirada, CA and managed and created websites for the alumni department of the Art Center College of Design in Pasadena, CA. Matt is a musician and played with the Red West represented by Atlantic Records with whom he produced two albums.

Christy Bozic joined the University of Colorado Boulder in January 2015 as a Scholar in Residence and Associate Faculty Director of Undergraduate Education for the Lockheed Martin Engineering Management Program. She is a teacher-scholar interested in helping students bridge their engineering education to careers in industry by developing business acumen.

In her academic career, she held faculty and administrative positions at Purdue University in West Lafayette, IN. At Purdue she served as the Director for two regional campus locations and worked in university engagement as the Manager for Business Innovation. Her corporate experiences include Global Business Manager at TDK Corporation of America, and Sales Engineer for Federal Mogul Automotive Division.

With an undergraduate degree from Purdue and an MBA from Butler, Dr. Bozic earned a PhD from Purdue University in Curriculum and Instruction with research emphasis on student-centered, active learning environments in engineering education. Her focus for research and teaching is Engineering Management with a specific interest in curriculum development in the area of Innovation Management and Engineering Intrepreneurship.

James Brasseur joins us as a Research Professor in the department of Aerospace Engineering Sciences from Penn State University. Professor Brasseur received his BS in Aerospace Engineering from the University of Maryland and his MS and PhD from Stanford University in Aeronautical and Astronautical Engineering. He joined the faculty of Clemson University in 1985 and moved to Penn State’s department of Mechanical and bioengineering in 1988. His research interests are in the field of fluid dynamics and he is a fellow in the American Physical Society division of Fluid Dynamics. He has been the PI or co-PI on more than $11 million in research grants, and also has an interest in biomedical research. He expects to be an active research faculty in the AES department and with the CU-Boulder Aerospace Ventures.
**Jed Brown** is an assistant professor in the Computer Science Department, and joins the college from the Argonne National Laboratory. He is a computational mathematician who did his doctoral research on ice flow simulation at the ETH, Zurich. He earned his BS and MS in physics and mathematics at the University of Alaska, Fairbanks, and taught at the University of Northern British Columbia. He was an Argonne Scholar and a post-doctoral appointee at the Argonne Laboratory.

**Torin Clark** joins the faculty of the Aerospace Engineering Department as an assistant professor. He is coming from the Jenks Vestibular Physiology Laboratory at the Harvard Medical School where he has completed a post-doctoral program. He earned his MS and PhD at MIT with an emphasis on humans in aerospace, and has a BS in Aerospace Engineering from CU-Boulder. Torin is a graduate of Niwot High School, and is soon to be married to Allie Hall on the 12th of September.

**Ioana Fleming** is an instructor in the Computer Science department and has been an adjunct and summer session instructor in the department for the past year. She is a native of Romania and is a trained medical doctor graduating from the University of Medicine and Pharmacy in Bucharest. She completed her BS in Computer Science at Illinois Institute of Technology, and her MS and PhD in Computer Science at Johns Hopkins University. Her research interests are in the biomedical area combining the power of computing with the art of physical healing.

**Rafael Frongillo** is an assistant professor in the Computer Science department. He received his BA and MEng in mathematics and computer science, respectively from Cornell University and his PhD from the University of California, Berkeley. He has just completed a post-doctoral fellowship at the Center on Computation Research and Society at Harvard. His research lies at the interface between theoretical machine learning and economics, primarily focusing on domains such as information elicitation and crowdsourcing which involve the exchange of information for money, and drawing techniques from convex analysis, game theory, optimization, and statistics. He did research internships for Microsoft and Google, and was an undergraduate research associate at the University of Rome La Sapienza, Italy.

**Michael Gooseff** is an associate professor in the Civil, Environmental and Architectural Engineering department, and has a joint appointment with INSTAAR. He earned his MS and PhD from CU Boulder in the CEAE department where he studied the effect of climate change on the temperature of alpine rivers, and the biogeochemical effects on dry valley streams in Antarctica. He received his BCE from Georgia Institute of Technology, and has taught at the Colorado School of Mines, Utah State University, Penn State University and Colorado State University. He has received several teaching awards from Penn State University and was the outstanding faculty member at Utah State University in 2004. He has received over $18 million in collaborative research grants.
Matthew Hammer is an assistant professor in computer science and joins us from a post-doctoral fellowship at the University of Maryland. He earned his PhD from the University of Chicago with an emphasis on self-adjusting machines. He did his BS in computer science at the University of Wisconsin, and his MS in computer science at the Toyota Technological Institute at Chicago. He has three patents in the multi-user gaming function and multi-layer applications.

Hendrick Heinz is an associate professor in the Chemical and Biological Engineering department. He comes to CU-Boulder from the University of Akron where he has been an assistant and associate professor since 2006. He did his graduate work at the ETH Zurich where he earned an MSc in Chemistry and a PhD in Material Science and Engineering. He received his BSc in Chemistry from the University of Heidelberg, Germany. He has been a research assistant in Germany, Switzerland and Cyprus, and has won numerous research honors including an NSF Career Award in 2010. He did a post-doctoral fellowship at the Air Force Research Laboratory at Wright Patterson Air Force Base in Dayton, OH.

Adam Holewinski is an assistant professor in the Chemical and Biological Engineering department. He did his undergraduate and graduate education at the University of Michigan, earning BSE, MS and PhD degrees in Chemical Engineering. His research interest is in the electrocatalysis of metallic compounds and solid fuel cell technology. He also has a joint appointment at RASEI.

James ‘Sean’ Humbert is an associate professor in the Mechanical Engineering department and comes to CU-Boulder from the University of Maryland where he has been an assistant and associate professor since receiving his MS and PhD in Mechanical Engineering from Cal Tech in 2005. He did his undergraduate work at UC Davis in Mechanical Engineering. His research has been associated with the mechanical aspects of flight and navigation mechanics. He has done work with the United Technologies Research Center and the Pratt and Whitney Propulsion Center.

Jae-Woong Jeong is an assistant professor in the Electrical Computer and Energy Engineering department. He joined the college in January 2015 and has research interests in the future of ‘soft’ bio-medical devices for advanced healthcare and biomedical research. Research areas in his group include design and fabrication of flexible/stretchable electronics, photonic microsystems, and ultrathin/soft microfluidic devices for various applications such as health/wellness monitoring, disease diagnosis and therapy, prosthetics, and human-machine interfaces. His team pursues an interdisciplinary approach, involving knowledge and techniques from materials science and engineering, electrical engineering, biomedical engineering, and physics. Their research interests lie in developing wearable functional artificial skin systems, implantable “soft” and/or “transient” devices, and endoscopic optical microscopes and photonic sensors. Jae-Woong earned a BS in Electrical Engineering at the University of Texas, and an
MS and PhD in EE from Stanford University. He joined our college from the University of Illinois where he was a post-doctoral research associate.

**Christoph Keplinger** is an assistant professor in the Mechanical Engineering department who has recently completed a post-doctoral fellowship at Harvard University’s Department of Chemistry and Chemical Biology, prior to that he was a post-doctoral fellow in Harvard’s School of Engineering and Applied Science. Christoph was educated at the Johannes Kepler University of Linz, Austria where he earned his MS/BS (Dip-Ing) and his PhD (Dr. Technic) in Physics. He did his work on mechanics of materials and soft matter physics. His work has been recognized with many awards as he has focused on soft matter research such as artificial muscles.

**Rita Klees** is a Scholar in Residence in the Civil, Environmental and Architectural Engineering department and is an associate director of the Mortenson Center in Engineering for Developing Communities where she teaches field methods and directs the student practicum experience. She did her graduate work in environmental engineering at CU-Boulder earning MS and PhD degrees, and has over 25 years of international development experience with the World Bank and USAID. Her focus has been on natural resources management, water resources, water supply and pollution control. She also has experience as a private consultant and in community development. She has been teaching at CU-Boulder as an adjunct for the past few years, and now joins our faculty in the Mortenson Center.

**Baowen Li** is a professor in the Mechanical Engineering department and joins the college from UC Berkeley where he has been a visiting professor on loan from the National University of Singapore (NUS). He has a distinguished academic and research career in phononics and thermal energy science. His education started with a BS in Physics from Nanjung University in China, MS in Physics from the Chinese Academy of Science in Beijing, and a PhD in Physics from the Carl-von-Ossietzky Universitat Oldenburg, Germany. He was the founding director of the Center for Phononics and Thermal Energy Science at Tongji University in China, and Executive Director for the Graduate School for Integrative Sciences and Engineering at NUS.

**Ben Livneh** is an assistant professor in the Civil, Environmental and Architectural Engineering department and has a joint appointment as a fellow in CIRES. Ben has been a research scientist and visiting fellow at CIRES for the past 3 years, and has taught summer session classes in the CEAE department. His prior experience includes lecturer positions at Seattle University and the University of Western Ontario. Ben received his BESc and MESc in Civil and Environmental Engineering at the University of Western Ontario, and his PhD in Civil and Environmental Engineering from the University of Washington. His research emphasis has been on hydrology, and his publications have been on hydrologic modeling.
Robert Marshall is an assistant professor in the Aerospace Engineering department and joins the college from Stanford University where he has been a research associate in the Aeronautics and Astronautics department. He also was a post-doctoral fellow in the Electrical Engineering department at Stanford. His research interest is in lightning and other thermo-spheric phenomena. He earned his BS in Electrical Engineering from the University of Southern California and his MS and PhD in EE from Stanford. He has done research on all seven continents including the northpole. He is an ironman finisher and an avid and accomplished golfer.

Frank Miller is a senior instructor in the Computer Science department. Frank has had an interesting career including the founding of his own company, Cornfed Systems, an embedded and systems software development and hardware development. He has been a systems engineer and architect for other technology and security firms and has also taught at the University of Maryland. He graduated with a BS in Electrical Engineering from the University of Iowa, has an MS in Computer Science from Iowa, and a PhD in computer science from the University of Maryland. He has multiple patents and has found multiple companies in the software/firmware business sector.

Sanghamitra Neogi is an assistant professor in the Aerospace Engineering Department and is coming to the college from the Max Planck Institute for Polymer Research, Mainz, Germany where she is a post-doctoral fellow working on thermal and electronic transport in silicon membranes for thermoelectric applications. She received her BSc in Physics from the Jadavpur University in Kolkata, India, her MSc in Physics from the India Institute of Technology in Kanpur, India, and her PhD in Physics from Penn State University.

Corey Neu is an associate professor in the Mechanical Engineering department, and is joining us from Purdue University where he has spent the last seven years in biomedical research on non-invasive methods of diagnosis and treatment, and artificial joints and tissues. He has published scores of peer reviewed journal articles and has published a CRC handbook of imaging in biological mechanics. He has four patents in synthetic tissues and a microscopic probe for magnetic resonance imaging. Corey earned a ScB in Mechanical Engineering from Brown University, a ScM from Brown in Biomedical Engineering from Brown, and a PhD in Biomedical Engineering from UC Davis. He did an NIH post-doctoral fellowship with the UC Davis Medical School.

Richard Osborne is an instructor in the Computer Science department with interests in machine language and bioinformatics. He has been an assistant professor and instructor in the Computer Science department over the past several years, and has taught a variety of classes on the Boulder and Denver campuses. He earned his PhD in Finance from Michigan State University, his MBA from MSU and a BA in English Literature from the University of Michigan. He has worked as a
Chief Technology Officer for large corporations, and is a licensed airline transport pilot and flight instructor.

Levi Perigo is a Scholar in Residence in the Interdisciplinary Telecommunications Program. He is a senior network engineer and has spent the past decade with ADTRAN, Inc. performing design and installation of network security systems. He has been an adjunct faculty in ITP teaching Cisco internetworking technologies and hands-on solutions. Levi has a BA in Computer Information Systems from Anderson University, an MS in Information and Communication Systems from Ball State University and a PhD in Information Systems from Nova Southeastern University.

Timothy Scherr is a Senior Instructor in the Electrical Computer and Energy Engineering department and will be teaching embedded systems and control systems classes. He started his teaching career at South Dakota School of Mines and Technology as an Assistant Professor of Electrical Engineering, and then spent 25 years in industry providing system design and support, project management, engineering management and product support. Most recently he has spent the past several years with Arrow Electronics who are headquartered in the Denver area. He has a BS in Electrical Engineering from Washington University in St. Louis, and an MS in Electrical Engineering from the University of Utah.

Ben Shapiro is an assistant professor in the ATLAS Institute, and will have his faculty home in the Computer Science department. He has a background in engineering education and computer science and joins us from Tufts University in Medford, MA. He did his undergraduate education at UC San Diego in computer and cognitive science, and his PhD in Learning Science at Northwestern University. He was a post-doctoral research associate in games+learning+society at the University of Wisconsin, Madison, and was a visiting professor at the University of Pittsburgh School of Education.

Michael Shirts is an associate professor in the Chemical and Biological Engineering department and joins us from the University of Virginia where he was an assistant and associate professor of Chemical Engineering. Michael has done immense research in the computational approach to simulation of molecular design in chemical engineering. These computational tools are used for drug discover and protein processing. Michael earned his AB in Chemistry from Harvard University and his PhD in Chemistry from Stanford University. He was a post-doctoral NIH research fellow at Columbia University.

Joel Swanson is an assistant professor in the ATLAS Institute with his faculty home in the Herbst program. He is the director of the Technology Arts and Media (TAM) program, which has a newly approved BS degree track in the College of Engineering and Applied Science. Joel has been an instructor in the TAM program for the past several years, and has a background in
the visual and computing arts. His BFA was earned at CU Boulder, and his MFA at UC San Diego with an emphasis on computational art. He has shown his work at art galleries around the region.

**Dan Szafir** is an assistant professor in the ATLAS Institute and will be rostered in the Computer Science department. Dan comes to us after earning his PhD in Computer Science from the University of Wisconsin, Madison. His research goals are to leverage novel sensing and interactive technologies to develop new forms of human assistance. His current focus is on two main research areas: (1) enhancing the capabilities of small flying robots to provide assistance to nearby people and (2) developing technology to assist student learning in educational settings. He uses theoretical models, observational data, and design techniques to develop solutions that empower users, support rich, intuitive interactions, and increase collaboration and task efficiency. Dan did his undergraduate work at Boston College where he earned a BA in computer science and history. He was an assistant coach for junior volleyball and hockey teams.

**Angela Thieman Dino** is an instructor in the College of Engineering and Applied Science and is the lead instructor for our Engineering Leadership Program. She is a cultural anthropologist and has her BA, MA and PhD degrees in anthropology from CU-Boulder. She has been the Field Director for the Leeds Scholars Program in the Leeds School of Business, and has been teaching leadership classes in Leeds and our college for the past 5 years.

**Eric Wustrow** will join our faculty as an assistant professor in the Electrical, Computer and Energy Engineering department in January 2016. Eric joins us from the University of Michigan where he just completed his PhD in Computer Science, and his BSE in Computer Engineering. His research interest is in computer and network security, including Internet measurement, censorship resistance, and applied cryptography. He has exposed vulnerabilities in insecure electronic voting systems in the U.S. and abroad, developed detection techniques that uncovered weaknesses in widespread cryptographic protocol implementations, and created systems for circumventing large-scale Internet censorship in countries such as Iran and China. He is an expert on the security impacts of the full body scanner, and his analysis has determined that the scanner does not detect the metallic objects it was intended to find.