Lorain County Community College
Fall 2018 STEM Forum Speaker Bios and Titles of Their Talks – October 25, 2018

David Levine – Innovation Talk Title: Soon to be finalized

David Levine is President of Wireless Environment. In 2006 David Levine and Mike Recker founded Wireless Environment, Mr Beams® parent company, to create innovative wireless LED lighting. Under their leadership, the company has acquired 26 issued utility patents, 10 issued design patents and 17 patents pending in the United States for its products and technology, and has grown from four employees in 2012 to more than 25 employees in 2017. The company has also expanded its product selection across three product lines: Mr Beams®, ReadyBright® and NetBright®, and has the top selling light on Amazon.com in its category. In January 2018, Ring acquired Wireless Environment. Shortly thereafter Ring was acquired by Amazon. Prior to Wireless Environment, David launched 21 consumer products and built a power tool company to $4 million in sales in five years. A Senior Product Manager at Black & Decker and DeWalt from 1995 until 1999, he launched the rotary tool business and later managed the cutting, drilling and screw driving accessory categories. In 2000, he co-founded Home Products and launched eleven Kitchen Drawer Power Tools,™ including the Mini Powered Screwdriver, the first miniature powered screwdriver. David earned an MBA from Harvard Business School and a BA in History from Washington University.

Fred Ode – Innovation Talk Title: Critical Components for Entrepreneurial Success

When Fred Ode, CEO/Chairman of Foundation Software, started his company in 1985, he had a single goal: to build a company that would be a dominant force in the construction accounting software industry. A high school math teacher turned computer programmer and entrepreneur, Fred didn't always have such an intense focus. Throughout his twenties, he alternated between teaching and traveling extensively across the United States and Europe, sometimes with little more than a backpack and pocket change. It wasn't until he enrolled in an MBA course at Cleveland State University that he discovered his true passion — programming. Since then, developing his own software and organically building a business from one employee to almost 300 with a unique, national reputation. Today, Fred is chairman/CEO of Foundation Software and Payroll4Construction.com, a family of companies designed to lead in helping contractors run the business side of their construction business.

Dr. Regan Silvestri – Innovation Talk Title: "Monitoring the Condition of In-Use Lubricating Oils: How One Small Idea Saved a Lot of Time and Money"

Dr. Silvestri is an Associate Professor of Chemistry at Lorain County Community College. Professor Silvestri holds a doctorate degree in polymer engineering from Case Western Reserve University. Among his many research activities, he directs a student research group investigating the science of the flavor of whiskey. He previously completed a volunteer service assignment in the U.S. Peace Corps as a Visiting Professor of Environmental Science in Kazakhstan where he lived and worked for four years. For fun, Professor Silvestri performs his science magic show "Magical Science!!" at local schools, and has reached audiences of tens-of-thousands of enthusiastic students.

University of Akron
Fall 2018 STEM Forum Speaker Bios and Titles of Their Talks - October 30, 2018

Dr. Brian Davis – Innovation Talk Title: "A path from math: how geometrical concepts lead to heart implants"

Dr. Brian Davis, graduated from the University of Cape Town with degrees in engineering and from Penn State with a PhD in Exercise and Sport Science. He has served as President of the International Society of Biomechanics and has been recognized as a Fellow by that society. He has conducted research ranging from designing instruments for use on the International Space Station to inventing new medical devices at the Cleveland Clinic. He served as Chairman of Biomedical Engineering at The University of Akron from 2012 to 2018 and is currently Director of Research for the College of Engineering. Over the course of his career he has secured over $25,000,000 in grant funding.

Dr. James Keszenheimer – Innovation Talk Title: "Innovation and Commercialization of Laser Technologies"

Dr. Keszenheimer holds both Bachelor's and Master's degrees in Physics from John Carroll University, an M.B.A. from Myers University, and a Ph.D. in Electrical Engineering from Tufts University. He joined the University of Akron in 2014. Dr. Keszenheimer began his career researching lasers and fiber optic instruments before transitioning his interests to the commercialization of technology. He has over 25 years of technology and business development experience and is a leading expert in photonics. He has worked at several government-funded labs including NASA, AVCO-TEXTRON, MIT Lincoln Lab, and Draper Lab. Dr. Keszenheimer has been involved in start-up companies since college and has co-founded or assisted early stage-companies in Boston, Silicon Valley, Princeton, and Ohio, with over $150M invested. His commercial interests have covered biomedical, communications, imaging, industrial, aerospace, as well as consumer products. He has delivered products to a broad range of markets by applying his combined business and technical acumen. Dr. Keszenheimer recently served as Director of the Wright Center for Sensor System Engineering (WCSSE) at Cleveland State University where he was managed $24M in grants to various Ohio research institutions. He currently serves as mentor and advisory board member to entrepreneurs and startups.

Dr. Ajay Mahajan – Innovation Talk Title: "Ultra Low Cost/High Tech Remote Monitoring Platforms: Potential Impact on Healthcare"

Dr. Ajay Mahajan is a tenured Professor (Mechanical Engineering and Biomedical Engineering departments) at The University of Akron, USA. He is the Chair of the Investment Committee for the Akron BioInnovation Fund II (ABFII), a venture fund for the city of Akron. He was the Associate Vice President for Innovation for the University and the Associate Dean for Research in the College of Engineering till 2015. In the past he has worked with NASA, US DoD, US Federal Highway, as well as companies such as Timken, Caterpillar and Medtronic. He has also worked with two Formula One race teams (Renault F1 and Toyota F1). He is the Co-Founder and President of Clipius Technologies, a high-tech device company, and serves on the Board of many organizations/companies. He has developed numerous biomedical devices and also run cadaver labs for Medtronic while testing their new devices for FDA approval and marketing claims. Four years ago, he served on President Barak Obama's Advanced Manufacturing Partnership (AMP2.0) initiative at the White House that has helped focus billions of dollars of funding to provide the US with a competitive edge in advanced manufacturing for the next twenty years.

Dr. Gopal Nadkarni – Innovation Talk Title: "Imagineering your Future: If you can dream it, you can build it!"

Dr. Gopal Nadkarni is currently an Associate Professor of Mechanical Engineering at the University of Akron. In 2016 he became a co-founder and investor of an Agro-tech startup in Bangalore, India. He has graduate degrees in Manufacturing and Mechanical Engineering from the University of Waterloo and the University of New Brunswick (UNB), Canada. He has worked in R&D, technology marketing strategy, sales, branding as well as implementation of supply chain in the automotive industry for over 30 years. Prior to joining the University of Akron as The Director, Proof of Concept Center, he was VP, Applied Technology at the Shale-Inland Corporation developing innovative metal laminate products. Dr. Nadkarni's interests are in invention, innovation & commercialization, a passion he brings to mentoring technologically minded students interested to create their own startups

Kent State University – Kent Campus
Fall 2018 STEM Forum Speaker Bios and Titles of Their Talks – November 7, 2018

Ms. Cynthia Calhoun – Innovation Talk Title: "Creating Your Own NASA Technology Spinoff"

Ms. Cynthia Calhoun is an Aerospace Engineer Supervisor serving as the Deputy Chief of the Program and Project Assurance Division at the NASA John H. Glenn Research Center in Cleveland, Ohio. She is responsible for assuring NASA systems are of high quality and operate safely, to ensure a successful mission for NASA programs and projects. This includes overseeing an annual budget of $11,000,000 and a staff of 50 employees who evaluate the safety, reliability, and quality of aeronautics and space systems fabrication, and technology or research and development activities that could evolve into space systems. Ms. Calhoun has authored and presented numerous national and international publications. She also received numerous awards throughout her career for her accomplishments, including the NASA Exceptional Service Medal for Software Engineering and the NASA Equal Employment Opportunity Medal for her STEM outreach efforts with underrepresented and underserved students. Ms. Calhoun has a Bachelor's in Electrical and Computer Engineering from Ohio University, and a Master's in Management Information Systems from Duquesne University.

Dr. Jong-Hoon Kim – Innovation Talk Title: "Telepresence Beyond Physical Limits"

Dr. Jong-Hoon Kim is an assistant professor in Computer Science and a director of the Advanced Telerobotics Research Laboratory at Kent State University. He received his PhD degree in Computer Science from Louisiana State University in Baton Rouge, Louisiana in 2011. He has about 4 years academic and 6 years IT industrial professional experience. He has published 38 research publications, has hold one US patent, and has involved about $12 M successful grants as a PI, Co-PI, or SP. He has the expertise in tele-robotics, wearable computing, sensor network, human-machine interaction, and internet of things. Especially, immersive tele-embodiment technology for advanced tele-robotic systems is his current research focus, and some of the research outcomes have been Used research outcomes have been used for developing a telepresencehumanoid robot, called TeleBot which was introduced to all around the world including National Fox News "America's Newsroom" with the title "Real-life 'ROBOCOP' helps wounded police officers & vets get back to work".

Dr. Robert Clements – Innovation Talk Title: "3D Imaging and Reconstruction"

Dr. Robert Clements Is a neuroscientist who teaches and performs research at Kent State University. He develops and uses different three-dimensional (3D) imaging techniques to understand diseases of the brain, for virtual and physical reconstruction as well as education. Dr. Clements' actively publishes in scientific journals, authors software and owns a patent. His research studies aim to visualize our brains' three-dimensional structure for better disease diagnosis and therapies as well as improve how we learn, experience, and perceive 3D environments and objects.

Ms. Margarita Benitez will talk about "Design Innovation/Entrepreneurship and STEM Programs, How They Can Prepare Students for the Future, and Scholarship Programs.

Ms. Margarita Benitez is an Associate Professor & Fashion Technologist in the Fashion Design & Merchandising Department. Previously, she served as a part-time faculty member in the Art + Technology Department at the School of the Art Institute of Chicago, where she attained her MFA, and as an adjunct professor in the Fashion Design program at the Illinois Institute of Art – Chicago (ILIC). Her interdisciplinary background mixes art and technology, interface design, tangible computing, 3D, architecture and fiber and material studies. Margarita's passion lies in interactivity and interaction design with an emphasis on interactivity in textiles and fashion. Margarita's recent research involves working on OSLOOM, an open-source thread controlled loom driven by microcontrollers. At the moment the project is the pre-production phase but ultimately all information on how to successfully build an open source loom will be available under a creative commons license online. Margarita used the "KickStarter" fundraising website to raise $10,000 to fund the OSLOOM project!

Youngstown State University
Fall 2018 STEM Forum Speaker Bios and Titles of Their Talks - November 9, 2018

R.K. Khosla –Title of Innovation Talk: "High School Students Can Make a Difference"

Rajesh (R.K.) Khosla is Chief Business Officer of Black Beret Life Sciences, LLC. R.K. was most recently CEO at Laguna Pharmaceuticals (formerly ChanRx Corp.), a company developing a multi-channel drug for the treatment of atrial fibrillation/atrial flutter, taking it through a very successful Phase 2b and raising $30M for a Phase 3 study. Simultaneously, he was CEO-in-Residence at BioEnterprise Corp. helping companies to accelerate their growth to benefit the Northeastern Ohio economy. Previously, R.K. was CEO of PeriTec Biosciences Ltd., a medical device spin-off of the Cleveland Clinic Foundation. Within a 4-year period, the company advanced from animal studies to completing 20 patients in the First-in-Man study and 10 patients in the Second-in-Man study. R.K. has a wide background in finance, entrepreneurship and venture capital. Highlights include two years as a Principal concentrating on wireless technologies at Crystal Ventures, a tech venture fund with offices in Cleveland, Palo Alto, Singapore & Taipei. He was also CFO and Director of Back Office Operations for All Wound Up, which exited to Borders Group in March 1999. All Wound Up, a seasonal toy retailing concept, was the winner of the Weatherhead 100 award for fastest growing company in Northern Ohio from 1994-1998. R.K. started his career at National City Corp. (now PNC) in Corporate Banking with the majority of his time being spent in Merchant Banking concentrating on off balance sheet vehicles and Mergers & Acquisitions including the takeover of Ohio Bancorp. Given his experience from all sides of the financing table as well as his operating roles, in his consulting practice, R.K. has been providing C-suite guidance to clients, both companies as well as venture funds, in various technology fields since 2005. R.K. earned an Electrical Engineering/Applied Physics degree, *summa cum laude*, with a minor in Economics from Case Western Reserve University. In addition, he has an MBA with a concentration in Finance from the Yale University School of Management with Letters of Distinction provided in Financial Accounting and Managerial Accounting.

Marissa Sergi – Title of Innovation Talk: "Turning Passion into Profit"

Marisa Sergi, a third-generation winemaker, earned her degree - Enology and Viticulture - at Cornell University in 2015. She worked in sunny California as an intern and subsequently, full-time, at E&J Gallo Winery as a new product development ecologist. She returned to Ohio to pursue her *real* American dream of launching and growing a national wine brand. Marisa is founder and CEO of RedHead Brands and, in addition to company strategy and direction, she is responsible for product quality, new product development and plays the key role as face of the company and brand ambassador.

Martin Abraham – Title of Innovation Talk: "Winning with STEM"

Dr. Abraham joined Youngstown State University as Professor of Chemical Engineering and Founding Dean of the College of Science, Technology, Engineering and Mathematics in July 2007, and served as Provost from October 2014 until May 2018. At YSU, he has led the integration of research and technology transfer across the disciplines, in cooperation with regional business and education partners, and promoted the development of an internship program for students. His strategic vision for the STEM College included a strong connection to the business community, including entrepreneurial efforts of faculty and students. He aligned closely with the Youngstown Business Incubator, led YSU's efforts to bring the National Additive Manufacturing Innovation Institute (America Makes) to Youngstown, and was named Business Advocate of the Year for 2013 by the Regional Chamber of Commerce. Dr. Abraham has had an active research program in sustainable technologies and green engineering and sustainability, with a particular emphasis on issues of sustainable energy. He has over 70 refereed publications and over 30 additional publications, is a contributing columnist for the Youngstown Business Journal on the subject of advanced manufacturing, has authored or edited nine books, has participated in three patent applications, and has given over 150 technical presentations. Abraham serves as editor for the American Institute of Chemical Engineer's journal Environmental Progress and Sustainable Energy and Elsevier Science Publishers Encyclopedia on Sustainable Technologies. He is a Fellow of the American Chemical Society and the American Institute of Chemical Engineers, and a registered Professional Engineer.

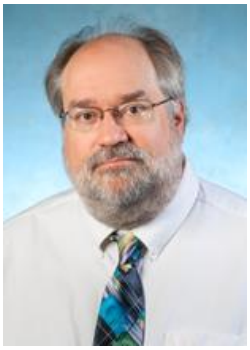
John Carroll University
Fall 2018 STEM Forum Speaker Bios and Titles of Their Talks – November 15, 2018

Dr. Jacquelyn Zera – Innovation Talk Title: "Technological challenges to collect fitness data"

Dr. Zera is an Assistant Professor in the Department of Exercise Science and Sports Studies at John Carroll University. She completed her PhD in Exercise Physiology at the University of Pittsburgh and a Postdoctoral Research Fellowship at the Neuromuscular Research Laboratory and Warrior Human Performance Research Center where she focused her work in performance optimization and injury prevention in military personnel, with a specific focus and expertise in swimming and aquatics based exercise performance. In addition to her work in aquatics, her current work focuses on designing and implementing fitness assessment programs to examine and improve college student health and wellness.

Dr. Katie Doud – Innovation Talk Title: "Developments in the field of viral infection"

Katie Doud completed her undergraduate work at Amherst College as a double major in chemistry and gender studies. She went on to receive an MS at UCLA in organic chemistry. Upon graduating from UCLA, Katie spent a decade working in biomedical research at Harvard and MIT, focusing on using biophysical methods to understand the interactions between proteins and small molecules in drug discovery. In 2009, Katie moved to Cleveland where she initially worked in the Learner Research Institute at the Cleveland Clinic before enrolling at Case Western Reserve University for a Ph.D. Her dissertation work focused on developing inhibitors to disrupt vitamin A signaling in cancer. Katie is currently an Assistant Professor in the Department of Chemistry at John Carroll University. Her research focuses on developing chemical probes to better understand biological systems.



Dr. Michael Nichols – Innovation Talk Title: "Chemistry in the Virtual World"

Dr. Michael Nichols received a B.S. Degree in Chemistry from Clarion University of Pennsylvania and a Ph.D. in Organic Chemistry from Duke University. He served as a post-doctoral associate at Brown University and as a visiting assistant professor at Kansas State University and Ohio University before joining the Chemistry Department at John Carroll University. He is an Associate Professor and current chair of the department. His current research interests span a wide range of organic chemistry including undergraduate laboratory experiment development, physical organic studies of keto-enol equilibrium using computer methods and nuclear magnetic resonance, and using gas chromatography-mass spectrometry to identify and classify essential oils. He regularly teaches organic chemistry lecture and laboratory courses.

Dr. Doan Winkel – Innovation Talk Title: "Entrepreneurship"

Coloring outside the lines. Immensely inquisitive. Deconstructing the box rather than fitting in it. Doan was hard-wired to figure out what makes things tick and why. Always pushing boundaries and struggling to fit in the traditional educational system, some would have said he was a difficult child. Luckily, his educator parents gave him freedom to explore, even if it was in unconventional ways. By high school, Doan was not only an entrepreneur, but also teaching his friends the entrepreneurial mindset. Doan is committed to supplementing the educational experiences of young people. He is the founder and director of the Entrepreneurship Education Project, which gathers data from nearly 20,000 college students from 400+ universities across 70+ countries to understand better how to teach entrepreneurship. He founded the McLean County Unit 5's Innovative Entrepreneurs experiential high school class to offer students the chance to experience what entrepreneurship looks and feels like. More used by university students around the world. As the John J. Kahl, Sr. Chair in Entrepreneurship and Director of The Edward M. Muldoon Center for Entrepreneurship at John Carroll University, Doan is developing the next frontier in university-based entrepreneurship curriculum and programming. recently, Doan co-founded TeachingEntrepreneurship.org, an experiential entrepreneurship curriculum

The Ohio State University – Ohio Agricultural Research & Development Center
Fall 2018 STEM Forum Speaker Bios and Titles of Their Talks – November 29, 2018

Dr. Katrina Cornish – Innovation Talk Title: "More Bounce to the Ounce: Making Sustainable Materials Work- Technically and Economically"

Katrina Cornish, graduated from the University of Birmingham, Edgabaston, England with a First Class Honours degree in Biological Sciences (1978) and a Ph.D. in Plant Biology in 1982. She is a global expert on alternate rubber and latex production, processing and products with more than 30 years working with rubber biosynthesis and alternative feedstocks in the Government, Commercial and University sectors. She is the Ohio Research Scholar and Endowed Chair in Bioemergent Materials at The Ohio State University, Technical Director of the Program of Excellence in Natural Rubber Alternatives, a fellow of the National Academy of Inventors and the American Association for the Advancement of Science, and CEO of EnergyEne, Inc. She leads a program on alternate rubber production, bio-based fillers and fibers, and exploitation of opportunity feedstocks from agriculture and food processing wastes for value-added products and biofuels and has >240 papers and ~20 patents.

Dr. Joe Scheerens – Innovation Talk Title: Health Beneficial Fruits Are Attached to STEMs

Joe Scheerens is a Professor in the Department of Horticulture and Crop Science at The Ohio State University. He has a B.S. degree from the University of Arizona, a M.S. degree from the University of Wisconsin and a Ph.D. from the University of Arizona. His research is focused on improving the culinary quality and/or health beneficial properties of edible or medicinal horticultural crops or their processed products, including Fruit Phytonutrients for Health and Well-being. A. Dewey Bond Pomology Endowment Research Program (PI), Developing the genomic infrastructure for breeding improved black raspberries. National Institute of Food and Agriculture, Specialty Crop Research Initiative (Co-PI). Development of grafting technology to improve sustainability & competitiveness of the U.S. fruiting vegetable industry National Institute of Food and Agriculture, Specialty Crop Research Initiative (CoPI). Commercialization of burdock (Arctium spp.) for medicinal uses. Ohio Agricultural Research and Development Center Seeds Research Grant (CoPI).

Dr. Peter Piermarini – Innovation Talk Title: Developing new chemical tools to control the deadliest animal in the world

Peter Piermarini is an Associate Professor of Entomology at The Ohio State University, Ohio Agricultural Research and Development Center in Wooster, Ohio. He received his BSc in Biology from James Madison University (1995) and doctorate in Zoology (2002) from the University of Florida, before completing postdoctoral training with Dr. Walter F. Boron at the Yale University School of Medicine and Dr. Klaus W. Beyenbach at the Cornell College of Veterinary Medicine. He started as an Assistant Professor of Entomology at The Ohio State University in 2011, and was recently promoted to Associate Professor in 2016. Dr. Piermarini was formally trained as a comparative and molecular physiologist studying the cellular mechanisms of salt and water balance and acid-base regulation in vertebrate and invertebrate animals. Since 2006, he has focused his attention on mosquitoes and other insect pests/vectors, performing physiological and toxicological studies aimed at discovering and developing insecticides with novel mechanisms of action, which have led to 38 peer-reviewed papers and 7 book chapters/reviews.

Dr. Katelyn Swindle Reilly – Innovation Talk Title: New Materials to Prevent Blindness

Dr. Swindle-Reilly is Assistant Professor, Department of Biomedical Engineering, Department of Chemical and Biomolecular Engineering, Department of Ophthalmology & Visual Science, The Ohio State University. She completed a B.S. in Chemical Engineering at Georgia Institute of Technology in 2004. She then received her M.S. in Chemical Engineering in 2006 and Ph.D. in Energy, Environmental, and Chemical Engineering in 2008 from Washington University in St. Louis. Her dissertation research resulted in the development of an injectable, in vivo-gelling biomimetic vitreous substitute. She completed postdoctoral training in Biomedical Engineering at Saint Louis University where she developed biopolymer and electrospun scaffolds for peripheral nerve regeneration. After completing her postdoctoral training, Dr. Swindle-Reilly worked as a Senior Scientist at Rochal Industries LLC for over four years where she researched and developed several patented and FDA approved wound care products. She also designed manufacturing processes and preclinical studies for regulatory clearance of these new devices. She concurrently held an appointment as Adjunct Assistant Professor in Biomedical Engineering at The University of Texas at San Antonio from 2013-2015. She joined The Ohio State University as Assistant Professor in 2016. Her current research interests focus on the design of polymeric biomaterials for soft tissue repair and drug delivery with focused applications in ophthalmology and wound healing.

Cleveland State University
Fall 2018 STEM Forum Speaker Bios and Titles of Their Talks – November 27, 2018

While Cleveland Sate's outstanding speakers will be announced soon, the Cleveland State STEM Forum will be focused on the emerging technology that is knows as Blockchain, and an initiative that is known in Northeast Ohio as BlockLand.

Don't let your students miss out on this opportunity that may well represent the future of Northeast Ohio. Register them to attend today.

The following is an excerpt from the Greater Cleveland Partnership website that helps to explain a little about Blockchain and Blockland:

Blockland Effort Advances Forward

August 16th, 2018
What to know about Cleveland's Blockchain Evolution

Cleveland leaders are organizing around a new initiative to transform and enhance our regional economy through blockchain. Blockchain technologies work as a linked list of digitized information in blocks, with each block recording transactions and linked in a chronological chain like a 20th century ledger. The local effort, referred to as BlockLand, is focused on how to reposition Cleveland on the cutting edge of technological advancement and is being led by Bernie Moreno, of the Bernie Moreno Companies.

Joe Roman (GCP) and Dr. Akram Boutros (MetroHealth System) co-chair BlockLand's political environment node. And, an event that was held last Monday at GCP headquarters was used to heighten public sector leaders' understanding of blockchain and its potential to enhance our economy. BlockLand's political environment node is charged with:

- Advocating for blockchain application adoption with city, county, and state policymakers, with the goal of modernizing government.
- Educating policy makers on the importance of developing laws and updating current statutes that make Cleveland, and Ohio, the leader in forward thinking blockchain legislation, allowing blockchain to succeed and thrive here.

Local business leader Bernie Moreno shed more light on the topic this past Thursday during a presentation at GCP's 3Q Middle Market Forum. During his standing-room-only presentation at the Huntington Convention Center, Moreno said it is imperative that Cleveland begin laying the groundwork now to be a leader in this burgeoning technology.

"We are three to five years away from mainstream adoption," Moreno said of Blockchain technologies at GCP's recent Middle Market Forum. "Technology today is in every company" and "a city that is not in the tech business is a city that is not going to survive," he added.

That's why Cleveland is building a blockchain technology ecosystem today. In fact, BlockLand also announced last week, a first-of-its-kind partnership between Cleveland-based JumpStart Inc. and the Toronto-based Blockchain Research Institute (BRI). With significant financial support from GCP and the Unify Project, JumpStart joined BRI on behalf of the entire region. The membership allows JumpStart to provide Greater Cleveland entrepreneurs and existing businesses valued under $1 billion with access at no charge to BRI's 80 groundbreaking research projects. These projects examine the strategic implications of blockchain technology in the financial services, manufacturing, retail, energy/resources, technology/media, healthcare and government sectors, as well as how this nascent technology changes the way companies are managed.