EVENT PROGRAM

INNOVATIONS IN HEALTHCARE TECHNOLOGY

OCTOBER 8, 2020

TECHNOLOGY COUNCIL OF CENTRAL PENNSYLVANIA

CENTER FOR MEDICAL INNOVATION

PennState

Opening Remarks

2:00 p.m.

Ann M. Hughes, MS

President, Technology Council of Central Pennsylvania

Ann M. Hughes joined the Technology Council of Central Pennsylvania in August 2019 bringing with her more than 20 years of nonprofit management, fundraising, marketing/public relations, strategic planning and partnership development experience.

Having previously served in a variety of executive roles with Franklin & Marshall College, Ronald McDonald House Charities of Central PA, Girl Scouts in the Heart of Pennsylvania and Catholic Health Initiatives, Ann has a successful track record of leading organizations and helping them exceed operational and fiscal objectives while also cultivating key strategic partners.

Ann has a Bachelor of Arts degree in Business Administration from Muhlenberg College in Allentown, PA and earned her Master of Science in Education degree from Indiana University in Bloomington, IN. Originally a Lancaster native, Ann currently lives in York, PA with her husband, Jim.

The Roots of Innovation Panel

2:05 to 3:00 p.m.

Redeploying existing technologies to address front line challenges: How current technologies have been strategically utilized and reinvented to continue care and address challenges.

Erika Swift , MBA (moderator)

Associate Director, Penn State Center for Medical Innovation, Penn State College of Medicine

Erika Swift serves as the Associate Director for Penn State College of Medicine's Center for Medical Innovation, which helps accelerate technology development through education, discovery, proof of concept programs, funding initiatives and startup support. The Center also facilitates collaborations with fellow institutions, industry partners and economic development organizations. Understanding the importance of technology transfer to regional economic growth, Ms. Swift also serve as the President of BioStrategy Partners, Inc. a 501c3 nonprofit consortium of seven academic medical centers and research institutes committed to the development and transfer of academic research into the marketplace.

Prior to joining Penn State College of Medicine in 2015, Ms. Swift worked in various industry sectors including medical devices, dental equipment and consumer goods having more than 20 years of experience in regional economic development, technology commercialization, new business development, operations, and startups. Ms. Swift received her Bachelor's Degree in Marketing with a concentration in International Business from Bloomsburg University, and an MBA from York College of Pennsylvania. Ms. Swift serves on Penn State's Conflict of Interest and Patent Review Committees.

Anthony Tsai, MD

Assistant Professor, Department of Surgery, Division of Pediatric Surgery, Assistant Professor, Department of Pediatrics, Director, Surgical Innovation Group, Penn State Health

Anthony Tsai is a pediatric surgeon, global health promoter, medical innovation facilitator, and gadget enthusiast. He seeks to promote health globally through the intersection of faith, medicine, technology, and innovation.

He is currently an associate professor at Penn State Milton Hershey Medical Center, division of pediatric surgery. His main clinical interest is minimally invasive surgery, chest wall deformities, and congenital malformations. He has led a successful implantation of a 3D printed splint in a patient with congenital airway defect that led to the second known survivor of the pathology, tracheal agenesis. He has published in the area of immunology, trauma, minimally invasive surgery. His research interest is in chest wall deformities, artificial intelligence, innovation process, surgical technologies, and global health. He serves on the American Pediatric Surgical Association Industry and Institutional Advisory Committee and New Technology Committee.

He is currently the Director of the Surgical Innovation Group, aiming to promote development of innovative solutions that will improve surgical care. He has special interest in digital health, artificial intelligence, augmented and virtual reality, health science systems, and innovation process.

He has participated and led global surgery teams to underserved areas in Honduras and Ghana in the interest of promoting global health. He is currently serving on the executive board for World Surgical Foundation.

Richard Bagley, MBA

Senior Vice President, Chief Supply Chain Officer, Penn State Health

As SVP and Chief Supply Chain Officer for Penn State Health, Richard leads the Penn State supply chain to deliver best in class solutions to the customers and patients we serve in central Pennsylvania. He is actively engaged in transforming the existing materials function. Penn State health is a $2.5B IDN anchored by the Penn State Milton Hershey Medical Center.

Prior to his current role, he led the sourcing and contracting team at Intermountain. He has worked for 3M Health Information Systems in development of their electronic medical records. He has also worked for Siemens developing commercial IT products. He is a graduate from the University of Utah with a degree in computer science and also has a master's degree in business administration from the University of Phoenix where he has taught 17 years.

Steve Tracey, MBA

Professor of Practice, Supply Chain and Information Systems, Executive Director, Penn State Executive Programs and Center for Supply Chain Research, Smeal College of Business, Penn State University

Steve Tracey is the current executive director for both the Center for Supply Chain Research (CSCR®) and Penn State Executive Programs, and professor of practice for the Supply Chain and Information Systems Department within Smeal College of Business. In Tracey's CSCR® leadership role, he is responsible for the vision of one of Smeal's premier research centers as an ambassador and spokesperson for supply chain activities at Penn State. During his tenure as executive director, he has elevated the CSCR® sponsor partnerships with both public and private sector organizations representing over $2.5T in private sector revenue.

As Executive Director of Penn State Executive Programs, Tracey leads an elite team of internationally recognized faculty, researchers, consultants, authors and thought leaders offering individuals and organizations deep expertise, relevant content, and effective learning models across multiple areas of focus with particular emphasis on leadership and strategy, general management, and supply chain.

As a Professor of Practice in Supply Chain Management in the Supply Chain and Information Systems Department within the Smeal College of Business, Tracey delivers curriculum reflecting his extensive background in operations and finance to Smeal undergraduate and graduate students. He also connects with broad industry and public sector audiences through his teaching in Penn State Executive Programs and representing CSCR® at industry events and conferences.

Tracey has a diverse global background directing operations with full P&L responsibilities in more than 14 countries and is considered a commodity market expert in the textile industry. Prior to joining Penn State, Tracey was the senior vice-president of Global Supply Chain at Standard Textile Company, the world's largest marketer and manufacturer of institutional textiles.

Tracey currently serves on both the West Chester Protective Gear and StoryTeller Fx Boards of Directors. and is also an active member of ISM, ASCM (formerly APICS), and CSCMP. He is a retired U.S. Army officer, serving from 1986 to 2002, both in active duty and reserve positions.

Tracey earned his B.S. in Finance from Penn State, and an M.B.A. from Duke University.

Timothy W. Simpson, PhD

Paul Morrow Professor of Engineering Design and Manufacturing, Director, Additive Manufacturing & Design Graduate Program, Co-Director, CIMP-3D, Penn State University

Timothy W. Simpson is a Paul Morrow Professor in Engineering Design and Manufacturing in Penn State's College of Engineering, teaching courses on mechanical engineering design, industrial systems design, additive manufacturing and product family design. He is co-director of the Penn State Center for Innovative Materials Processing through Direct Digital Deposition (CIMP-3D) and he also helps oversee the Engineering Design and Optimization Group within the Department of Mechanical and Nuclear Engineering. A member of the Penn State faculty since 1998, Simpson has successfully teamed on more than $39 million in externally funded projects since 2011, including nearly $1 million in industry support.

Dr. Simpson is nationally recognized for his work in 3D printing and has spoken at numerous industry events and conferences on the topic. His work has been widely published in both scholarly journals and mainstream media. Dr. Simpson has received several awards including the American Society of Mechanical Engineers (ASME) Ben C. Spark Award in 2014, the American Society of Engineering Education Merryfield Design Award in 2011, and the University and College Designers Association Excellence in Design Award in 2011.

Simpson is an ASME Fellow, a Penn State Teaching and Learning with Technology Fellow in 3D Printing, and an American Institute of Aeronautics and Astronautics Associate Fellow. As an active member of ASME, he serves as chair of the Design Engineering Division, the largest division within ASME, and he is a founding member of ASME's Design, Materials and Manufacturing Segment Leadership Team.

Simpson holds doctoral and a master's degrees in mechanical engineering from Georgia Tech and a bachelor's degree in mechanical engineering from Cornell University.

BIOGRAPHIES

Barry Fell

President, TPC Design

Barry Fell, has over 33 years as a consultant/designer in the composite materials and medical device industries. He has an extensive record in designing, manufacturing, and marketing novel materials, processes, and devices with more than 40 US patents granted (with numerous foreign patents as well) and currently 38 US medical device applications pending. In total, he has over 100 US & Foreign patents issued/pending. He has 43 years of experience in the creation and design of advanced textiles, carbon composites, advanced high temperature materials, and products for commercial and military vehicles.

Fell has extensive experience in designing and fabricating equipment for novel material and processing technologies, including over 15 years working with all facets of the 3D printing in various polymeric and metallic materials. He has demonstrated extensive capability integrating components of various scientific, engineering, and biologic concepts into a unified, fabricated laboratory device capable of progressing towards a viable commercialization effort.

In 2010, Fell co-founded of the Penn State Health Department of Surgery's Medical Device Innovation Program. Today, he regularly consults to the medical device industry on device design, function, surgical technique, regulatory pathway and company formation.

Breakthroughs in Telemedicine Panel

3:00 to 4:00 p.m.

Exploring innovations that have emerged during the pandemic and how health systems are handling the seismic shift to remote health, monitoring, rehabilitation, etc. to continue patient care.

Christopher L. LaCoe, DBA, RN, FACHE (moderator)

Vice President, Virtual Health, Penn State Health

LaCoe has over 30 years of varied clinical, operational and service line administrative experience. He is also Assistant Professor of Surgery and Public Health Sciences, College of Medicine, the Pennsylvania State University in Hershey, Pennsylvania and an Adjunct Instructor in Health Policy and Administration, College of Health and Human Development, the Pennsylvania State University World Campus, University Park, PA

LaCoe holds a Bachelor's Degree in Nursing from the University of Scranton, Scranton, Pa., Master's Degree in Health Care Administration from St Joseph's University, Philadelphia, Pa. and completed his Doctoral work in Business and Health Services at Nova Southeastern University, Fort Lauderdale, Fla. with a research emphasis on Service Quality.

Additionally, Dr. LaCoe is a Fellow in the American College of Health Care Executives (FACHE). Serves on several boards including American Heart Association Capital Region, Miller - Keystone Blood Center and Hershey Soccer Club.

R. Hal Baker, MD

Senior Vice President, Chief Digital and Chief Innovation Officer, WellSpan Health

Dr. Baker's current role of Senior Vice President: Chief Digital & Chief Information Officer began in 2020 and includes a continued oversite of IT, HIM, Medical Informatics, Cyber Security, Digital, Biomed, with a new focus on the creation of the Analytics Center of Excellence and WellSpan's Innovation Center.

Since 2005, he has championed WellSpan's progress in leveraging technology to improve patient safety, clinical care, and the quality of the patient experience. An avid promoter of Open Notes and instant access for patients to their results, Dr. Baker championed the creation of patient portals that focused on giving patients immediate control of their data and thereby avoiding sleepless nights. Through his leadership, WellSpan achieved HIMSS Level 7 recognition on of both Cerner and Epic EHRs.

From 2013-20, Dr. Baker also served as SVP: Clinical Improvement and drove an enhanced urgency to addressing safety issues (or "increased rapidity to completing RCA's") as well as the development of multiple improvements in the integration of clinicians and technology to improve safety. By fostering collaborations between the IS and Clinical Improvement teams under his direction, WellSpan was able to dramatically improve survival in sepsis to nation leading levels. This effort was recognized with WellSpan's receipt of the 2019 John M. Eisenberg Patient Safety & Quality Award.

Recognized as both a physician and technology leader, Dr. Baker has served in committee leadership roles for the American College of Physicians. He has also served on the board of the Health Information Management System Society since 2016. He has presented nationally and internationally on the topic of clinical leadership in IS and patient centered design in the deployment of technology.

Dr. Baker joined WellSpan York Hospital in June 1995 as associate program director of the WellSpan York Hospital Internal Medicine Residency Program. He previously served as lead physician at Apple Hill Internal Medicine, where he still practices primary care as part of the WellSpan Medical Group. Dr. Baker came to York after completing a general internal medicine fellowship at Johns Hopkins Hospital and a residency at the Hospital of the University of Pennsylvania. He holds a bachelor's degree in biology and a medical degree from Cornell University.

Robert Neff

Vice President, Digital Solution Development, Digital Innovation & Consumer Experience (DICE) Group, Thomas Jefferson University and Jefferson Health

Robert Neff is the VP for Digital Solutions Development at Thomas Jefferson University and Jefferson Health. Neff is part of Jefferson's Digital Innovation and Consumer Experience Group, the DICE Group, at Jefferson. This unique group at Jefferson has been developed to allow innovation specifically in the area of technologies that improve a consumer's experience with Jefferson. These consumers consist of Patient, Students, Families, Providers, and the community at large. In his role at Jefferson he leads teams that develop applications, mobile apps, digital properties and leverage new and innovative technology to improve the consumer experience across the university health system.

Prior to Jefferson, Neff held product manager roles at Cerner and Siemens Healthcare in the areas of medical device integration, mobile apps, and technology currency. Neff is enthusiastic about the creation of new solutions using innovative technology. His passion has led to several patents for innovative technology in the area of healthcare technology.

Jennifer Kraschnewski, MD, MPH

Professor and Vice Chair for Research, Department of Medicine, Professor of Public Health Sciences and Pediatrics, Director of Project ECHO, Penn State College of Medicine

Dr. Jennifer Kraschnewski joined the faculty of Penn State College of Medicine in July 2009 and is currently Professor of Medicine, Public Health Sciences and Pediatrics. She is a clinician-investigator with a research focus on behavioral interventions for healthy lifestyles in both clinical and community settings. She completed her medical school training at the University of Wisconsin, Internal Medicine residency at Duke University Medical Center, and Master of Public Health and NRSA Fellowship at the University of North Carolina at Chapel Hill. She has more than 80 peer-reviewed publications, and her research has been presented and awarded at both the regional and national levels.

Dr. Kraschnewski serves as director of Penn State Project ECHO, part of a national movement to democratize medical knowledge to improve and save lives in rural and underserved communities. Under her leadership, Penn State Project ECHO has robust funding support from the Department of Health and Human Services/Substance Abuse and Mental Health Services Administration, with two grants focused on opioid use disorder and alcohol use in youth within central Pennsylvania. Dr. Kraschnewski is also Principal Investigator of the REACH Project, funded by the Centers for Disease Control and Prevention, "Enhancing Hispanic Health in Rural Pennsylvania through healthy lifestyle strategies" (Better Together). She also leads a five-year PCORI-funded study to investigate the impact of obesity counseling on diabetes outcomes utilizing the electronic health records from Penn State, University of Pittsburgh, Johns Hopkins, Temple Health System, University of Utah and Geisinger Health System.

In her prior role as executive director of Penn State PROWellness, she had funding from organizations including PCORI, HRSA, Merck, Boy Scouts of America, Kohl's Cares and the Highmark Foundation.

Sricharan Chalikonda, MD, MHA, FACS

Chief Medical Operations Officer, Allegheny Health Network

Sricharan Chalikonda, MD, MHA, FACS, is the Chief Medical Operations Officer at Allegheny Health Network. A nationally recognized physician leader and pioneer in the use of highly advanced surgical procedures for abdominal cancers and other diseases, he joined AHN in 2018 from the Cleveland Clinic.

At AHN, Dr. Chalikonda leads clinical operations for the network's physician organization, a role that includes oversight of surgical services provided at AHN's inpatient and outpatient facilities. He also maintains his surgical practice as part of AHN's Center for Digestive Diseases and Cancer Institute.

Dr. Chalikonda earned his medical degree from Kasturba Medical College and a master's degree in healthcare administration from Ohio University. He completed his general surgery residency and a fellowship in minimally invasive and bariatric surgery at the Cleveland Clinic, and a surgical oncology fellowship at UPMC.

Dr. Chalikonda has published dozens of scientific articles, abstracts and book chapters about issues and advancements in his field, including the surgical treatment of pancreatic cancer, the treatment of peritoneal surface malignancies and minimally invasive treatment of liver disease.

He is a member of the American College of Surgeons, the American Hepato-Pancreato-Biliary Association and the Society of Surgical Oncology.

BIOGRAPHIES

The New Wave of Biotechnologies Panel

4:00 to 5:00 p.m.

Traditional science and technology come together to achieve better diagnosis and care.

Mel Billingsley, PhD (moderator)

President and CEO, Life Sciences Greenhouse of Central Pennsylvania, Professor of Pharmacology, Penn State College of Medicine, Professor of Biotechnology and Entrepreneurship, Penn State University

Mel Billingsley, Ph.D., is President and CEO of the Life Sciences Greenhouse of Central Pennsylvania, professor of pharmacology at Pennsylvania State University Milton S. Hershey College of Medicine (MSHCM), and professor of biotechnology and entrepreneurship, Penn State University – Harrisburg, PA campus. His background includes rich and varied experience as a researcher, educator and investor, as well as a long history of actively fostering the advancement of technology within the larger community.

Dr. Billingsley has an undergraduate degree in biophysics and microbiology from the University of Pittsburgh, a doctoral degree in pharmacology from George Washington University, and a postdoctoral degree in neuropharmacology from Yale School of Medicine.

Nikolay Dokholyan, PhD

G. Thomas Passananti Professor and Vice Chair for Research, Department of Pharmacology, Professor, Department of Biochemistry and Molecular Biology, Penn State College of Medicine

Dr. Dokholyan is engaged in the translational research with the focus on neurodegeneration and cancer. Dr. Dokholyan utilizes several integrated computational and experimental strategies to understand, sense (recognize and report), and control aberrant biological molecules, and uncover etiologies of human diseases, such as amyotrophic lateral sclerosis (ALS), Alzheimer's and Parkinson's diseases.

For the past two decades, Dr. Dokholyan has been developing approaches to molecular structural modeling and dynamic simulations, allowing study of structure and dynamics of biological molecules at time scales relevant to biological systems. These approaches uniquely integrate rapid physical dynamics simulations, experiments, and molecular modeling and design, allowing him to make significant breakthroughs in understanding etiologies of cystic fibrosis and ALS. Such integration allows him to perform translational research: from understanding molecular players at atomic level to probing their function at the cellular and organism level, as well as discovering molecular therapeutic strategies to affect these players.

Dr. Dokholyan received his B.S. and M.S. in Physics from Moscow Institute of Physics and Technology. He received his Ph.D. in Physics from Boston University and was a National Institutes of Health Postdoctoral Fellow in Biophysics in the Department of Chemistry and Chemical Biology at Harvard University.

G. Thomas Caltagirone, PhD

President & CEO, Aptagen, LLC

Dr. Caltagirone, who has over 25 years of research and business experience in start-ups, is the President and CEO of Aptagen, LLC. A native of York, PA, he began his studies at the University of the Sciences in Philadelphia with a bachelor's degree in Biochemistry followed by a Ph.D. in Neuroscience from Drexel University. He completed his thesis on "Proton-Sensitive Ribozyme Switches with Molecular Memory" at Yale University. His training and technical skills are primarily in the area of Molecular Biology with several patents and publications under his name.

James H. Adair, PhD

Professor of Materials Science & Engineering, Biomedical Engineering, and Pharmacology, Penn State University

James H. Adair is a Professor of Materials Science and Engineering, Bioengineering and Pharmacology at Penn State University. His research and teaching interests most recently include biological-nanoscale composite particulates for nanomedical applications, based on colloid and interfacial chemistry, and material chemistry.

Dr. Adair received his B.S. in Chemistry (1975) and M.S. (1979) and Ph.D. (1981) in Materials Science and Engineering, all from the University of Florida. From 1981-1982, he was a Fulbright Post-Doctoral Fellow at the University of Western Australia at the Royal Perth Hospital where he studied the biophysical chemistry origin of pathological biomineralization. From 1982 to 1997, Dr. Adair held a variety of professional positions including principal research scientist at Battelle Memorial Institute, research associate at the Materials Research Lab at Penn State, and associate professor at the University of Florida. He has been at Penn State as a Professor of Materials Science and Engineering, Biomedical Engineering, and Pharmacology since 1998. In 2005, he co-founded Pendrea Pharmaceutical, Inc. originally as Keystone Nano, Inc.) and currently serves on the Board of Directors and chief science officer. Dr. Adair is the author/co-author of about 300 publications including over 260 papers, more than 28 US and foreign patents and co-editor of 12 books including the Handbook of Characterization Techniques for the Solid-Solution Interface.

Dr. Adair is a Fellow of the American Ceramic Society and the World Academy of Ceramics. He has served in multiple capacities in the American Ceramic Society at the local and national levels. In 2017, he was one of six Faculty Scholar Medal awardees and named as the 2018 Inventor of the Year in the Penn State University System. In 2020, Dr. Adair received the Frontiers of Science and Society - Rustum Roy Lecture Award at the Annual Meeting of the American Ceramic Society.

Jian Yang, PhD

Professor of Biomedical Engineering and Dorothy Foehr Huck and L. Lloyd Huck Chair Professor in Regenerative Engineering, Penn State University

Dr. Yang is a Professor of Biomedical Engineering and Dorothy Foehr Huck and J. Lloyd Huck Chair Professor in Regenerative Engineering at The Pennsylvania State University. Dr. Yang has published 133 peer-reviewed journal articles and book chapters, and was a recipient of NSF CAREER Award (2010), Outstanding Young Faculty Award of College of Engineering at UTA (2011), and PSEAS Outstanding Research Award at Penn State (2018). Dr. Yang was elected to the Fellow of American Institute of Medical and Biological Engineering (AIMBE) in 2016, Fellow of National Academy of Inventors (NAI) in 2018, and Fellow of Biomedical Engineering Society (BMES) in 2020.

Dr. Yang is the Co-Editors-in-Chief for journal "Bioactive Materials" (2020 Impact factor 8.724) and an Associate Editor for Journal "Frontiers in Bioengineering and Biotechnology" (Biomaterials section) and has served as a standing member for NIH "Biomaterials and Biointerfaces" study section. Dr. Yang is a co-founder of a medical device company, Aleo BME, Inc. and is also serving on the medical advisory board for Acuitive Technologies, Inc.

Daniel Hayes, PhD

Professor of Biomedical Engineering, Huck Institutes of the Life Sciences & Materials Research Institute, Penn State University

Dr. Hayes, is graduate of the Penn State Engineering Science and Mechanics PhD program, and is a current faculty member in Biomedical Engineering at Penn State University. He also holds appointments in Huck Institute for the Life Sciences and the Materials Research Institute at Penn State. Prior to joining the Penn State faculty, Dan served on the faculty in Biological Engineering at LSU. He is active in translational research and tech transfer and was the co-founder of NanoHorizons Inc. and Osteosynth LLC, both successful Penn State University spin-outs. Dan has authored numerous peer-reviewed publications and book chapters and is an inventor on more than 15 pending and allowed patents.

Technology Council of Central Pennsylvania

Connecting members & organizations to promote technology and fuel economic development.

The Technology Council of Central Pennsylvania (TCCP) connects technologists from diverse industries, backgrounds and experiences with opportunities to learn, collaborate and innovate while also raising the profile of the technology community throughout the Central Pennsylvania region and beyond. More information about the Technology Council of Central Pennsylvania can be found at www.tccp.org

Center for Medical Innovation

Advancing medical innovation to positively impact human health.

Penn State College of Medicine clinicians, faculty, staff, postdocs and students are building a better future by moving their groundbreaking innovations down the path of technology commercialization and into the lives of patients around the world. The mission of the Center for Medical Innovation is to provide a service-oriented organization within the Penn State system to drive economic and social value from Penn State medical innovation. The Center provides guidance and support to streamline the process of moving innovative technologies through the commercialization pipeline to industry, to make a positive economic and social impact in the community. Learn more at med.psu.edu/innovation

Technology Council of Central Pennsylvania

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