



2024

ENGINEERING TECHNOLOGY LEADERS INSTITUTE

ROCHESTER, NEW YORK | OCTOBER 14 -16, 2024



MONDAY, OCTOBER 14TH

ETNF LUNCHEON

A summary of the Engineering Technology National Forum's activities of the past year since fall of 2023.



Dr. David L. Ferro has been the Weber State University's Dean of Engineering, Applied Science & Technology since 2011 and a professor of Computer Science since 2001. Prior to WSU he spent many years working in industry in companies like Lotus Development, Unisys, and Iomega. He has degrees in Computer Science and Science

and Technology Studies. He has been co-chairing the Engineering Technology National Forum with Vassilios Tzouanas since fall of 2023.



Dr. Vassilios Tzouanas is the Chair and a Professor in the Computer Science and Engineering Technology Department at the University of Houston-Downtown. He earned his Ph.D. in Chemical Engineering from Lehigh University. Prior to joining UHD, he held technical and

management positions in leading operating and process control technology companies. Dr. Tzouanas is an ABET Program Evaluator for Engineering and Engineering Technology programs, a director on ASEE's Engineering Technology Council, and co-chairs the Engineering Technology National Forum with Dr. David Ferro. Workshop 1a

WORKSHOP 1A



Paul Tymann started his academic career as a member of the computer science faculty at the State University of New York at Oswego in 1987. After teaching for 10 years at Oswego, Tymann became a professor at the Rochester Institute of Technology (RIT) in Rochester New York. Tymann was Professor and former Chair of the

Computer Science Department at RIT. He served as a Program Director in the Division of Undergraduate Education in the Education and Human Resources Directorate (EHR/DUE) at the National Science Foundation for three years starting in 2013. Tymann has been involved in computer science education at the high school level and served as the co-Chair of AP Computer Science Development Committee from 2011 until 2015 and as the Chief Reader for the AP Computer Science Principles Exam. He served as Vice Chair of ACM's Special Interest Group on Computer Science Education, served as symposium co-chair for the SIGCSE technical symposium in 2006 and 2013, and was a member of ACM Education Council. Tymann has written textbooks on software development, bioinformatics, and a breadth-first overview of computer science. His research interests include CS education, bioinformatics, and high-performance computing. He enjoys teaching internationally and has taught at the University of Zimbabwe, at the University of Osnabrück in Germany, and the University of Canterbury in New Zealand.

WORKSHOP 2A

Description: Active learning strategies This workshop session will focus on student success through enhanced engagement in traditional engineering courses. Workshop time will be spent with discussion and demonstration of various active-learning techniques to assist faculty with integrating engaging pedagogies into their classroom. Examples include quick activities, such as think-pair-share, to longer activities such as jigsaws and gallery walks. The workshop will build on these techniques to then demonstrate alternatives



to traditional exams. Participants will walk away with examples, discussion and brainstorming for their own courses, and assessment methods.



Jennifer O'Neil is an Associate Professor of Manufacturing and Mechanical Engineering Technology at the Rochester Institute of Technology. She currently teaches undergraduate courses in thermal fluid sciences and introductory engineering courses. She actively promotes the integration of entrepreneurial mindset into engineering

curriculum through faculty development. For the past 7 years she has led national workshops and provided one-on-one faculty coaching to improve undergraduate engineering education. Her dual research interests are in the areas of engineering education and spray physics.

VA, he joined ODU in 2013. Prior to his tenure at ODU, Dr. Ayala spent three years as a Postdoctoral Researcher at the University of Delaware, focusing on multiphase flow simulation, high-performance parallel computing, and scientific computation. He has taught courses in Fluid Mechanics, Heat Transfer, Thermodynamics, Multiphase Flows, and Mechanical Engineering Labs. Dr. Ayala possesses valuable industry exposure, having worked with engineering consulting firms on diverse projects, spanning petroleum, natural gas, brewing, and newspaper industries. He has actively contributed to professional organizations like ASME, notably in the Committee of Spanish Translation of ASME Codes and the ASME Subcommittee on Piping and Pipelines in Spanish. With a prolific research background, Dr. Ayala has authored 90 journal and peer-reviewed conference papers, presented his work globally, and maintains an average yearly citation rate of 44.78. He is also a ABET PEV representing ASME.



Richard Cliver holds an M.S. in Electrical Engineering and is currently a faculty member in the Electrical and Computer Engineering Technology department at the Rochester Institute of Technology (RIT). In addition to his work at RIT, Richard worked as a design engineer at Kodak for 32 years. He has been involved with ABET since 2006,

serving as both a program evaluator and team chair, visiting 21 campuses. Richard has also trained new program evaluators (PEVs) at ABET headquarters and is a member of ABET's Board of Delegates, where he serves on the Engineering Technology Area Delegation. In his role as the PEV Coordinator, he assigns PEVs to IEEE technology visits worldwide. Richard also serves on the Committee on Engineering Technology Accreditation Activities (CETAA), which is responsible for implementing IEEE involvement in the Engineering Technology Accreditation Commission (ETAC) of ABET. Additionally, he has served on IEEE's Accreditation Policy Committee and was the recipient of IEEE's Meritorious Achievement Award in Accreditation Activities. Richard has successfully led his department through two ABET visits and supported three others.

WORKSHOP 2B:

"Best Practices for a Successful ABET Self-Study Report."

"In this session, three experienced program evaluators will offer their expertise on crafting a successful self-study report. They will highlight best practices, common mistakes that can lead to issues, and provide you with the essential knowledge to effectively navigate a successful accreditation process. You'll also gain a clear understanding of what should be included in your self-study report. Additionally, a faculty member who recently undertook the challenging task of coordinating the ABET accreditation for three different programs will share his insights on the experience."



Orlando Ayala, a Cum Laude graduate with a BS in Mechanical Engineering from Universidad de Oriente (Venezuela) in 1995, obtained his MS in Mechanical Engineering in 2001 and a Ph.D. in Mechanical Engineering in 2005 from the University of Delaware (USA). Currently serving as the Ray Ferrari Endowed Professor in the Mechanical Engineering

Technology Program at Old Dominion University, Norfolk,



Mike Eastman is a professor and Senior Associate Dean at RIT in the College of Engineering Technology. He earned a BS in Electrical Engineering Technology and an MS in Computer Science from RIT. He earned a PhD in Curriculum, Instruction, and the Science of Learning from University at Buffalo after having served as a faculty member at RIT

for several years. After completing his MS in Computer Science, Mike worked as a senior hardware systems engineer for Intel Corporation for seven years prior to entering a tenure track role at RIT in 1996. Beginning in 2005, Mike served 12 years as the department chair of Electrical, Computer, and Telecommunications Engineering Technology (ECTET) before entering the associate dean's role in 2017. As a department chair, Mike guided the ECTET department through two successful ABET visits. As an associate dean, Mike led the College of Engineering Technology's six engineering technology programs through a successful accreditation review in 2022. Mike has served on RIT's Student Learning Outcomes Assessment Committee for the past seven years. In the Senior Associate Dean's role, Mike oversees the College of Engineering Technology's Exploration Program for first-year students. Mike is passionate about learning and teaching and is currently focusing his available research time on the application of AI to education.



Dr. Héctor Rodríguez is the Dean of Science, Technology, Engineering and Math (STEM) at Hudson Valley Community College (HVCC) in Troy, NY. He has over 27 years of combined industrial and academic experience. Before joining HVCC, he was the Technology Manager for Mechanical Components & Systems at GE Research. Dr.

Rodríguez's engineering leadership experience includes Pratt & Whitney as the GTF LPC Structures Manager and Infotech Aerospace Services (now Pratt and Whitney Puerto Rico). At Infotech Aerospace Services, Dr. Rodríguez held positions as Mechanical Analysis Manager, Chief Engineer, and General Manager, where he helped grow the site into a several hundred-person aerospace design team. On the academic side, Dr. Rodríguez has held leadership positions as the Department Head of Mechanical Engineering at the Polytechnic University of Puerto Rico and the Dean of Engineering at Universidad del Turabo (now Universidad Ana G. Méndez). Since 2017, he has been an ABET program evaluator for mechanical engineering programs, representing ASME at the Engineering Accreditation Commission and, more recently, at the Engineering Technology Accreditation Commission. He received his BS in Civil Engineering from the University of Puerto Rico and his PhD in Mechanical Engineering from Virginia Tech. He is a licensed professional engineer in the State of New York.



Ilya Grinberg graduated from National University L'viv Polytechnic with MSEE in 1979 and from Moscow State University of Civil Engineering with Ph.D. in Electrical Engineering in 1993. He authored and co-authored two books and over 60 peer-reviewed journal papers and conference proceedings. He is SUNY

Distinguished Teaching Professor and Director of Electrical Engineering Technology at the Department of Engineering Technology at SUNY Buffalo State University. He is ETAC of ABET Commissioner and Team Chair, ASEE immediate past Zone 1 Chair, and Chair of IEEE Buffalo Section.

DINNER SPEAKER



Grant Crawford, P.E., Ph.D., F.ASEE, is a Professor of Mechanical Engineering in the School of Computing and Engineering at Quinnipiac University where he focuses on faculty development and undergraduate education in the thermal sciences, circuits, CAD, and design. He is a first-generation college graduate, a

military veteran, and comes from a blue collar, low-income background. Grant graduated with a B.S. in Mechanical Engineering in the top fifth of his class from West Point and served on active duty in the U.S. Army for



TUESDAY, OCTOBER 15, 2024

over 33 years. Along the way, he earned his M.S. and Ph.D. degrees in Aerospace Engineering and spent 13 years teaching at West Point, where he retired as the Director of Mechanical Engineering. He has served as a Program Evaluator for ABET's Engineering Accreditation Commission and a Commissioner and Team Chair for the Engineering Technology Accreditation Commission. He has been a member of the Fundamentals of Engineering Exam Committee for the National Council of Examiners for Engineers and Surveyors (NCEES) since 2005 and has chaired the committee. He has served as the Mid-Atlantic Section Chair, the Military and Veterans Constituent Committee Chair, Zone I Chair, Vice President for Member Affairs (two terms), an President for ASEE and is currently in his fourth term serving on the Board of Directors.

WELCOME SPEAKERS



Brian P. Malm, PE, FNSPE NSPE- President Elect 2023-2024 Brian is a Principal Engineer with Bolton & Menk, Inc., and is currently serving as President-Elect for the National Society of Professional Engineers (NSPE). He has been an active member of NSPE for 23 years and has served in a variety of leadership roles at the chapter, state, and national level. He began

his civil engineering career in 1996 and has spent the majority of that time as a municipal consulting engineer. Brian manages Bolton & Menk's Rochester, Minnesota office and serves as the consultant city engineer for several cities in southeast Minnesota.



Kevin is the father of the Virtual Assistant and a Silicon Valley innovator, serial entrepreneur, CEO, and futurist. He was INC Magazines' Entrepreneur of the Year, a CNBC top Innovator of the Decade, World Economic Forum Tech Pioneer, Chair of Silicon Valley Forum, Planet Forward Innovator of the Year nominee, featured for 5 years on TechTV's

Silicon Spin, and inducted into RIT's Innovation Hall of Fame. He has 94 worldwide patents and led pioneering work on the first cellular data smartphone (AirCommunicator), the first human-like AI virtual assistant (Portico), soundproof drywall, high R-value windows, AI-driven building management, Generative AI for QA automation, supply-chain auctions, and the window/energy retrofits of the Empire State Building

KEYNOTE SPEAKER:

Prabu David
Provost and Senior
Vice President for
Academic Affairs





10:30AM-11:30AM SESSION



Vearl Turnpaugh is currently Assistant Vice President of Curriculum at Ivy Tech Community College of Indiana. In this role, Vearl serves as senior administrator over the Engineering, Engineering Technology, Agriculture, and IT based programs for Ivy Tech

statewide. Alignment of academic programs, workforce development, and economic development throughout the state is a vital part of his role. Vearl has worked in various roles at Ivy Tech over the past thirty-four years and holds a M.S. in Industrial Technology and B.S./A.S. in Computer Integrated Manufacturing Technology from Purdue University.



Dr. Ramkumar is the Dean of the College of Engineering Technology at the Rochester Institute of Technology (RIT). A mechanical engineering graduate from India, Dr. Ramkumar holds a master's degree in manufacturing engineering from RIT and a doctoral degree in systems science from SUNY

Binghamton. He specializes in robotics, automated manufacturing, and surface mount electronics assembly education and research. Dr. Ramkumar was instrumental in establishing the advanced manufacturing and electronics packaging laboratories at RIT. Over the years, he progressed through the ranks to professor, and through various teaching and administrative responsibilities, including department head and mentor of the college's tenure track faculty. RIT's Sponsored Research Office has recognized him as a Principal Investigator Millionaire, a designation given to faculty that have generated funding in excess of million dollars. He has been the principal investigator for several applied research projects and has published technical papers in journals and peer reviewed conferences. He regularly teaches courses for the electronics packaging industry, including at the IPC APEX and SMTA industry focused conferences.



Dr. Marilyn Barger is the Senior Education Advisor for FLATE part of the FloridaMakes Network, a Manufacturing Extension Partnership Center. She was the P.I. and Executive Director of FLATE, an ATE Center focused on manufacturing technology education in Florida for over 18 years.

Today FLATE is part of the FloridaMakes Network (www.floridamakes.com), the NIST Manufacturing Extension Partnership Center in Florida which is continuing its NSF mission supporting manufacturing technician education. Dr. Barger serves on several national and regional workforce education boards and has developed award-winning curricula for STEM programs at all educational levels. She taught Environmental Engineering at Hofstra and FAMU-FSU College of Engineering, authored many engineering education papers, is a registered Professional Engineer in Florida, and a Fellow of both the American Society of Engineering Education (ASEE) and the American Institute of Medical and Biochemical Engineers (AIMBE).



Dr. Ron Eaglin is the Chair of the Department of Engineering and Information Technology. He has chaired this program for 20 years and is a leader in the state Engineering Technology community and serves on the State Course committee. He has chaired the department

since 2010 and has led the program through ABET accreditation of the BSET and BSIT programs. He earned his BS degree from University of South Carolina and Masters and Doctorate from University of Central Florida. He is an avid ultra and adventure athlete. He currently teaches programming in the BSIT program and works as a programming consultant.



WEDNESDAY, OCTOBER 16, 2024

KEYNOTE SPEAKER



Lara Sharp (she/her/hers) has a B.S. in Chemical Engineering from SUNY Buffalo, a M.B.A. from UMASS Amherst, and a M.S. in Industrial Engineering from University of South Florida and is currently the Dean of Science, Technology, Engineering, and Math at Springfield Technical Community College. She has

worked as a process engineer, an education sales expert, and a high school chemistry and engineering teacher. Her higher education experience started in 2013 with Polk State College working on a National Science Foundation (NSF) grant about open entry, early exit competency based engineering technology education and a Department of Labor grant for machining education. In 2015, she took on the role of Program Director of Engineering, Manufacturing, and Building Arts at St. Petersburg College. She is deeply committed to the mission of the community college and the students it serves. Lara is also active in American Society for Engineering Education and serves on its Engineering Technology Council.



Richard O. Davis, Ph.D., Ed.M. Chief Executive Officer, Rochester Regional Health

Richard “Chip” Davis, Ph.D., Ed.M., joined Rochester Regional Health (RRH) as its Chief Executive Officer (CEO) in March 2022. In this role, Dr. Davis is responsible for the strategic leadership and direction of the \$3.6 billion health system

and its affiliates.

Before joining RRH, Davis served as CEO of the Henry Ford Health South Market, CEO of Henry Ford Hospital, and Senior Vice President. In this role, he oversaw the South Market, which includes more than 100 care locations, including two hospitals; \$2 billion in patient revenue; 250,000 annual Emergency Department patient visits; and nearly 50,000 inpatient admissions annually. Before joining Henry Ford, Davis served as the President and CEO of Sibley Memorial Hospital in Washington D.C., a not-for-profit hospital within Johns Hopkins Medicine (JHM); Dr. Davis’ career with Johns Hopkins Medicine spanned more than 25 years. His previous roles include vice president of Innovation and Patient Safety and executive director for the Johns Hopkins Medicine’s Center for Innovation, Johns Hopkins Health System’s access services, ambulatory operations, and operations integration. Dr. Davis served as faculty at the Johns Hopkins School of Medicine, Johns Hopkins Bloomberg School of Public Health, and the Johns Hopkins Carey Business School. He is an international consultant and speaker, advising health systems and community hospitals on operational efficiency and quality improvement, innovation and patient safety programs, medical staff relations, and culture change.

Dr. Davis received his Ph.D. in Public Health from Johns Hopkins University. He also has a Master’s degree in Counseling and Consulting Psychology from Harvard University and a Bachelor’s degree in Psychology from the University of Michigan.



ROCHESTER REGIONAL HEALTH

Rochester Regional Health (RRH) is a \$3.6 billion, independent regional health system and leading provider of comprehensive care for Western New York, the Finger Lakes Region, and New York State's North Country. As the Rochester region's second-largest employer with more than 20,000 employees, RRH includes nine hospitals: Rochester General Hospital, Unity Hospital, United Memorial Medical Center, Unity Specialty Hospital, Newark-Wayne Hospital, Clifton Springs Hospital & Clinic, Canton-Potsdam Hospital, Gouverneur Hospital, Massena Hospital; an expansive provider network of 2,000 physicians and 300 care sites including primary and specialty practices, rehabilitation centers, ambulatory campuses, immediate care facilities, senior services facilities, independent housing and a range of behavioral health services across the region. The network includes Rochester Regional Health Laboratories and ACM Global Laboratories, a global leader in patient and clinical trials in more than 65 countries.

Title: Leading Change initiatives in Engineering departments

This session equips engineering faculty with strategies needed to effectively lead and manage change within academic and research settings. Participants will explore best practices for fostering a culture of adaptability, overcoming resistance, and leveraging their leadership to implement transformative initiatives.



Bio: Malar Hirudayaraj, Ph.D. Director, AdvanceRIT Associate Professor, Department of Management Saunders College of Business Rochester Institute of Technology, Rochester, NY. Dr. Malar Hirudayaraj, is an Associate Professor in the Department of Management, Saunders College of Business, Rochester

Institute of Technology, Rochester, NY. She is also the Director of ADVANCE, RIT, a program that works to increase the representation and retention of women faculty and empower and support them to advance in their careers. Dr. Hirudayaraj has a Ph.D. in Workforce Education and Development. Dr. Hirudayaraj teaches Workforce Diversity and Inclusion, Technology and

the Future of Work, Leading Innovation, and Leading Change at the Graduate level. She has led workshops and delivered lectures on: intergenerational diversity in the workplace, understanding privilege, dimensions of identity, colorism in the workplace, beyond diversity-focusing on inclusion and belonging, culture change, women veterans in the workplace, returning women returnship. Dr. Hirudayaraj also leads workshops on leading innovations to executives in traditional sectors, leading change initiatives in organizations. Her research interests cover issues of gender, colorism, inequality, and employability of disadvantaged populations. More recently she has forayed into studying the implications of Artificial Intelligence integration in organizations. She has worked in the media and the not-for-profit sector and has also trained more than 5000 professionals in the corporate sector. She also created one of India's earliest employability programs for rural youth funded by the World bank.

Title: Conquering Workplace Conflict, the Good, the Bad, and the Ugly!

A recent study published in the Harvard Business Review indicates that leaders can spend up to 40% of their time managing conflict at work, or 3-4 hours a week! Dealing with conflict can cause stress and can lead to burnout, tension, and frustration. Therefore, it is critical for leaders

to become comfortable in managing conflict and develop their competence in choosing the right conflict resolution strategies. In this workshop participants will discuss strategies for effectively addressing conflict, including, exploring different styles and approaches to conflict resolution, as well as reflecting on the emotional aspect that can fuel workplace disagreements. Leading people is messy at times, humans are complex, it takes effort, thoughtful intention, and skill to be successful, we all have to work at these things. So take some time to reflect on the effectiveness of your own conflict resolution approaches, build your tool kit, and become more adept at navigating those workplace challenges.

Bio: Molly McGowan has spent the past 25 years studying, practicing, and teaching best practices in leadership. She is currently the Co-Director of EMBA and Executive Education Programs and Senior Lecturer in the Management Department at the Saunders College of Business at the Rochester Institute of Technology specializing in leadership development, managerial skills, human resource management, business planning and emotional intelligence. She was



the founding Director of the Leadership Academy at Saunders at the Rochester Institute of Technology College of Business and the advisor for Women in Business. Molly has a strong passion and unique talent for developing others, helping individuals to discover and achieve their leadership potential. She has an undergraduate degree from SUNY Geneseo in Political Science, a Master's in Public Administration from SUNY Brockport and a Ph.D. in Organizational Psychology from Grand Canyon University. She is a DISC and Franklin Covey certified trainer and has developed award winning leadership programs for all levels of organizations – from frontline employees, to emerging leaders and middle managers, to high level executives. She has delivered training and coaching for hundreds of individuals both domestically and internationally, as well as specifically for women, including the RIT Women's Leadership Summit, earning the RIT Edwina award for her work supporting women and gender inclusivity.