

NJIT Center for Translational Research (CTR)

Technology Innovation Translation Acceleration (TITA) External Advisory Board Members



Brian G. Kiernan: Brian Kiernan, retired vice president and chief scientist of InterDigital Communications, LLC, possesses a dynamic combination of technical expertise and leadership savvy that has fueled his outstanding achievements in the development of computer and communication standards and systems. He received a B.S. in electrical engineering from Newark College of Engineering in 1970, and an M.S. in Management Science/Operations Research from Fairleigh Dickinson University. Kiernan, who was recognized at the 2016 NCE Salute to

Engineering Excellence for his achievements since graduation, was directly responsible for InterDigital's worldwide technology and industry standards activities and aided in developing new market, product and technology initiatives by providing strategic technical and marketing support to InterDigital's sales, marketing and business development efforts as well as the company's worldwide patent and licensing programs.

Previously, Kiernan was president of USTC World Trade Corporation, an international sales and marketing subsidiary of InterDigital's predecessor company, International Mobile Machines (IMM). Having full P&L accountability for IMM's international business, he quadrupled revenues in two years and opened new markets—primarily in Asia and Latin America—that accounted for over 90 percent of InterDigital's past product revenue. Prior to his sales position, Kiernan was IMM's vice president of Engineering and Operations. His product line responsibilities covered all areas of product development and sales engineering, manufacturing, product support and quality assurance of IMM's UltraPhone® TDMA Wireless Local Loop product.

Under Mr. Kiernan's tutelage, IMM/InterDigital grew from an unknown tiny telecom company with a big idea and zero revenue to an acknowledged worldwide force in mobile communications with some 14,000 patents, annual revenue in excess of \$500M and a \$2B market cap.

Before joining IMM, Kiernan was a senior staff engineer at GTE Products Corporation, where he generated and evaluated military communications systems concepts that included mobile and fixed station radio, circuit and message switching, and network management and control. Kiernan's program and technical management experience encompassed TDMA and CDMA voice

and data systems, digital and analog switching, and VHF/UHF and microwave radio. He was also active in both communications and non-communications Electronic Warfare systems development. He has been a speaker at numerous industry conferences, published numerous papers and articles, and holds 30 patents.

He was awarded the IEEE Standards Medallion in 2006 and the IEEE Hans Karlsson Award in 2013 for his extraordinary skill and dedication in chairing the complex task groups that developed the IEEE 802.16a, 802.16e, and 802.16m WirelessMAN standards, the world's first 4G Wireless standards. The Hans Karlsson Award honors outstanding skills and dedication to diplomacy, team facilitation and joint achievement in the development of standards in the computer industry.

After retiring from InterDigital, Mr. Kiernan has put his extensive technical and managerial talents to work, serving as Chair of the Albert Dorman Honors College Interdisciplinary Design Studio (IDS) program which morphed into the NJIT Undergraduate Research and Innovation (URI) Program. In this capacity, Kiernan, along with other URI Board members, evaluates and guides numerous student projects, several of which have developed into student companies. As an active Angel Investor, Kiernan has invested in some of these student companies and continues to guide them as they develop. He is also an active member of the NJIT ECE Industry Advisory Board.



Govi Rao: Govi has over 25 years of experience globally, across several industries, including specialty chemicals, coatings, building materials, lighting, energy and the rapidly evolving IoT space. As co-founder and Managing Partner of Carbon Group Global (CGG), Govi is currently leading CGG's vision to scale transformational solutions, specifically to address education, total resiliency of women and resource efficiency. Prior to CGG, Govi was the President and Chief Executive Officer of Noveda Technologies, a pioneer in water and energy management solutions, based in Bridgewater, NJ. In 2007, Govi was instrumental in envisioning and pioneering one of the earliest LED lighting solutions providers, Lighting Science Group Corporation as the Chairman & CEO.

Previously, Govi was Vice President and General Manager of the Philips Solid State Lighting business in North America. He also held several leadership roles at Philips, including Vice President of Business Creation & Brand, where he was responsible for product management, strategic marketing, branding and sustainability. Prior to joining Philips, Govi spent over a decade with specialty chemicals leader Rohm and Haas Company (now part of Dow Chemicals) in various leadership roles across a range of businesses and geographies. In addition to his experience with a wide business portfolio, Govi has extensive functional expertise that includes

strategic planning, business innovation, product management, marketing, operations, leadership development and general management. Widely traveled across Asia, Europe and the Americas, Govi has a keen sense of value creation in emerging markets and technologies, grounded on the principles of sustainability. Govi has built winning teams that achieved extraordinary goals in start-ups as well as mature businesses – pioneering and inspiring profitable and sustainable growth.

Govi serves on several boards including the Undergraduate Research and Innovation at NJIT and the department of Chemistry and Chemical Biology at Rutgers University. Govi also serves as an advisor to Hellothinkster, an AI based educational technology company. Govi is active in discussions with various Governments, NGOs and investment groups to drive market adoption of social impact solutions and is a contributing author of the Sustainable Enterprise Fieldbook (AMACOM 2008). Govi has testified to the U.S House of Representatives on IP and Innovation.



Marc Long, PhD: Marc Long is currently Vice President of R&D at MTF Biologics, leading the new tissue, product and technology development teams, clinical affairs, intellectual property and grants, and project management groups. Marc's previous 20+ years of industry experience focused on evaluating and developing biologics products and technologies for device companies. Marc's previous roles with Stryker included leadership in the Spine, Orthobiologics, Sports Medicine, and Joint Reconstruction divisions. Before that, he worked at Smith & Nephew Orthopaedics and Biologics. Marc received his PhD in

Bioengineering in 1999 and MSc in Materials Science & Engineering in 1992 from Clemson University after graduating from Arts et Métiers ParisTech in 1989 with an Engineering Diploma. Marc was born in Cannes, France.



Steven C. Schachter, MD: Dr. Steven Schachter is Chief Academic Officer for the Consortia for Improving Medicine with Innovation & Technology (CIMIT), a Professor of Neurology at Harvard Medical School, and Co-PI for the POCTRN Coordinating Center and its RADx Chief. He is Past President of the American Epilepsy Society and served on the Epilepsy Foundation of America Board of Directors. Dr. Schachter has published over 250 articles and chapters and edited or written 35 books. He is the Clinical Editor for Journal of Translational Engineering in Health and Medicine, a member of the Advisory Board of IEEE Open Access Journal of

Engineering in Medicine and Biology, and founding editor and editor-in-chief of the medical journals Epilepsy & Behavior and Epilepsy & Behavior Case Reports.



Nicholas DeNichilo: Nicholas DeNichilo, PE, was the President and Chief Executive Officer of Mott MacDonald, North America and is presently a retired professional serving on various boards and professional associations. Nick officially retired as of January 1, 2022. He was responsible for the success and sustainability of the firm's entire operation in North America. Mott MacDonald - North America is a \$600 million business with 2500 employees and is part of Mott MacDonald's \$2 billion global operations with 16,000 employees. Nick served as a member of the Mott MacDonald Group Executive Board. He brings technical expertise, with 48 years of experience in the consulting field, an extensive network of relationships with key industry leaders and regulators.

An industry expert, Nick has authored and presented numerous technical papers, and hosted technical discussions at various industry events. He also is active in many professional and trade organizations. Nick is a licensed professional engineer in many states and the District of Columbia. He is past Chair of the American Society of Civil Engineers' (ASCE) Industry Leaders Council and is a past Chair of the New Jersey Section of the American Water Works Association (AWWA). He is a member of the Environmental and Water Resources Institute (EWRI) of ASCE. Mr. DeNichilo is also a member of the National Academy of Construction. He is a member of the New Jersey Institute of Technology's Board of Trustees and previously served as a member of NJIT's Board of Overseers and past Chairman of the Newark College of Engineering Board of Visitors. He is a member of the Board of Directors of the New Jersey Innovation Institute. He is also a member of the University of Rutgers, New Jersey Climate Change Alliance. Mr. DeNichilo is also a Board member of the Villanova Career Compass Advisory Board. He is a member of the Board of Advisors of the Industry Board of Center for Buildings, Infrastructure and Public Space at Columbia University.

Nick has been honored to receive awards throughout his career, including ASCE's Engineer of the Year Award in 1999. In 2003 New Jersey Section of the American Water Works Association awarded Nick the George Warren Fuller Award for his distinguished professional volunteer service in the waterfield. In 2005, the NJIT Alumni Association presented Nick with the Association's Distinguished Alumni Achievement Award. In 2014, ASCE awarded Nick the Outstanding Projects and Leaders (OPAL) Award, which recognizes and honors outstanding civil engineering leaders whose lifetime achievements and accomplishments have made significant differences in the field of engineering management. In 2015, ASCE awarded Nick the John I. Parcel-Leif J. Sverdrup Civil Engineering Management Award for becoming a widely respected national voice on behalf of safe engineering practices and the need for resilient infrastructure.

while guiding Mott MacDonald through an extraordinary period of growth and profitability as President and CEO. In 2020 Nick was selected as an Honorary Diplomate, Water Resources Engineer(Hon.D.WRE) in the American Academy of Water Resources Engineers. In 2021, Nick was awarded the Newark College of Engineering Outstanding Alumni Award.

Nick received his BSCE from Newark College of Engineering and his MSCE from the New Jersey Institute of Technology.



Manish Patel: Manish Patel, founder of TrickyWater, a small business advisory firm, is currently Director of Brand Innovation at Princeton Partners, a strategic brand marketing firm.

Manish is a skilled engineer and leader with creative and innovative capabilities. He is a successful entrepreneur with proven consultancy, product development, management, and strategic analysis skills. Analytical skills vital in referencing developmental, production, and supervisory skills across multiple industries to maximize profitability and satisfaction of clients in various technical and creative fields. Produced results for all companies by branding, marketing, and procuring revolutionary designs and enhanced digital developments. He loves challenges and helping clients solve problems. Manish was at Omnicom Agency, Arnell where he was Lead Project Manager reporting directly to Chairman of Arnell Group. He managed Innovation Lab teams comprised of artists, designers and engineers developing innovative brand solutions, strategies and products. Key Client Experience included Project Lead for The Home Depot - OrangeWorks innovation initiative, delivering several product SKUs in key categories in collaboration with senior merchandisers, including the Home Hero brand. While having Chrysler Automotive as a client, he was Project Leader and C-Suite Liaison for innovation programs in the areas of automotive design, NAV system user interface design, and electric vehicle programs. He also managed relationships with leading global design studios Pininfarina and Giugiaro in Italy. He introduced process and stage gate methodology and applied it to creative development process.

Manish also worked on the re-brand of the iconic Fontainebleau Hotel and the strategy behind building an experience that once again made the hotel a cornerstone of the Miami high end lifestyle destination. He has also helped small New Jersey businesses maximize their advertising success with the introduction of innovative methods for reaching consumers.

Manish obtained a BSME from Drexel University and an MS Management from NJIT. Now he enjoys giving back to the school by serving on their Undergraduate Research and Innovation External Advisory Board. When he is not working, he can be seen coaching soccer, playing volleyball or managing the family dog's social media page.



Daniel Henderson: Daniel Henderson is an American innovator, entrepreneur, and artist. He was Assistant to Kazuo HASHIMOTO, a prolific Japanese inventor with over 1000 patents worldwide and he met and briefly worked with Jack Kilby, inventor of the integrated circuit. Dan's 1993 prototype objects for wireless picture and video messaging were received in the permanent collection by the National Museum of American History at the Smithsonian Institution in 2007

(<https://americanhistory.si.edu/press/releases/national-museum-american-history-acquires-wireless-picturephone-prototypes>)

Dan's extensive research for wireless objects also resides there

(<https://invention.si.edu/daniel-henderson-portable-electronic-devices-documentary-collection-1968-2002>). He was named a mobile technology innovator for video sharing in cellular phones when he appeared in a 2012 Super Bowl commercial for Best Buy along with Ray Kurzweil and Neil Papworth. His invention of wireless picture and video messaging in cellular telephones is covered by U.S. Patent 8,160,221, "*Cellular telephone with the ability to display and store picture and video messages and Caller ID received from a message originator*" and US Patent 8,472,595, "*Method and Apparatus for providing a portable communication device with the ability to selectively display picture and video*".

His 1993 inventions are utilized today in nearly every cellphone in the world. He has received 30 US Patents that have cumulatively been cited in other patents over 1000 times. He has had extensive experience in intellectual property, licensing to over 170 of the largest companies in the world.

Prior to starting his career at IBM Corporation, Dan received a Bachelor of Science degree in Business from Southern Oregon University, where he is an Emeritus Board member for the Foundation there.

Dan currently serves on the Board of Overseers and the Dorman Honors College Board of Visitors for NJIT. Several of his large-scale stone sculptures may be seen on the NJIT campus. He received an honorary Doctor of Science degree from NJIT in 2011 and remains committed to the importance of innovation to improve society and the world we live in.



Michael Doyle, PhD: Entrepreneur, scientist, and educator. Pioneer in spatial biology, cryptography, mobile AI, and Web tech. Expert in university technology transfer. Deep experience in university/industry collaborations, intellectual property strategy and management, tech industry corporate

management, patent drafting and prosecution, patent enforcement and licensing, business development, & strategic planning. Dr. Michael Doyle is the creator of fundamental technologies that underlie such revolutionary products as the Cloud, blockchain/cryptocurrency systems, spatial genomics/transcriptomics, and mobile intelligent assistants. Dr. Doyle received his PhD from the Department of Cell & Structural Biology at the University of Illinois at Urbana-Champaign (UIUC). He then served as Director of the UIC Biomedical Visualization Laboratory from 1989 to 1993. While on sabbatical at UIUC working with Dr. Paul Lauterbur (2003 Nobel Laureate) on the application of micro-MRI techniques to embryo imaging, Dr. Doyle created the Visible Embryo Project (VEP), a multi-institutional collaboration to create a national online "metacenter" computational and information resource on early human development. Prior to founding Eolas Technologies Inc.

in 1994, Dr. Doyle served as Director for the Center for Knowledge Management at the University of California, San Francisco. While at UCSF Medical Center, in 1993, Dr. Doyle led a research team that, while working on the VEP, developed the fundamental web technologies which enabled Web browsers for the first time to act as platforms for fully interactive embedded applications, in the process pioneering revolutionary Web technologies such as streaming media and cloud computing. To assist the University of California in commercializing the related patents, Dr. Doyle founded Eolas, where he is the architect of the company's research and development efforts, generating over \$250 million dollars in research revenue since 2008, including over \$50 million in patent royalties for the University of California System. His 1995 invention of code signing has become the worldwide defacto standard for securing executable Web content. His work in high-performance biological computing pioneered the important field of spatial transcriptomics in 2000. His creation of transient-key cryptography in the late 1990s represented the first signature-blockchain system, enabling the later creation of the Bitcoin system, and has been adopted in the x9.95 ANSI National Standard for secure timestamps. And his co-invention of the Skybot mobile intelligent chatbot system in 2005 pioneered the mobile intelligent-assistant product category that is now ubiquitous worldwide.



Sabbir Rangwala, PhD: Dr. Rangwala has a distinguished career in optics that spans over 30 years, with ground-breaking achievements in diverse applications like communications, sensors, imaging, LiDAR and autonomy. He currently heads Patience Consulting LLC which specializes in market, management, strategic and technology analyses in the LiDAR and autonomy areas. He also serves on the boards of multiple companies that develop and/or use optical sensing and is a regular Forbes contributor in the smart transportation vertical. This experience has enabled deep insights into the LiDAR

landscape from a competitive, architecture and operational perspective – for automotive and trucking applications, smart cities/infrastructure, logistics and autonomy of things (AoT™).

Sabbir pioneered the development of high performance, 1550 nm SPAD based LiDAR systems at Princeton Lightwave and led the Automotive LiDAR business unit. This involved building and managing a team of 50 people in various disciplines, as well creating deep customer engagements and supplier relationships. His efforts led to the sale of the company to Argo.ai in October 2017.

Prior roles include President and COO of Princeton Lightwave where he led LiDAR development for aerospace applications, VP of Product Development & Operations at JDS Uniphase where he was responsible for a team of 180 people in four global locations, and management and technical roles in optical communication components and networks at Bell Laboratories and AT&T Network Systems. He holds multiple patents in all these areas.

Dr. Rangwala has a Ph.D. in Mechanical Engineering from the University of California at Berkeley.



Steven Golombek, MD: Dr. Golombek is Managing Partner, Allergy & Arthritis Associates, P.A. a medical practice located in northwestern New Jersey, specializing in allergy, rheumatology, and osteoporosis. He has been responsible for implementing new procedures, billings, human resources, and management.

Dr. Golombek is a Founding Fellow of the American College of Rheumatology. He has been involved in medical research at both the laboratory and clinical levels and co-authored multiple papers in the field of systemic lupus, rheumatoid arthritis, and immunology. Over the years, he has been involved in over 35 clinical trials involving drug development and approval. He has received awards from the New York Arthritis and Northeastern Regional Foundations for his research in immunology.

Dr. Golombek received his A.B., summa cum laude from Brandeis University with high honors in chemistry and biochemistry, and was elected to Phi Beta Kappa. He earned an M.D. from The Johns Hopkins University. Following that, he trained in internal medicine at Weill Cornell Medical Center, consisting of The New York Presbyterian Hospital, Memorial Sloan Kettering Cancer Center, and The Hospital for Special Surgery. Subsequently, he pursued a fellowship in rheumatology at The Hospital for Special Surgery. Recently he completed a Master in Health Care Delivery Science from Dartmouth College. He has served on the faculty of Weill Cornell Medical School, Touro College of Osteopathic Medicine and presently, The New York Medical College.