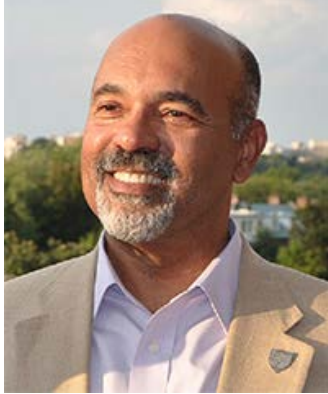


Keynote Speakers

9:30 am, Thursday, September 27, 2018 – Welcome Addresses



Ronald Mason, Jr., J.D.

President, The University of the District of Columbia
Washington D.C.

Ronald Mason, Jr., J.D., began his tenure as the ninth president of the University of the District of Columbia on July 1, 2015. His reputation for strong leadership and responsible governance is bolstered by more than 30 years of experience in the higher education, community development, and legal fields.

Former UDC Board Chair Elaine A. Crider describes Mason as a proven, highly motivated and accomplished administrator who is exceptionally and uniquely suited to build upon the successes that the University has achieved in recent years.

"Mr. Mason has proven himself a leader in the higher education community in many parts of the country," says Crider. "He has brought enhanced community relationships, responsible governance, and a strong students-first focus to his past roles and will do the same for the University of the District of Columbia as we continue to implement the goals and objectives of our "Vision 2020" strategic plan."

Prior to being appointed president of the University of the District of Columbia, Mr. Mason was the seventh president of the Southern University and A&M College System, where he served a five-year term as the chief executive officer of the nation's other Historically Black College and University System and provided oversight for the System's five campuses.

Serving as Southern University's president during a period of severe budget cuts, Mason improved human and technology infrastructures, established online degree options, and led the campuses through a difficult transition process. Moreover, concerned about the social and economic barriers that stand in the way of educational opportunities for the underserved and black men in particular, Mason spearheaded an initiative titled the "Five-Fifths Agenda for America." Its goals are to bring truth to the conversation about the relationship between America and black men, increase the number of college degrees among black men, and increase the number of black male teachers.

Before joining the Southern University System, Mason was president of Jackson State University (MS). Under his leadership, Jackson State experienced unprecedented growth in areas of fundraising, information technology proficiency, and the construction of new buildings. Earlier in his career, President Mason developed a successful record of progressive leadership in various positions over an 18-year period at Tulane University in New Orleans, including senior vice president, general counsel, and vice president for finance and operations. He also served as the founder and executive director of the National Center for the Urban Community at Tulane and Xavier Universities.

Among his numerous public service and professional activities, Mr. Mason holds current membership on the White House Board of Advisors for Historically Black Colleges and Universities and the Board of Directors of the Thurgood Marshall College Fund. He also serves on the Board of the American University of Nigeria and the International Foundation for Education and Self Help. His previous board service includes the American Council on Education and the National Advisory Committee on Institutional Quality and Integrity, Office of Postsecondary Education. A native of New Orleans, President Mason received his B.A. and J.D. degrees from Columbia University in New York City. He attended the Harvard Institute of Educational Management and is the recipient of the Mayor's Medal of Honor from the City of New Orleans, the Martin Luther King Lifetime Achievement Award from Dillard, Loyola, Tulane, and Xavier universities, and was one of five recipients of Columbia University's 2008 John Jay Award for distinguished alumni.

10:00 am, Thursday, September 27, 2018 – Opening Keynote



Dr. Bruce Kramer

Senior Advisor
National Science Foundation

BRUCE KRAMER is a graduate of MIT (S.B., S.M., Ph.D) and has served on the faculties of Mechanical Engineering of MIT and George Washington University. He is currently a Senior Advisor at the NSF, coordinating NSF's participation in the National Advanced Manufacturing Program. Dr. Kramer previously directed NSF's Divisions of Design, Manufacture and Industrial Innovation and Engineering Education and Centers. He co-founded Zoom Telephonics of Boston, a NASDAQ company and producer of communications products marketed under the Zoom and Motorola brands, holds three U.S. patents, and is a Fellow of the SME and an International Fellow of the School of Engineering of the University of Tokyo. He has received the F.W. Taylor Medal of CIRP, the ASME Blackall Award, and the R.F. Bunshah Medal of the ICMC for his contributions to manufacturing research and the Distinguished Service Award, the highest honorary award granted by the National Science Foundation.

Rethinking Manufacturing as a Search-Based Service

Many industries have been transformed by network-enabled tools that give users easy access to service providers, but manufacturing services too frequently depend on expert intervention and designer-to-fabricator negotiations. The presentation will attempt to reframe design as a process that can be driven by an intelligent search of the existing store of parts that have already been manufactured. That store incorporates the cumulative expertise of all the designers and manufacturing engineers who worked on them and each part has a detailed 3D geometrical description, an associated manufacturer and a proven process plan that can be depended on to execute reliably with small parametric variations. An effective search strategy would be a critical breakthrough that resolves longstanding and critical problems with the prevailing generative view of design and manufacturing, which depends on perfecting software systems that unambiguously translate the designs of expert designers into the associated

machine instructions for producing them. It is suggested that the search-based approach provides an interesting challenge for the machine learning community.

11:30 am – 12:15 pm, September 27, 2018 – Thursday Keynote I



Dr. Pamela McCauley

Program Director-Innovation Corps-National Innovation Network Sites Program (I-Corps Sites)

National Science Foundation

Professor and Director of the Ergonomics Laboratory

Department of Industrial Engineering and Management Systems

University of Central Florida

“Industrial Engineering: The Education for Innovators”

Dr. Pamela McCauley is a biomechanics expert, a Professor and Director of the Ergonomics Laboratory in the Department of Industrial Engineering and Management Systems at the University of Central Florida, and an internationally acclaimed keynote speaker and popular author on a lifelong mission to increase diversity in Innovation and STEM.

An award-winning educator often described as an outstanding professor and enthusiastic teacher, Dr. McCauley previously held the position of Martin Luther King, Jr. Visiting Associate Professor of Aeronautics and Astronautics at the Massachusetts Institute of Technology. Her teaching efforts have resulted in the receipt of both the College of Engineering Award for Excellence in Undergraduate Teaching and the Teaching Incentive Program Award (TIP). She is also the recipient of the National 2015 Black Engineer of the Year Award for Educational Leadership and the Promotion of College-Level Education.

Dr. McCauley is the author of over 100 technical papers, book chapters, conference proceedings and the best-selling ergonomics textbook, *Ergonomics: Foundational Principles, Applications, and Technologies*. Many of her leadership, diversity, innovation and STEM education related keynote talks draw from her research-based book; *Transforming Your STEM Career through Leadership and Innovation: Inspiration and Strategies for Women*, which examines the growing need for leadership and innovation, particularly among women and STEM professionals.

Her newest book, *The Essentials of Engineering Leadership and Innovation*, is underpinned by years of applied experience in engineering settings, and is designed to develop and prepare engineers as leaders to accept the technical and managerial challenges that they will face as professionals. To inspire students, particularly minorities and females, to consider careers in STEM she authored, *Winners Don't Quit Today they Call Me Doctor*, in which she shares her challenging yet inspirational journey to engineering success despite financial, academic, and personal difficulties.

The U.S. State Department selected Dr. McCauley for the prestigious Jefferson Science Fellowship Program in 2015. Jefferson Science Fellowships are distinguished appointments to senior academics based on their stature, recognition, and experience in the national and international scientific or engineering communities, and their ability to rapidly and accurately understand scientific advancements outside their discipline area to effectively integrate this knowledge into U.S. Department of State/USAID policy discussions. Dr. McCauley also has the distinction of being a 2012 U.S. Fulbright Scholar Specialist Program Awardee for her US-New Zealand Human Engineering and Mobile Technology in High Consequence Emergency Management Research Program.

In addition to her academic appointments, Dr. McCauley is a seasoned entrepreneur. As a highly sought expert witness, she applies ergonomics, biomechanics, physics and human engineering principles to support cases nationwide. She has also led start-up companies for the past 20 years developing human factors centric services and software products to support corporations, the Department of Defense, NASA and universities throughout the nation.

Over the past twenty-five years, Dr. McCauley has held various leadership positions and has received numerous awards in recognition of her commitment, professional accomplishments and community outreach efforts in the business, technology, and education communities. She has received the Distinguished Alumni Award from the University of Oklahoma, the Engineer of the Year Award from the Florida Engineering Society, and has been recognized by the Society of Women Engineers as Engineering Educator of the year, and as the Millennium Woman of the Year by the Millennium Woman Foundation.

12:15 pm – 1:00 pm, September 27, 2018 – Thursday Keynote II



Dr. Russell R. Barton

Vice President, INFORMS Sections and Societies, Fellow, IISE

Distinguished Professor of Supply Chain and Information Systems

Smeal College of Business

The Pennsylvania State University

University Park, PA, USA

“Understanding Input Uncertainty in Operations Models”

Russell Barton is Distinguished Professor of Supply Chain and Information Systems in the Smeal College of Business at Penn State, and was senior associate dean from 2013-2018. He holds a courtesy appointment in the Department of Industrial and Manufacturing Engineering. From 2010-2012 was Program Director for Manufacturing Enterprise Systems and Service Enterprise Systems at the U. S. National Science Foundation. From 2006-2010 he was Co-Director of the Master of Manufacturing Management degree program at Penn State. From 2002-2005 he served as Associate Dean for Research and Ph.D./M.S. Programs in the Smeal College of Business. He was a professor in the Department of Industrial and Manufacturing Engineering at Penn State for eleven years prior to joining Smeal. He began his academic career at Cornell University in the School of Operations Research and Industrial Engineering after eleven years in industry and consulting. Dr. Barton has taught courses in operations management, new product

Penn State for eleven years prior to joining Smeal. He began his academic career at Cornell University in the School of Operations Research and Industrial Engineering after eleven years in industry and consulting. Dr. Barton has taught courses in operations management, new product

development, optimization, statistics and quality, and simulation at the undergraduate and graduate levels. He has received seven awards for teaching and curriculum development. He holds a B.S. in electrical engineering from Princeton University, and M.S. and Ph.D. degrees in operations research from Cornell University. Dr. Barton's research has focused on the interface between applied statistics, simulation, and product design and manufacturing. He has received thirty grants supporting research and teaching, including ten from the National Science Foundation. He has 150 technical publications. He serves as associate editor for Operations Research and the IMA Journal of Management Mathematics. He is Vice President of INFORMS Sections and Societies, Chair of the INFORMS Subdivisions Council and a member of the INFORMS Board of Directors. He is a Fellow of IISE and Senior Member of IEEE. His is a Certified Analytics Professional, and serves on the Analytics Certification Board.

1:00 pm – 2:30 pm, September 27, 2018 – Networking LUNCH Buffet (Thursday Lunch Keynote: 1:40 – 2:00 pm)



Jack L. Price, Ph.D.
Director of Research
Naval Surface Warfare Center, USA

9:40 am – 10:20 am, September 28, 2018 – Friday Morning Keynote I



Dr. Jose Luis Guerrero-Cusumano
Associate Professor of Operations and Information Management
McDonough School of Business
Georgetown University
Washington D.C., USA

Jose-Luis Guerrero-Cusumano holds a Ph.D. in Industrial and Mechanical Engineering from the University of Illinois and a Master of Sciences in Statistics from the Mathematics Department of the University of Illinois. He is also an Economics Statistician from the School of Economics Science, Rosario University, Argentina. Jose-Luis Guerrero-Cusumano is a Tenured Associate Professor at the Georgetown University School of Business. Prof. Guerrero-Cusumano has been a member of the faculty at Georgetown since 1989 in the School of Business. He is also the recipient of the Gold Medal for service at Georgetown University. Professor Guerrero-Cusumano was the Academic Director of the Corporate International Master's at the Georgetown University School of Business (2012-2017). He is former co-Director of the International Institute on Government, Management, and Policy at Georgetown University.

In 2008, Professor Guerrero-Cusumano was awarded an Honorary Doctorate, Doctor Honoris Causa in Administration by Ovidius University (Romania). Also in 2008, he was elected Fellow at the Judge Business School, Cambridge University, England. In 2017, he was recognized by the International Institute for Applied Knowledge Management with the Fellow & Distinguished Scholar Award. Among his research areas are Big and Small Data, Data Mining, Text Mining, International Business, Social Responsibility, Business Forecasting, Six Sigma and Quality Improvement.

In 2017, he was the Co-Chair of the international conference on Responsible Organizations in the Global Context. He was also the Deputy Director and Executive Editor of the journal Globalization, Competitiveness and Governability, Spain, 2007-2011. Dr. Guerrero-Cusumano has published over fifty articles in leading journals. Prof. Guerrero-Cusumano has been a member of the faculty at Georgetown since 1989 in the School of Business. He is also the recipient of the Gold Medal for service at Georgetown University. Professor Guerrero Cusumano was the deputy Director and Executive Editor of the journal Globalization, Competitiveness and Governability, Georgetown U-Universia, Spain, 2007-2011.

Professor Guerrero-Cusumano was also the Vice-president of the Latin American Foundation for Quality and he is also a founding member of The Multinational Alliance for the Advancement of Organizational Excellence (MAAOE). In February 2004, he was the technical chairperson for the 3rd Latin American Quality Conference held in Managua, Nicaragua. He was also a member of the International think Tank on Quality and Social Responsibility for the American Society for Quality.

He won the Belgian-American foundation research grant 1995, and spent Spring 1995 as a visiting professor at Institut d'Administration et de Gestion (IAG), Université Catholique de Louvain, Louvain-La-Neuve (Belgium) and at Vesalius College (Vrije Universiteit), Brussels. In the fall 1997, Professor Guerrero-Cusumano spent his sabbatical year at Ghent University (The Vlerick School of Business), Ghent, Belgium as an invited professor, where he researched European Quality Certifications for Academic Institutions. In spring 2006, he was invited by Escuela Superior de Administración y Dirección de Empresas (ESADE) in Barcelona, where he spent part of his sabbatical.

Professor Guerrero-Cusumano has also lectured widely internationally. He is also a researcher at "Laboratoire de Recherche en Management" (University of Versailles, France) in the area of Comprehensive Management, Quality and Innovation. He has lectured at European Quality Master Program system (Versailles University, France; University of Limerick, Ireland; Tor Vergata University, Rome, Italy; University of Piraeus, Athens, Greece; Universidad Complutense, Madrid, Spain), the Master of Total Quality Management (Vaxjo University, Vaxjo, Sweden), the Master of Quality Management (Hebrew University, Jerusalem, Israel), and the Master of Industrial Engineering (Ghent University, Ghent, Belgium) as an invited professor.

Dr. Guerrero-Cusumano was an examiner for the American National Science Foundation in the areas of "Transformations to Quality Organizations Program", the "Production and Operations Research Program" and "the Innovation and Organizational Change Program". Also, Professor Guerrero-Cusumano served as an examiner for the American National Research Council in the area of Benchmarking and for Institute of International Education. Internationally, Professor Guerrero-Cusumano was an examiner for the European Foundation for Quality Management (E.F.Q.M.). He is a member of the Consumer Interest Forum of the American National Standards Institute.

He has been an external judge for several Ph.D. thesis defenses for prestigious international universities as well as a reviewer for many publications such as Management Science, the Journal of Multivariate Analysis, Information Sciences, etc. Professor Guerrero-Cusumano has been a plenary speaker in many conferences around the world and has appeared repeatedly in the media, such as America's Voice, French TV5, National Public Radio, the international Spanish channel Univision, the Voice of America and CNN international and Jim Lehrer's News Hour. He speaks seven languages fluently (Dutch, English, French, German, Italian, Portuguese, and Spanish).

10:20 am – 11:00 am, September 28, 2018 – Friday Morning Keynote II



John H. James, Jr.
Executive Director
Missile Defense Agency

Mr. James became the Executive Director of the Missile Defense Agency (MDA), Office of the Secretary of Defense, in May 2011. He is the senior civilian advisor to the MDA Director on all issues relating to MDA operational and management activities. Mr. James provides oversight, leadership, direction and guidance to the MDA staff, ensuring the effective organization and integration of all functions required to sustain an effective Ballistic Missile Defense program. He also serves as a key interface to the Office of the Secretary of Defense, the Services, and the Congress.

Mr. James is a strong and active proponent of DoD, Navy, and NAVSEA initiatives to motivate the future workforce to pursue education and careers in the areas of science, technology, engineering and mathematics (STEM). He is a member of the White House Advisory Group on SES Reform, is a member of the DoD STEM Executive Committee, and is a mentor for the Defense Senior Leader Development Program.

Mr. James previously served as the Director, National Security Personnel System (NSPS) Transition Office, within the Office of the Secretary of Defense from January 2010 to May 2011. He was directly responsible for the Congressional mandate to transition approximately 228,000 employees from NSPS to an alternate

personnel and pay system. He worked for the Department of the Navy for more than 29 years, helping to construct and maintain the Nation's surface ship and submarine fleets. He was selected for the Senior Executive Service in May 2000.

During his tenure with the Navy, Mr. James was assigned to the Norfolk Naval Shipyard, Naval Sea Systems Command (NAVSEA) headquarters and staff of the Chief of Naval Operations. His first assignment as a Senior Executive was as Deputy Program Manager for Strategic and Fast Attack Submarines and then as Program Manager for Submarine Repair and Overhaul. He also served as NAVSEA's Executive Director for the Undersea Warfare Directorate and Executive Director, Logistics, Maintenance and Industrial Operations Directorate.

Awards include SECDEF Meritorious Civilian Service Award (2017), Distinguished Executive Presidential Rank Award (2013), African American Federal Executive Association Distinguished Senior Executive Service award (2011), Black Engineer STEM Senior Executive Service award (2011), DoN Superior Civilian Service Award (2010), NSBE Golden Torch Award for Lifetime Achievement in Government (2007), Meritorious Executive Presidential Rank Award (2006), Black Engineer of the Year Award – Special Recognition (2004), DoN Nathaniel Stinson Equal Employment Opportunity Award for Leadership (2004), David Packard Excellence in Acquisition Award, and Assistant SECNAV (Research, Development and Acquisition) Certificate of Excellence for Success in Acquisition Reform.

Mr. James received his undergraduate degree from Howard University and Master's Degree from Florida Institute of Technology. He attended the Harvard School of Business and the Keenan-Flagler Business School, and is a member of the Acquisition Professional Community.

1:00 – 2:30 pm, September 28, 2018 – Networking LUNCH Buffet

1:40 – 2:00 pm Friday Lunch Keynote



Professor Cecilia Nembou
President and Vice-Chancellor
Divine Word University, Papua New Guinea

Systems Thinking Applied in a University

Professor Cecilia Nembou is the President and Vice Chancellor of the Divine Word University (DWU) in Papua New Guinea, and Professor of Higher Education Leadership and Management. She is based in Port Moresby and supervises the leadership and management functions of the DWU Port Moresby campus as well as the rest of DWU system across 5 campuses. She holds a BSc in Mathematics from the University of Papua Guinea (1975), MSc in Operational Research from the University of Sussex (UK, 1978) and PhD in Operations Research from the University of New South Wales (Sydney, Australia, 1992). She has held various academic and senior management positions at the University of PNG, University of Wollongong in Dubai and at the Divine Word University over a period spanning 40 years. Professor Nembou's research interests include, systems thinking, strategic planning, leadership and management, and analytics in higher education.

Professor Nembou is a regular member of INFORMS and member of the IEOM Technical Committee. She has served on various committees and Councils of Universities as well as on Boards of State Statutory organizations, and Boards of commercial and non-government organizations in Papua New Guinea. She is a former Head of Mathematics Department, Executive Dean of the School of Natural and Physical Sciences, Pro Vice Chancellor Planning and Development and Acting Vice Chancellor at the University of Papua New Guinea; Academic Registrar and Senior Lecturer at the University of Wollongong in Dubai, and Deputy President of the Divine Word University. She commenced her new role as President and Vice Chancellor of DWU on 20 January 2016.

7:00 pm – 10:00 pm, Friday, September 28, 2018 – Conference Awards Dinner Keynote



Dr. Claudia Rankins
 Program Officer
 Directorate for Education and Human Resources
 National Science Foundation
 Alexandria, Virginia, USA

Claudia Rankins is a Program Officer in the Directorate for Education and Human Resources at the National Science Foundation, where she manages the Historically Black Colleges and Universities Undergraduate Program and the Centers for Research Excellence in Science and Technology. Prior to this post, Dr. Rankins served at Hampton University for 22 years in a number of capacities, including endowed university professor, chair of the department of physics, assistant dean for research, and dean of the School of Science.

Her formal education includes military training, certification as translator and interpreter for German, French and English, a B.S. in Mathematics from Christopher Newport University, an M.S. in Statistics from Old Dominion University, an M.S. in Physics and a Ph.D. in Physics both from Hampton University.

Dr. Rankins is an advocate for STEM education and research at Historically Black Colleges and Universities. Her current research interests center around the history of STEM at these institutions. Her research in theoretical particle physics focused on the development of a model to describe distribution amplitudes and form factors of pseudoscalar mesons. Dr. Rankins is the co-founder of the Society of STEM Women of Color, Inc.

9:40 am – 10:20 am, September 29, 2018 – Saturday Morning Keynote I



Veronica L. Nelson
 Executive Director
 Advancing Minorities' Interest in Engineering (AMIE)
 Washington D.C.

Veronica Nelson is the Executive Director of Advancing Minorities' Interest in Engineering (AMIE). AMIE is a coalition of corporations, government agencies and the fifteen (15) ABET accredited Engineering Schools at Historically Black Colleges and Universities (HBCU). Her role is to lead AMIE as we develop strategies to expand corporate, government and academic partnerships to implement and support programs to attract, educate, graduate and place minority students in engineering careers and increase diversity in the engineering workforce. Veronica has over 18 years of experience in process engineering developing Automated Assembly Processes and over 9 years of experience in Engineering Management and Human Resources managing Career Pathways

Programs, Diversity Recruiting, Professional Development Rotation Programs, Intern Programs and University Relations & Recruiting at Northrop Grumman Corporation. Veronica recently served as a Senior Associate at Booz Allen Hamilton responsible for developing, managing and implementing firm-wide Strategies for University and Diversity Recruiting.

Veronica was awarded the 2009 Black Engineer of the Year Award for Educational Leadership – Promotion of Higher Education and the 2007 Women of Color in Technology Award for Educational Leadership – Corporate Promotion of Education for her passion and dedication to promoting Science, Technology, Engineering and math (STEM). Veronica earned her Bachelor's degree in Mechanical Engineering from Fairleigh Dickinson University and her Master's degree in Mechanical Engineering with a concentration in Robotics from Howard University. She received the National GEM Consortium Fellowship and was the first female to obtain her Master's degree in Mechanical Engineering from Howard University. Veronica is married and the proud mother of two sons who have followed her passion and are pursuing degrees in Engineering.

10:20 am – 11:00 am, September 29, 2018 – Saturday, Morning Keynote II



Dr. Rupy Sawhney
 Professor and Heath Fellow in Business & Engineering
 Department of Industrial and Systems Engineering
 Executive Director of CASRE (Center for Advanced System, Research and Education)
 University of Knoxville, Tennessee, USA

Rupy Sawhney earned B.S. and M.S. in Industrial Engineering and Ph.D. degrees in Engineering Science and Mechanics from the University of Tennessee, Knoxville in 1981, 1984 and 1991 respectively. Currently he is a Professor in Industrial and Systems Engineering at the University of Tennessee, Knoxville; Heath Fellow in Business and Engineering; Professor in Interdisciplinary Program in Energy; Joint Appointment with the Y12 National Security Complex; and Visiting Professor at University of Loughborough UK. He was a Weston Fulton Professor and Department Head during 2010-2013. His current research focuses on innovative ideas to enhance operational excellence in complex systems. He has decomposed his research into three components (i) manufacturing intelligence, (ii) organizational intelligence, and (iii) people based design. Furthermore, Dr. Sawhney has assembled a team over the past five years that has a greatest critical mass within the history of the Industrial Engineering department to compete with other academic institutions in the lean area. His research group at this moment consists of 40 Postdocs, Ph.D. and Master students. He has published significant journal papers, conference papers and has submitted for 5 patents. He has graduated more than 50 Master's and 8 Ph.D. students. His funded research projects are in the millions of dollars. He has worked with over 200 companies and is a recipient of various awards (Boeing Welliver Fellow, Alcoa Faculty Award, IIE Lean Teaching Award, Reuben Harris Award, and Accenture Teaching Excellence Award).

1:00 – 2:30 pm, September 29, 2018 – Networking LUNCH Buffet

1:40 – 2:00 pm - Saturday Lunch Keynote



Dr. Abby Ilumoka Nwabizour
Program Director, Engineering Education
National Science Foundation

Dr. Abiodun (Abby) Ilumoka currently serves as program director for engineering education in the Division of Undergraduate Education (DUE) at NSF. She is lead program director for the DUE engineering team and one of the co-leads for the Improving Undergraduate STEM Education (IUSE) program.

Prior to joining NSF, Dr. Ilumoka received the Bachelor of Science degree in Physics and Chemistry from the University of Aston in Birmingham, England in 1976, the Master's degree in Electronics from the University of Southampton, England in 1978 and the Ph.D. in electrical engineering from Imperial College London, England in 1982. Following this, she continued with postdoctoral work at Imperial College and later lectured at Brunel University, Uxbridge, UK. After a brief stint in academia and the telecommunications industry in Nigeria – her country of birth – in 1992, she joined the faculty at the College of Engineering, University of Hartford in Connecticut.

Her research interests have ranged from microelectronic circuit optimization to AI-based tunable microwave filter synthesis and complex adaptive systems design. She authored many journal publications and conference articles and received research and teaching grants from government and corporate sources rising to the rank of full professor in 2003. In 2007, Dr. Ilumoka received the Connecticut Women of Innovation Award for outstanding leadership & technology innovation. She was honored in 2008 by the Connecticut Women's Hall of Fame as "one of the best of A New Century of Women in Science" for her leadership efforts to mentor young women and minorities in Connecticut. As one of the state's most distinguished engineers, she was inducted in May 2011 into the Connecticut Academy of Science and Engineering (CASE) the prestigious non-profit that provides science and technology advice to state government and the Connecticut General Assembly.

Understanding and modeling complex systems such as the US K-16 STEM education system requires bold interdisciplinary research. At NSF, within the Education and Human Resources directorate, Dr. Ilumoka leverages her expertise in complex systems research for effective and efficient management of undergraduate STEM education portfolio.