Inventorship, Entrepreneurship, and Systems for Nurturing Black People in Applied and Translation Fields: A Workshop

Committee

Marian R. Croak

Co-Chair

Engineer Marian Croak PhD has worked on advancing Voice over Internet Protocol (VoIP) technologies, converting voice data into digital signals that can be easily transmitted over the internet rather than using traditional phone lines. Her work has furthered the capabilities of audio and video conferencing, making it a practical reality in today’s world.

In 1982, Croak began her career at Bell Labs (later AT&T) with a position in the Human Factors research division, looking at how technology could be used to positively impact people’s lives. She subsequently went on to work on network engineering, where she contemplated the potential of digital telecommunications. Rather than use a traditional phone line for voice communication along with a digital method for internet data, she and her team thought both could be done digitally with the internet. Consequently, they focused on enabling voice traffic that could be both reliable and of high quality. Today, the widespread use of VoIP technology is vital for remote work and conferencing, as well as personal communications.

During her career, Croak and her team created a text-to-donate system for charitable organizations that first saw widespread use after Hurricane Katrina hit New Orleans in 2005, which raised $130,000. After the 2010 earthquake in Haiti, the technology raised $43 million in donations. Croak joined Google in 2014, where she now is vice president of engineering and leads the Research Center for Responsible AI and Human Centered Technology. She also has led a team bringing broadband to developing countries in Asia and Africa.

Croak attended Princeton University for her undergraduate studies and the University of Southern California for her doctorate, focusing on statistical analysis and social psychology. With more than 200 patents to her name, Croak also works on racial justice efforts at Google and continues her goal of encouraging women and young girls in engineering. She was inducted into the National Inventors Hall of Fame and the National Academy of Engineering in 2022.

Ian Henry

Co-Chair

Ian Henry PhD is a section head in R&D at Procter & Gamble. A native of Marion, IN, Ian earned his B.A. in chemistry from Earlham College in 2001 and a Ph.D. in Analytical Chemistry from Purdue University in 2008, where he studied under Dr. M. Daniel Raftery. Currently, Ian leads the Analytical group for P&G's global Feminine Care business. Prior to Feminine Care, Ian led the Qualitative Mass Spectrometry group in the Trace Analysis Capability and the Analytical Digital Platforms group in corporate R&D. An analytical chemist with a background in bioanalytical NMR Spectroscopy, Ian started his P&G journey in the Beauty business, supporting innovation programs for brands such as Olay, Safeguard, Pantene and Head & Shoulders. During his tenure in Beauty, he was an original member of the Centric Team, a grassroots-led group of black Ph.D. scientists who led fundamental hair studies and value proposition creation that resulted in the startup of focused product initiatives for Consumers of African-Ancestry, most notably Pantene Gold Series, H&S Royal Oils and, more recently, the My Black Is Beautiful brand. The team's work earned both CTO Pathfinder and P&G Diversity and Inclusion Award honors. In 2016, Ian was selected as a Great Leader Under 40 by LEAD Cincinnati. Beyond work, Ian is the Vice President of the Cincinnati Chapter of NOBCChE and active in the local Cincinnati Section of the ACS, where he is involved in STEM outreach throughout the greater Cincinnati region.Ian has served as a member of the Board of Trustees at Earlham College, where he led the Diversity Committee. He has served also a mentor in the Big Brothers Big Sisters program, serving since 2010.

James Howard

Member

James Howard is a lecturer, design historian, and industrial designer/inventor of some 300 products with 20 patents. He owns and operates entrepreneurial U, a specialty private career school of Design Thinking. Howard's course, “Bridge” Exploring New Career Pathways, takes students through the problem-solving processes: problem/necessity, solution, and execution and leads them to new career pathways and job opportunities. James Howard serves as Executive Director of The Black Inventors Hall of Fame, (www.BIHOF.org) a virtual museum devoted to immortalizing African Americans whose noteworthy inventions have improved lives yet gone unnoticed. James also serves on the Board of Directors for the United States Intellectual Property Alliance, and recently assisted the National Inventors Hall of Fame to curate their very first Black Inventors exhibit Breaking Barriers. James serves on the advisory board for the American Institutes for Research, addressing the question - Does Race and Gender of the Patent Examiner Matter for Innovation? He is also the recent recipient of the TAGGIE award for his documentary film, The Gathering, and the co-producer of the groundbreaking film, The Great Equalizer, examining fairness in the patent system. James has served as a subject matter expert on design thinking for the Keller Innovation Center at Princeton University. He is also a visiting lecturer for the University of Texas Center for Integrated Design. James earned a Master's and Bachelor of Fine Arts -Industrial Design at the University of Illinois, Urbana, IL. James was recently awarded honorary member of the National Academy of Inventors, and he serves on the panel for Diversity, Equity, and Inclusion in the innovation ecosystem. He is also a recent recipient of the Inspire Top 100 award. For the past two years, James has served as a keynote speaker for various USPTO Black history month symposiums. For the past three years James has served as a judge for the esteemed Conrad Challenge program and he has also served as a judge for the Fairleigh Dickinson FDU Pitch competition.

Gualberto Ruaño

Member

Dr. Gualberto Ruaño is assistant professor of psychiatry and assistant director for special projects at the Connecticut Convergence Institute for Translation in Regenerative Engineering at UConn Health. He is a pioneer in the field of personalized medicine and the inventor of molecular diagnostic systems used worldwide for the management of viral diseases. Ruaño, who was born and raised in the city of Mayagüez, Puerto Rico, came to the United States to study medicine. He attended Johns Hopkins University where he obtained his baccalaureate degree, and was elected to Phi Beta Kappa. Ruaño also attended Yale University and his thesis was "A PCR-Based Paradigm for the Analysis of DNA Sequence Variation.

Ruaño founded Genomas in 2003. Ruaño had previously founded Genaissance Pharmaceuticals, Inc. in 1997 as the pioneer company in pharmacogenomics. He served as Genaissance's CEO and Chief Scientific Officer. As CEO he led the IPO of the company in 2000 (NASDAQ: GNSC), which successfully raised $90 million, and to R&D partnerships with major pharmaceutical and biotechnology companies furthering the field with visibility. As CSO, he developed fundamental technology for genetic associations based on gene haplotypes. Prior to that, at Bios Laboratories since 1992, he invented the Coupled Amplification and Sequencing (CAS) System (U.S. patent 5,427,911) for the rapid determination of sequence variation and now used for infectious disease pharmacogenomics. Marketed worldwide by Bayer Diagnostics as Trugene, this technology was the first pharmacogenomic diagnostic system approved by the U.S. Food and Drug Administration (FDA) and is a leading example of personalized medicine in practice. Ruaño's clinical research interests revolve around physiogenomics and nanotechnology. His public policy activities center on the implementation of genomics in personalized medicine from both regulatory and reimbursement perspectives.

He was elected to the Connecticut Academy of Science and Engineering in April 2004, noted for his contributions to personalized medicine at the national level, and serves as the Chairman of the Academy's Health Care and Medical Technology Board. He has also served as senior editor of the journal of Personalized Medicine. Ruaño has served on advisory committees of the American Association of Clinical Chemistry and of the National Academy of Clinical Biochemistry instituting guidelines for pharmacogenetic testing in the clinical laboratory. He was elected as a Fellow of the National Academy of Clinical Biochemistry and received the Beacon Alliance Medical Technology Award in 2005. He is also a founding Director of the Personalized Medicine Coalition in Washington, D.C. Over the last five years he has served in various steering committees working with the FDA on pharmacogenomic guidelines for drug development and was a member at the Manhattan Institute's 21st Century FDA Task Force. The Food & Drug Administration approached Genomas about doing the first pharmacogenomics conference on Hispanics in May 2010 in San Juan, Puerto Rico.

Shameika R. Wilmington

Member

Dr. Shameika Wilmington received her B.S. in Biochemistry from the University of Iowa, where she published her first scientific article. Enjoying having an independent research project, she thrived in the academic lab environment and decided to attend graduate school. Dr. Wilmington received a Ph.D. in Biochemistry and Cell Biology from Northwestern University where she engineered inducible proteasome degradation systems to control cellular protein concentration. During her graduate program she also received a certificate from Kellogg School of Business for completing the competitive Business Management for PhDs program. Towards the end of her studies, Dr. Wilmington spent time at The University of Texas at Austin continuing her research as a Bill & Melinda Gates Research Foundation recipient. Dr. Wilmington later accepted a position in Boston with Procter & Gamble/Gillette in Research & Development as a Regulatory Affairs Scientist. Today Dr. Wilmington is the Research & Development Director for Regulatory Affairs. She is responsible for the governance and compliance of the Global Grooming/Shave Care Business in North America, Europe, and Latin America. Externally, Dr. Wilmington represents Procter & Gamble on the Greater Boston Chamber of Commerce Young Professional Advisory Board and leads the partnership between Gillette and Dearborn STEM Academy, a Boston public high school.

Andre Porter

Staff Officer