

Abby Ilumoka, Ph.D.

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Bio: Dr. Abiodun (Abby) Ilumoka currently serves as program director for engineering education in the Division of Undergraduate Education, one of four divisions within the directorate for STEM Education at NSF. She coordinates the activities of the Engineering Education team within DUE and manages the NSF partnership with the Department of Defense through the REU-ASSURE program. She is co-lead for the new NSF ExpandAI program and manages the NSF-funded AI Institute for Adult Learning and Online Education. Dr. Ilumoka recently completed a detail in the NSF Office of International Science and Engineering where she successfully helped negotiate the first ever MOU for scientific cooperation between NSF and its Swiss counterpart, Swiss NSF.

Prior to joining NSF in 2015, Dr. Ilumoka earned the Ph.D. in Electrical Engineering from Imperial College of Science, Technology and Medicine London, England in 1982. Following this, she continued with post-doctoral work at Imperial College and later lectured at Brunel University, Uxbridge, UK. In 1992, she joined the Electrical Engineering faculty at the College of Engineering, University of Hartford in Connecticut, rising to the rank of associate professor (1994) and full professor (2003).

Her research interests include engineering education, microelectronic circuit optimization, AI-based tunable microwave filter synthesis and complex adaptive systems design. She has authored over 65 journal publications and conference articles and received research and teaching grants from government and corporate sources. 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 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, Dr. Ilumoka's research focus is to use her experience and background in engineering research and engineering education to help generate accurate and efficient predictive models for aspects of the K-16 STEM education enterprise.