



Dr. Margaret Martonosi is the National Science Foundation's (NSF) Assistant Director for Computer and Information Science and Engineering (CISE). With an annual budget of approximately \$1 billion, the CISE directorate at NSF has the mission to uphold the Nation's leadership in scientific discovery and engineering innovation through its support of fundamental research and education in computer and information science and engineering as well as transformative advances in research cyberinfrastructure. While at NSF, Dr. Martonosi is on leave from Princeton University where she has been on the faculty since 1994

and is the Hugh Trumbull Adams '35 Professor of Computer Science. She has also served as Associate Dean of Princeton's School of Engineering and Applied Science. In 2015-2016, she served within the US Department of State as a Jefferson Science Fellow. From 2017 to 2020, she was Director of Princeton's Keller Center for Innovation in Engineering Education. Through that, she led Princeton's efforts on cross-cutting educational initiatives in entrepreneurship, design, and the technology-society interface.

In her role at CISE, Dr. Martonosi works to advocate for and set the direction of research funding across the important topic areas comprised within the CISE space. Past CISE research funding has planted the seeds that have germinated into major scientific, economic, and societal impacts including advances in artificial intelligence, cloud computing, search, and fundamentals of computational theory and computer hardware and systems design. The directorate has also helped to catalyze transformative work on CISE education and workforce issues, including broad efforts on K-12 and undergraduate computer science education to move towards the goal of ensuring effective and accessible CISE education for all students. In addition, investments through the Office of Advanced Cyberinfrastructure positioned within CISE have supported advanced computing systems and services, which have in turn enabled breakthroughs in all areas of science and engineering.

Dr. Martonosi's research interests are in computer architecture and hardware-software interface issues in both classical and quantum computing systems. Her work has included the widely-used Wattch power modeling tool which helped bring power-awareness into the computer architecture agenda, and the Princeton ZebraNet project which ushered in the field of mobile sensor networks through its design and real-world deployment of zebra tracking collars in Kenya. Her most recent work has led the application of classical architecture and compiler approaches to quantum computing (QC) systems, offering orders of magnitude improvement in the successful utilization of near-term QC implementations.

Dr. Martonosi is a Fellow of the Association for Computing Machinery (ACM) and the Institute of Electrical and Electronics Engineers (IEEE). In addition, her research earned the 2018 IEEE Computer Society Technical Achievement Award, the 2013 Anita Borg Technical Leadership award, and the 2015 Marie R. Pistilli Women in Design Automation award. Her papers have received numerous long-term impact awards from major ACM and

IEEE conferences. Dr. Martonosi is also an inventor on seven granted US patents, and has co-authored two technical reference books on power-aware computer architecture.

Dr. Martonosi has also been a leader in diversity and inclusion efforts for her field. She served for over a decade on the board of the Computing Research Association's Committee on Widening Participation (CRA-WP, formerly CRA-W) and led it as co-chair for two of these years. In those roles, she helped lead efforts improving coverage and synergy of CRA-WP programs for women as well as for other groups under-represented in CISE. Dr. Martonosi's work on these topics has been honored with the ACM SIGARCH Alan D. Berenbaum Distinguished Service Award. In addition, she earned the 2010 Princeton University Graduate Mentoring Award and 2013 National Council on Women and Technology (NCWIT) Undergraduate Mentoring Award, among other honors.

Dr. Martonosi completed her Ph.D. at Stanford University.