



## MAA Metropolitan New York Annual Meeting

May 4, 2019

New York City College of Technology, CUNY

### Keynote Speakers

**Dr. Sylvester James “Jim” Gates, Jr.**

**Brown University**

Biography: Sylvester Jim Gates is an American theoretical physicist. He received two B.S. degrees and a Ph.D. degree from the Massachusetts Institute of Technology, the latter in 1977. His doctoral thesis was the first one at MIT to deal with supersymmetry. In 2017, Gates retired from the University of Maryland and is currently the Ford Foundation Professor of Physics, and an Affiliate Mathematics Professor at Brown University. While at the University of Maryland, Gates was a University System Regents Professor, the John S. Toll Professor of Physics at the University of Maryland, College Park, the Director of the String and Particle Theory Center, Affiliate Professor of Mathematics.



Gates served on the U.S. President’s Council of Advisors on Science and Technology and contemporaneously on Maryland State Board of Education from 2009-2016, and the National Commission on Forensic Science from 2013-2016. He is known for his work on supersymmetry, supergravity, and superstring theory. He is a past president of the National Society of Black Physicists, and is an NSBP Fellow, as well as a Fellow of the American Physical Society, the American Association for the Advancement of Science, and the Institute of Physics in the U.K. He also is an elected member of the American Academy of Arts and Sciences and the American Philosophical Society. In 2013, he was elected to the National Academy of Sciences, becoming the first African-American theoretical physicist so recognized in its 150-year history. On November 16, 2013, Prof. Gates was awarded the Mendel Medal by Villanova University “in recognition of his influential work in supersymmetry, supergravity and string theory, as well as his advocacy for science and science education in the United States and abroad.” President Obama awarded Prof. Gates the 2011 National Medal of Science, the highest award given to scientists in the U.S., at a White House ceremony in 2013. During 2014, he was named the Harvard Foundation’s “Scientist of the Year.” In 2015, he became a member of the Board of Directors of the Achieve, Inc and the Board of Councillors for the Boy Scout of America’s STEM National Council. He currently continues his research in supersymmetry in systems of particles, fields, and strings.

## **Dr. Kristin Lauter (A Polya Lecturer)**

### **Microsoft, University of Chicago**

Biography: Kristin Lauter is a Principal Researcher and Research Manager for the Cryptography group at Microsoft Research. Her research focuses on post-quantum cryptography, algorithmic number theory, elliptic curve, pairing-based, and lattice-based cryptography, homomorphic encryption, and cloud security and privacy, including privacy for healthcare. Her work has been featured in the press in articles in Science, Nature, American Scientist, and PNAS. She has published over 75 research articles and 5 books, her work appearing in venues ranging from the American Journal of Mathematics to the Journal of Biomedical Informatics and the Proceedings of CRYPTO and EUROCRYPT. Lauter has served the mathematical community as President of the Association for Women in Mathematics, and on the Council of the American Mathematical Society. She is a Fellow of the American Mathematical Society and the Association for Women in Mathematics. She was a co-founder of the Women in Numbers Network, a research collaboration community for women in number theory, and she serves on the Scientific Advisory Board for BIRS, the Banff International Research Station. Lauter is also an Affiliate Professor in the Department of Mathematics at the University of Washington. In 2008, Lauter, together with her coauthors, was awarded the Selfridge Prize in Computational Number Theory. She loves to engage audience with accessible lectures highlighting the importance of mathematics in society.



## **Dr. Christina Sormani**

### **Lehman College and CUNY Graduate Center**

Biography: Christina Sormani grew up in New York City attending PS 166, IS 44, and Hunter College High School. Awarded a scholarship, she commuted to NYU for college and stayed there with a National Science Foundation fellowship for the doctorate. After completing postdoctoral positions at Harvard and Johns Hopkins University, she came back home to work at CUNY. She presents her research on



geometric analysis around the world and is an American Mathematical Society Fellow. Today she will present undergraduate research completed with Lehman College students: Shanell George, Ulysses Hernandez, Fifonsi Lantonkpode, Vanessa Ortiz, Amanda Rodriguez, and Benjamin Arthur.

