The President's
DISTINGUISHED LECTURE SERIES

Darío Gil, Ph.D.

Senior Vice President and Director of Research

IBM

What's Next in Computing

Wednesday, October 9, 2024, at 4 p.m.

University Center, Tech Flex Auditorium

REGISTER NOW

Registration required. Reception directly following lecture.

HOSTED BY

Dr. Nariman Farvardin

President, Stevens Institute of Technology

ABSTRACT

For the last 60 years, the world of computing has been dominated by binary bits representing the intersection of information and mathematics. We have constantly pushed the boundaries of computation in this paradigm, with innovations in semiconductors reducing energy or increasing performance to enable more sophisticated calculations. In fact, we are on track to put a trillion transistors on a chip by 2030. Now, working at the intersection of information and biology, artificial intelligence is permeating through ever more applications affecting business and science. With generative AI, the technology has evolved from discrimination to creation in new domains. Generative AI models are trained without the need for annotated data and generalize to a variety of tasks with relatively efficient re-training. These models have defined an inflection point in AI. We are seeing unprecedented levels of community innovation, defining the future of AI as one based on open innovation. Finally, we are witnessing the growth of a new computing paradigm combining physics and information — quantum computing. It has the potential to solve problems out of reach for even the most powerful supercomputers. We marvel at the power of each of these computing technologies, but we haven't fully grasped their most profound implication, one that we will see this decade when we witness their convergence. The result will be the creation of unseen computational power

accelerating the rate of scientific discovery. In this lecture, we will reflect on the future of computing and the implications of this convergence of technologies for science, business and society.

BIOGRAPHY

Dr. Darío Gil is responsible for IBM Research, one of the world's largest and most influential corporate research labs. He directs innovation strategies in hybrid cloud, AI, semiconductors, quantum computing and exploratory science. He heads the technical community of IBM and is responsible for the company's intellectual property strategy and business.

Gil is also the chair of the National Science Board, which oversees the National Science Foundation. An advocate of collaborative research models, he co-chairs the MIT-IBM Watson AI Lab, which advances fundamental AI research to benefit industry and society. He also co-chairs the executive board of the International Science Reserve, a global network of open scientific communities that provides specialized resources to prepare for and help mitigate urgent, complex global challenges.

He has served on the U.S. President's Council of Advisors on Science and Technology and is a member of the President's Research Council of the Canadian Institute for Advanced Research, MIT School of Engineering Dean's Advisory Council and the Aspen Global Cybersecurity Group. He serves on the boards of the Semiconductor Industry Association, the Center for Strategic and International Studies, the New York Academy of Sciences, the New York Hall of Science and Rensselaer Polytechnic Institute.

Gil is a member of the National Academy of Engineering and received his Ph.D. in electrical engineering and computer science from MIT.

ATTENDANCE

This event is open to all Stevens students, faculty, staff, alumni and invited guests.

MORE INFORMATION

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