IBM Newsroom

IBM and ETH Zurich Join Forces to Shape the Future of Algorithms for the AI and Quantum Era

• IBM and ETH Zurich launch a 10-year initiative to advance foundational algorithmic research.

• The collaboration will focus on developing foundational algorithms for the AI and quantum era.

• IBM will also support the creation of ETH Zurich professorships to lead joint research projects and education in algorithmic innovation.

ZURICH, March 31, 2026 /PRNewswire/ -- IBM (NYSE: IBM) and ETH Zurich announced today a 10-year collaboration to advance the next generation of algorithms at the intersection of AI and quantum computing. This initiative represents the latest milestone in the long-standing collaboration between the two institutions, further strengthening a scientific exchange that has helped create the future of information technology.

Algorithms are the hidden architecture of modern technology. They power scientific discovery, economic growth, and technological progress, from classical computing to today's AI revolution. With quantum computing bringing increasing value to science and industry, entirely new algorithmic foundations — as well as new ways of understanding and representing data — are required. Over the next decade, IBM and ETH Zurich aim to create new classes of algorithms capable of bridging classical computing, machine learning, and quantum systems to address some of the today's critical challenges in business.

IBM will also support the creation of professorship positions and research projects at ETH Zurich, with the goal of advancing the algorithmic expertise of the next generation workforce. The education and research efforts will focus on new algorithmic paradigms for AI and quantum systems, including hybrid approaches that combine classical, AI-driven, and quantum computation to address challenges in four key areas: optimization and combinatorial problems; differential equations and dynamical systems; linear algebra and Hamiltonian simulations; and complex system modeling. These mathematical foundations are particularly important at the intersection of AI and quantum computing, where new algorithmic approaches could soon help unlock practical value from today's quantum hardware and redefine how complex problems in science, industry, and society are solved.

Alessandro Curioni, IBM Fellow, VP Algorithms and Applications, IBM Research said: *"Algorithms have always been the*

true drivers of computing revolutions and are at the core of our history at IBM Research. I strongly believe that the future of computing will be written not only in hardware or software, but in the algorithms that connect the two. As AI and quantum computing converge, we are witnessing the dawn of a new algorithmic era — and shaping this future requires both industry and academic scientific depth. IBM and ETH Zurich have a long and distinguished history of working together at the frontiers of science and technology. With this agreement, we are committing to inventing the algorithmic foundations of the future."

Prof. Dr. Joël Mesot, President of ETH Zurich, said: *"ETH Zurich and IBM share a longstanding commitment to excellence in research, and our focus in developing pioneering technologies is anchored in long-term societal benefits. The partnership with IBM reflects our ambition to co-create groundbreaking technology and to empower the next generation of AI and quantum computing experts."*

IBM has helped define every major era of computing, from foundational algorithmic breakthroughs — including the Fast Fourier Transform (FFT) — to pioneering artificial intelligence — with systems like Deep Blue and Watson. Showcasing decades of leadership in algorithm design and implementation, IBM continues to push the boundaries of what computation can achieve.

ETH Zurich stands among the world's leading scientific institutions, with a legacy that includes 22 Nobel laureates and some of the most influential minds in mathematics, physics, and computer science — from Albert Einstein to Eduard Stiefel. ETH was the birthplace of numerous ideas that form the mathematical and algorithmic backbone of modern science, and ETH-created programming languages, numerical methods, and theoretical frameworks are still in use to this day.

About IBM

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