

Bachelier Prize 2026: Citation for Christa Cuchiero

Short citation:

The 2026 Louis Bachelier Prize has been awarded to Professor Christa Cuchiero (University of Vienna, Austria). Cuchiero is internationally recognised as one of the leading figures in modern stochastic analysis and mathematical finance, with deep and transformative contributions spanning affine and polynomial processes, infinite-dimensional stochastic analysis, signature methods, and the interface of probability theory with machine learning and data science.

Long citation:

The 2026 Louis Bachelier Prize has been awarded to Professor Christa Cuchiero (University of Vienna, Austria).

Christa Cuchiero is Professor of Mathematical Finance at the University of Vienna. Her research is distinguished by an exceptional combination of mathematical depth, conceptual originality, and sustained relevance to real-world financial modelling, with highly cited contributions spanning more than fifteen years.

Her research contributions include:

- foundational work on affine processes on positive semidefinite matrices, which has become a cornerstone of multivariate stochastic volatility modelling;
- highly influential contributions to the theory of polynomial processes and their applications to mathematical finance, substantially broadening the class of tractable models available to researchers and practitioners;
- pioneering work on signature stochastic differential equations and their universal approximation properties, forging a profound link between rough path theory and modern machine learning;
- innovative models for joint SPX/VIX calibration combining theoretical sophistication with computational tractability, as well as contributions to generative modelling for calibration;
- recent advances in functional Itô calculus and Taylor expansions for nonanticipative functionals of rough paths, solving a major open problem in the multivariate setting.

Christa Cuchiero's research exemplifies the power of rigorous mathematical frameworks to open entirely new avenues for modelling complex financial systems, with impact felt equally across stochastic analysis, quantitative finance, and data-driven methods.