



Conference on Mathematics of Data Science

November 16–20, 2026 • Salt Palace Convention Center, Salt Lake City, Utah, U.S.

This is the conference of the SIAM Activity Group on Data Science.

Organizing Committee Co-Chairs

Andreas Mang, *University of Houston, U.S.*

Rebecca Morrison, *University of Colorado Boulder, U.S.*

Rebecca Willett, *University of Chicago, U.S.*

About the Conference

The SIAM Conference on Mathematics of Data Science (MDS26) will bring together researchers and practitioners from academia, industry, government, and national laboratories to explore advances in the mathematical foundations of data science. Presentations will highlight advances in mathematical, statistical, and computational methods that shape how data are analyzed, modeled, and used to inform decision-making. MDS26 will feature work spanning foundational theory through real-world applications. This year, a particular focus is on the mathematics of data science in high dimensions, with topics such as dimensionality reduction and embeddings, scalability and parallel algorithms, and algebraic and geometric data analysis. We invite you to join MDS26 to engage with emerging ideas, share insights, and help define the next generation of mathematics for data science.

Included Themes

- Applications of data science (DS), machine learning (ML), and artificial intelligence (AI) in all scientific disciplines
- Approximation theory
- Computational linear algebra and tensor methods
- Graphs, network science, and discrete structures
- High dimensional geometry and topology of data
- Interpretability, fairness, explainability of data-driven models
- Mathematics of AI and ML
- Operator Learning
- Optimization and Control
- Parallel and high-performance computing
- Randomized algorithms
- Software, reproducibility & data ecosystems
- Statistical learning theory
- Uncertainty and probabilistic modeling

Focus Topics

- Dimensionality reduction and embeddings
- Emergent properties of AI models
- Generative AI (theory and applications)
- Geometric and topological data analysis
- Graph neural networks
- Inverse problems
- Privacy/interpretability/explainability/ethics/policy of AI, ML, and DS
- Parallel/distributed/scalable optimization
- Probabilistic graphical models
- Uncertainty quantification

Learn more: siam.org/mds26

The following conferences will be held jointly:

- SIAM Conference on Imaging Science (IS26)
- SIAM Conference on Mathematics of Data Science (MDS26)
- SIAM International Conference on Data Mining (SDM26)



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