Editor's Notes

Welcome to the December 2025 issue of the ACM SIGMOD Record!

This issue starts with the Database Principles column featuring an article by Tao and Wang focusing on the theoretical foundation of sampling for natural joins, which are fundamental to database systems. The authors present an elegant and powerful box-tree technique that has been developed by the database-theory community in recent years. The technique yields simple algorithms and data structures, whose theoretical guarantees match the state of the art, for solving the problems of join reporting, small-delay enumeration, and join sampling. The box-tree technique is based on so-called split theorems, which uncover a combinatorial and intrinsically geometric structure underlying natural joins. The article also surveys related work, discusses alternative approaches to join reporting and sampling, and points out directions for future research.

The Reminiscences on Influential Papers column, edited by Pınar Tözün, presents contributions by Genoveva Vargas-Solar, Thomas Heinis, Alexander Boehm, and Pamela Delgado.

The Advice to Mid-Career Researchers column presents a contribution by Khuzaima Daudjee. The reflections shared in the article focus on four themes connected to the author's personal experiences: system building, mentorship, micro-visits, and service. The article provides advice on many aspects of the mid-career stage of life, offering the perspective of looking for what is meaningful and interesting, as well as for new opportunities, including the one of building yourself along the way on this path. The author expresses a hope that some of the reflections shared in the article would also be a useful read for colleagues who are currently at earlier points in their careers than mid-career researchers.

The DBrainstorming column, whose goal is to discuss new and potentially controversial ideas that might be of interest and benefit to the research community, features an article by Raul Castro Fernandez that focuses on understanding and designing data ecosystems. The research agenda presented in the article aims to uncover principles that drive dataflows and to design comprehensive interventions to steer them positively. The author shares preliminary and ongoing work on this topic, outlines opportunities for the database community, and maps out the road ahead in this research space.

The Distinguished Profiles column features an interview with Angela Bonifati, Distinguished Professor of Computer Science at Lyon 1 University, Head of the Database Research Group at the CNRS Liris Research Lab, and a senior member of the Institut Universitaire de France. In the interview, Angela talks about her research focus and professional arc over the years, about the state of the art and future of graph databases, and about her work plans for the prestigious ERC Advanced Grant that she has just received. She discusses working in the industry and her experience with collaborations, as well as research in Europe versus in the rest of the world. Angela also outlines her vision as the new chair of SIGMOD, provides advice on mentoring, and shares her thoughts and experiences concerning work-life balance.

The issue closes with the Open Forum column, which presents an article by Khan and colleagues reporting on the discussion of retrieval-augmented generation (RAG) that was held by a panel at the LLM+Vector Data'25 workshop held jointly with the ICDE-25 conference in Hong Kong, China. The discussion in the panel focused on emerging RAG opportunities at the intersection of data science, data engineering, and data-centric AI/ML methodologies. The panel also outlined open challenges for

real-world LLM-RAG deployment, with the hope that the discussion would inspire future work on the domain's emerging data-management issues.

On behalf of the SIGMOD Record Editorial board, I hope that you enjoy reading the December 2025 issue of the SIGMOD Record!

Your submissions to the SIGMOD Record are welcome via the submission site:
https://mc.manuscriptcentral.com/sigmodrecord

Prior to submission, please read the Editorial Policy on the SIGMOD Record's website:
https://sigmodrecord.org/sigmod-record-editorial-policy/

Rada Chirkova

December 2025

<u>Past SIGMOD Record Editors:</u>

Yanlei Diao (2014-2019)	Ioana Manolescu (2009-2013)	Alexandros Labrinidis (2007–2009)
Mario Nascimento (2005–2007)	Ling Liu (2000–2004)	Michael Franklin (1996–2000)
Jennifer Widom (1995–1996)	Arie Segev (1989–1995)	Margaret H. Dunham (1986–1988)
Jon D. Clark (1984–1985)	Thomas J. Cook (1981–1983)	Douglas S. Kerr (1976-1978)
Randall Rustin (1974-1975)	Daniel O'Connell (1971–1973)	Harrison R. Morse (1969)