

Editor's Notes

Welcome to the September 2023 issue of the ACM SIGMOD Record!

This issue starts with the Database Principles column presenting an article by Dong and Yi on query evaluation under differential privacy. In the scope of the pressing challenges in processing sensitive information at scale and in privacy-preserving ways, the authors consider the holy grail of developing a general-purpose SQL-based query engine that is capable of supporting a broad range of queries while maintaining differential privacy. Toward that goal, the article presents recent research advances in query evaluation under differential privacy, and outlines interesting directions for further investigation.

The Surveys column features a contribution by Seufitelli and colleagues. The article presents a systematic literature review on the areas of overlap between digital forensics and database systems. In an effort to promote better categorization and synthesis, the authors introduce a new taxonomy, which brings to light a pattern of publications that would enable researchers and organizations to quickly find solutions grouped by forensic purpose. The authors draw conclusions from their findings and list potential opportunities for future research.

The Systems and Prototypes column presents an article by Beedkar and colleagues that introduces Apache Wayang (Incubating), an open-source framework for unifying data analytics in a systematic way by integrating multiple heterogeneous data-processing platforms. The authors present the architecture of Apache Wayang, describe its components, and give an outlook on future directions of work.

The Reminiscences on Influential Papers column features contributions by Renata Borovica-Gajic and Bailu Ding.

The DBrainstorming column, whose goal is to discuss new and potentially controversial ideas that might be of interest and potentially of benefit to the research community, presents an article by Salihoglu. The article ponders research questions around architecting modern graph database-management systems (GDBMS), under the premise that they are relational at the core but can process “beyond relational” workloads. The author shares the experiences of the research team working on the Kùzu GDBMS, and formulates areas of inspiration for student researchers, including studies of systems with general deductive capabilities.

The Industry Perspectives column features an article by Poppe and colleagues that discusses challenges encountered with reactive resource allocations in modern cloud services, and introduces the proactive resource-allocation policy for Microsoft Azure Cognitive Search. The authors discuss the insights gained from the available production-workload patterns, and outline directions of further work.

The Open Forum column presents an article by Amer-Yahia and colleagues that explores the challenges and opportunities related to large language models (LLMs) in database and data-science research and education. The authors discuss a number of intriguing topics, including the pros and cons of LLMs, uses of LLMs in database systems and in education, and the need for reasoning in LLMs.

The issue closes with an announcement from the ACM on the new authorship policy, which covers a range of key topics, including the use of generative AI tools.

On behalf of the SIGMOD Record Editorial board, I hope that you enjoy reading the September 2023 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

September 2023

Past SIGMOD Record Editors:

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)