Editor's Notes

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

This issue starts with the Database Principles column presenting an article by ten Cate and colleagues on algorithms for solving the fitting problem for conjunctive queries. The fitting problem, which concerns constructing queries that fit the given labeled data examples, has a long history in database research, with connections ranging from the query-by-example paradigm to inductive logic programming. The authors consider the fitting problem for the case of conjunctive queries, that is select-project-join queries with equality comparisons, covering desirable properties for potential algorithms addressing the problem, a comparison of existing algorithms under these considerations, and structural interactions between the considerations. The article concludes with an outline of interesting directions for further investigation.

The Surveys column features a contribution by Siddiqui and Wu. The article considers the landscape of challenges in recommending high-quality indexes while ensuring scalability in managing workloads in modern cloud services. Within this scope, the authors explore ways in which machine-learning techniques provide new opportunities in the mitigation of some of the challenges in automated index tuning. The article highlights the key takeaways from the recent efforts in these directions, and underlines the gaps that need to be closed for their effective functioning within the traditional index-tuning framework. The information provided in the article can be useful in providing context and impetus to the further research and development efforts in automated index tuning.

The Reminiscences on Influential Papers column features contributions by Sourav Bhowmick, Carsten Binnig, and Peter Alvaro.

The Advice to Mid-Career Researchers column presents a contribution by Tiziana Catarci. In the column, she shares her experiences with the university-career tracks in her home country and in Europe as a whole, and provides perspective on how the mid-career period can give researchers even more freedom to study, create their own groups, and choose their own ventures. She also explores potential ways to impact the society, to contribute to the creation of a better world, and to be a positive example for the younger generation during that career period.

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 Tianzheng Wang. The article ponders research questions around the roles of programming languages in implementing DBMS. The DBMS software is expected to deliver both on good use of the hardware for high performance and on success with high-level abstractions, which often leads to the choice of more than one programming language for the implementations. The article makes a case for exploring features of programming languages in deciding whether a single programming language can be used in implementing DBMS, and for quantitatively comparing the available programming languages for this purpose. As compiler and ecosystem support can often fall short in DBMS development, the author calls on the community to consider influencing programming-language and compiler design to push the desired features early into future programming languages.

The issue closes with an Open Forum column, which presents an article by Meliou and colleagues that focuses on the important and hard task of reviewing papers for conferences. The article reports the results of a survey conducted to gather the opinions of the data-management community regarding what could be done to address the existing challenges in conference reviewing. The authors

reached out to about 1,200 members of the community with relevant reviewing experience, and collected 345 anonymous responses. A planned follow-up to the article will discuss in more depth particular proposals inspired by the collective feedback from the community.

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

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