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Guest Editorial: Special Issue on Database Theory

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This volume contains invited papers from the 20th edition of the International Conference on Database Theory, which was held in Venice, Italy in 2017. Originally biennial, the ICDT conference has been held annually and jointly with the conference on Extending Database Technology (EDBT) since 2009.

The papers invited to the special issue were chosen by the Program Committee with the goal of highlighting top contributions in the conference across a broad range of topics. One of the papers deals with a fundamental problem in the expressiveness of logic-based query languages: *How many variables are needed to express an existential positive query?*, by Simone Bova and Hubie Chen, which had already been awarded the ICDT 2017 Best Paper Award at the conference. The remaining three papers were considered outstanding representatives in distinct subareas within the topic of database theory:

- *Better Streaming algorithms for the Maximum Coverage problem*, by Andrew McGregor and Hoa T. Vu, in the area of stream-processing;
- *Evaluating Datalog* via *Tree Automata and Cycluits*, by Antoine Amarilli, Pierre Bourhis, Mikaël Monet and Pierre Senellart, in the area of query evaluation;
- *A logic for Document Spanners*, by Dominik D. Freydenberger, in the area of information extraction.

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