

21st International Conference on Database Theory

ICDT 2018, March 26–29, 2018, Vienna, Austria

Edited by

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■ Contents

Preface	
<i>Benny Kimelfeld and Yael Amsterdamer</i>	0:vii
Organization	
.....	0:ix
External Reviewers	
.....	0:xi
Contributing Authors	
.....	0:xiii
ICDT 2018 Test of Time Award	
<i>Pablo Barcelo, Richard B. Hull and Victor Vianu</i>	0:xv

Invited Talks

Fine-grained Algorithms and Complexity	
<i>Virginia Vassilevska Williams</i>	1:1–1:1
Join Algorithms: From External Memory to the BSP	
<i>Ke Yi</i>	2:1–2:1
An Update on Dynamic Complexity Theory	
<i>Thomas Zeume</i>	3:1–3:1

Regular Papers

Rewriting Guarded Existential Rules into Small Datalog Programs	
<i>Shqiponja Ahmetaj, Magdalena Ortiz, and Mantas Šimkus</i>	4:1–4:24
Enumeration on Trees under Relabelings	
<i>Antoine Amarilli, Pierre Bourhis, and Stefan Mengel</i>	5:1–5:18
Connecting Width and Structure in Knowledge Compilation	
<i>Antoine Amarilli, Mikaël Monet, and Pierre Senellart</i>	6:1–6:17
A More General Theory of Static Approximations for Conjunctive Queries	
<i>Pablo Barceló, Miguel Romero, and Thomas Zeume</i>	7:1–7:22
Answering UCQs under Updates and in the Presence of Integrity Constraints	
<i>Christoph Berkholz, Jens Keppeler, and Nicole Schweikardt</i>	8:1–8:19
Expressivity and Complexity of MongoDB Queries	
<i>Elena Botoeva, Diego Calvanese, Benjamin Cogrel and Guohui Xiao</i>	9:1–9:23
On the Expressive Power of Query Languages for Matrices	
<i>Robert Brijder, Floris Geerts, Jan Van den Bussche, and Timmy Weerwag</i>	10:1–10:17
Enumeration Complexity of Conjunctive Queries with Functional Dependencies	
<i>Nofar Carmeli and Markus Kröll</i>	11:1–11:17

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Preserving Constraints with the Stable Chase <i>David Carral, Markus Krötzsch, Maximilian Marx, Ana Ozaki, and Sebastian Rudolph</i>	12:1–12:19
Fast Sketch-based Recovery of Correlation Outliers <i>Graham Cormode and Jacques Dark</i>	13:1–13:18
Satisfiability for SCULPT-Schemas for CSV-Like Data <i>Johannes Doleschal, Wim Martens, Frank Neven, and Adam Witkowski</i>	14:1–14:19
Querying the Unary Negation Fragment with Regular Path Expressions <i>Jean Christoph Jung, Carsten Lutz, Mauricio Martel, and Thomas Schneider</i>	15:1–15:18
Covers of Query Results <i>Ahmet Kara and Dan Olteanu</i>	16:1–16:22
Distribution Policies for Datalog <i>Bas Ketsman, Aws Albarghouthi, and Paraschos Koutris</i>	17:1–17:22
Parallel-Correctness and Transferability for Conjunctive Queries under Bag Semantics <i>Bas Ketsman, Frank Neven, and Brecht Vandevoort</i>	18:1–18:16
Evaluation and Enumeration Problems for Regular Path Queries <i>Wim Martens and Tina Trautner</i>	19:1–19:21
Massively Parallel Entity Matching with Linear Classification in Low Dimensional Space <i>Yufei Tao</i>	20:1–20:19

■ Preface

The 21th International Conference on Database Theory (ICDT 2018) was held in Vienna, Austria, on March 26-29, 2018. Originally biennial, the ICDT conference has been held annually and jointly with the conference on Extending Database Technology (EDBT) since 2009. The proceedings of ICDT 2018 includes an overview of the keynote talks by Virginia Vassilevska Williams (MIT EECS, MA, USA), by Ke Yi (Hong Kong University of Science and Technology, Hong Kong, China), and by Thomas Zeume (TU Dortmund University, Germany), as well as 17 research papers that were selected by the Program Committee.

Out of the 17 accepted papers, the Program Committee selected the paper “*Evaluation and Enumeration Problems for Regular Path Queries*” by *Wim Martens and Tina Trautner (University of Bayreuth, Germany)* for the ICDT 2018 Best Paper Award.

We wish to thank the many contributors to ICDT 2018: the authors of the submitted papers, the external reviewers, the keynote speakers, the EDBT/ICDT 2018 local organization officers, and the conference General Chair Reinhard Pichler. We wish to especially thank the members of the ICDT 2018 Program Committee, who invested considerable time and effort providing thorough paper reviews and conducting careful discussions. We also wish to thank ICDT Council Chair Wim Martens and ICDT 2017 Program Committee Chair Michael Benedikt for their guidance and support, as well as ICDT 2017 Proceedings Chair Giorgio Orsi for useful advice on the publicity and production of the proceedings. Last, we wish to acknowledge Michael Wagner and Marc Herbstritt from Dagstuhl Publishing for their support with the publication of the proceedings in the LIPIcs (Leibniz International Proceedings in Informatics) Series.

Benny Kimelfeld and Yael Amsterdamer
March 2018



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■ ICDT 2018 Test of Time Award

In 2013, the International Conference on Database Theory (ICDT) began awarding the ICDT Test of Time (ToT) award, with the goal of recognizing one paper, or a small number of papers, presented at ICDT at least a decade earlier, that have best met the “test of time”. The ICDT ToT award for 2018 was presented during the EDBT/ICDT 2018 Joint Conference, March 26–29, 2018 in Vienna, Austria. The ICDT 2018 ToT Award Committee was charged with selecting the paper(s) from the ICDT 1999 and 2001 proceedings that have had the most impact in terms of research, methodology, conceptual contribution, or transfer to practice over the past decade. After careful consideration, the committee selected the following papers as joint award winners for 2018:

Kevin S. Beyer, Jonathan Goldstein, Raghu Ramakrishnan, Uri Shaft:
When Is “Nearest Neighbor” Meaningful?

This much cited, thought-provoking paper challenged the conventional wisdom in high-dimensional similarity search by highlighting a surprising phenomenon: the distance to a point’s nearest neighbor is almost the same as the distance to its farthest neighbor, in high dimensions. This opened up new fundamental questions about the utility of indexes for high-dimensional similarity search and pointed out a major weakness in the methodology of empirical evaluations of prior works.

Peter Buneman, Sanjeev Khanna, Wang Chiew Tan:
Why and Where: A Characterization of Data Provenance

A seminal contribution to the foundations of data provenance, this article considered for the first time the “where” and “why” flavors of provenance in a unified, application independent framework, using a general-purpose semi-structured data model. “Why” provenance refers to the portion of the database that justifies the presence of an item in the answer to a query, while “where” provenance identifies actual locations in the database from which the answer values were extracted. This influential and highly cited paper opened the way to an important research area focusing on various semantic and computational aspects of data provenance, still very active today.

Pablo Barcelo Richard B. Hull Victor Vianu
Univ. of Chile IBM T.J. Watson Research Center UC San Diego

The ICDT Test-of-Time Award Committee for 2018



