

VLDB2018

44th International Conference on Very Large Data Bases, Rio de Janeiro, Brazil



Proceedings of the VLDB Endowment

Volume 11, No. 12 – August 2018

**Proceedings of the 44th International Conference on
Very Large Data Bases, Rio de Janeiro, Brazil**

Program Chairs:

Sihem Amer-Yahia and Jian Pei

Associate Editors – Research Track:

Luc Bouganim, Juliana Freire, Johannes Gehrke, Wook-Shin Han, Chris Jermaine, Jimmy Lin, Ioana Manolescu, Renee Miller, Mohamed Mokbel, Felix Naumann, Srinivasan Parthasarathy, Andrew Pavlo, S. Sudarshan, Jens Teubner, Yuanyuan Tian, Jianliang Xu, Meihui Zhang, Xiaodong Zhang

Proceedings Chairs:

Sourav Bhowmick, Ricardo Torres

PVLDB – Proceedings of the VLDB Endowment

Volume 11, No. 12, August 2018.

The 44th International Conference on Very Large Data Bases, Rio de Janeiro, Brazil.

Copyright 2018 VLDB Endowment

This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/>. For any use beyond those covered by this license, obtain permission by emailing info@vldb.org.

Volume 11, Number 12, August 2018: VLDB 2018

Pages i – viii and 1742 - 2167

ISSN 2150-8097

Additional copies only online at: portal.acm.org, arxiv.org/corr, and www.vldb.org

TABLE OF CONTENTS

Front Matter

Copyright Notice	i
Table of Contents	ii
VLDB 2018 Organization and Review Board	vii

Industrial and Applications

Challenges and Experiences in Building an Efficient Apache Beam Runner For IBM Streams	
.....Shen Li, Paul Gerver, John Macmillan, Daniel Debrunner, William Marshall, Kun-Lung Wu	1742
On Optimizing Operator Fusion Plans for Large-Scale Machine Learning in SystemML	
.....Matthias Boehm, Berthold Reinwald, Dylan Hutchison, Prithviraj Sen, Alexandre Evfimievski, Niketan Pansare	1755
OLTPShare: The Case for Sharing in OLTP Workloads	
.....Robin Rehrmann, Carsten Binnig, Alexander Boehm, Kihong Kim, Wolfgang Lehner, Amr Rizk	1769
Automating Large-Scale Data Quality Verification	
.....Sebastian Schelter, Dustin Lange, Philipp Schmidt, Meltem Celikel, Felix Biessmann, Andreas Grafberger	1781
Taking Omnid to the Clouds: Fast, Scalable Transactions for Real-Time Cloud Analytics	
.....Ohad Shacham, Yonatan Gottesman, Aran Bergman, Edward Bortnikov, Eshcar Hillel, Idit Keidar	1795
Providing Streaming Joins as a Service at Facebook	
.....Gabriela Jacques-Silva, Ran Lei, Luwei Cheng, Guoqiang Jerry Chen, Kuen Ching, Tanji Hu, Yuan Mei, Kevin Wilfong, Rithin Shetty, Serhat Yilmaz, Anirban Banerjee, Benjamin Heintz, Shridar Iyer, Anshul Jaiswal	1809
FusionInsight LibrA: Huawei's Enterprise Cloud Data Analytics Platform	
.....Le Cai, Jianjun Chen, Jun Chen, Yu Chen, Kuorong Chiang, Marko Dimitrijevic, Yonghua Ding, Yu Dong, Ahmad Ghazal, Jacques Hebert, Kamini Jagtiani, Suzhen Lin, Ye Liu, Demai Ni, Chunfeng Pei, Jason Sun, Li Zhang, Mingyi Zhang, Cheng Zhu	1822
F1 Query: Declarative Querying at Scale	
.....Bart Samwel, John Cieslewicz, Ben Handy, Jason Govig, Petros Venetis, Chanjun Yang, Keith Peters, Jeff Shute, Daniel Tenedorio, Himani Apte, Felix Weigel, David Wilhite, Jiacheng Yang, Jun Xu, Jiexing Li, Zhan Yuan, Craig Chasseur, Qiang Zeng, Ian Rae, Anurag Biyani, Andrew Harn, Yang Xia, Andrey Gubichev, Amr ElHelw, Orri Erling, Zhepeng Yan, Mohan Yang, Yiqun Wei, Thanh Do, Colin Zheng, Goetz Graefe, Somayeh Sardashti, Ahmed M. Aly, Divy Agrawal, Ashish Gupta, Shiv Venkataraman	1835
PolarFS: An Ultra-low Latency and Failure Resilient Distributed File System for Shared Storage Cloud Database	
.....Wei Cao, Zhenjun Liu, Peng Wang, Sen Chen, Caifeng Zhu, Song Zheng, Yuhui Wang, Guoqing Ma	1849
Accordion: Better Memory Organization for LSM Key-Value Stores	
.....Edward Bortnikov, Anastasia Braginsky, Eshcar Hillel, Idit Keidar, Gali Sheffi	1863

Real-time Constrained Cycle Detection in Large Dynamic Graphs	Xiafei Qiu, Wubin Cen, Zhengping Qian, You Peng, Ying Zhang, Xuemin Lin, Jingren Zhou	1876
BTrim - Hybrid In-Memory Database Architecture for Extreme Transaction Processing in VLDBs ...	Aditya Gurajada, Dheren Gala, Fei Zhou, Amit Pathak, Zhan-Feng Ma	1889

Demonstrations

Sherlock: A System for Interactive Summarization of Large Text Collections	Avinesh P.V.S., Carsten Binnig, Benjamin Hättasch, Christian Meyer, Orkan Özyurt	1902
DataStorm-FE: A Data- and Decision-Flow and Coordination Engine for Coupled Simulation Ensembles	Hans Behrens, K. Selçuk Candan, Xilun Chen, Ashish Gadkari, Yash Garg, Mao-Lin Li	1906
A Demonstration of the OtterTune Automatic Database Management System Tuning Service	Bohan Zhang, Dana Van Aken, Justin Wang, Tao Dai, Shuli Jiang, Jacky Lao, Siyuan Sheng, Andrew Pavlo, Geoffrey Gordon	1910
OctopusFS in Action: Tiered Storage Management for Data Intensive Computing	Elena Kakoulli, Nikolaos Karmiris, Herodotos Herodotou	1914
TRIPS: A System for Translating Raw Indoor Positioning Data into Visual Mobility Semantics	Huan Li, Hua Lu, Feichao Shi, Gang Chen, Ke Chen, Lidan Shou	1918
A Demonstration of PERC: Probabilistic Entity Resolution With Crowd Errors	Xiangyu Ke, Michelle Teo, Arijit Khan, Vijaya Krishna Yalavarthi	1922
CDB: A Crowd-Powered Database System	Guoliang Li, Chengliang Chai, Ju Fan, Xueping Weng, Jian Li, Yudian Zheng, Yuanbing Li, Xiang Yu, Xiaohang Zhang, Haitao Yuan	1926
FASTER: An Embedded Concurrent Key-Value Store for State Management	Badrish Chandramouli, Guna Prasaad, Donald Kossmann, Justin Levandoski, James Hunter, Mike Barnett	1930
Maverick: A System for Discovering Exceptional Facts from Knowledge Graphs	Gensheng Zhang, Chengkai Li	1934
PTRider: A Price-and-Time-Aware Ridesharing System	Lu Chen, Yunjun Gao, Zixian Liu, Xiaokui Xiao, Christian Jensen, Yifan Zhu	1938
CoreKG: a Knowledge Lake Service	Amin Beheshti, Boualem Benatallah, Reza Nouri, Alireza Tabebordbar	1942
RuDiK: Rule Discovery in Knowledge Bases	Stefano Ortona, Venkata Vamsikrishna Meduri, Paolo Papotti	1946
The return of JedAI: End-to-End Entity Resolution for Structured and Semi-Structured Data	George Papadakis, Leonidas Tsekouras, Emmanouil Thanos, George Giannakopoulos, Themis Palpanas, Manolis Koubarakis	1950
Provenance Summaries for Answers and Non-Answers	Seokki Lee, Bertram Ludäscher, Boris Glavic	1954

Helix: Accelerating Human-in-the-loop Machine Learning	Doris Xin, Litian Ma, Jialin Liu, Stephen Macke, Shuchen Song, Aditya Parameswaran	1958
ShapeSearch: Flexible Pattern-based Querying of Trend Line Visualizations	Tarique Siddiqui, Paul Luh, Zesheng Wang, Karrie Karahalios, Aditya Parameswaran	1962
PANDA: A System for Partial Topology-based Search on Large Networks	Miao Xie, Sourav S. Bhowmick, Hao Su, Gao Cong, Wook-Shin Han	1966
MSQL+: a Plugin Toolkit for Similarity Search under Metric Spaces in Distributed Relational Database Systems	Wei Lu, Xinyi Zhang, Zhiyu Shui, Zhe Peng, Xiao Zhang, Xiaoyong Du, Hao Huang, Xiaoyu Wang, Anqun Pan, Haixiang Li	1970
HYDRA: A Dynamic Big Data Regenerator	Anupam Sanghi, Raghav Sood, Dharmendra Singh, Jayant Haritsa, Srikantha Tirthapura	1974
A Demonstration of MAGiQ: Matrix Algebra Approach for Solving RDF Graph Queries	Fuad Jamour, Ibrahim Abdelaziz, Panos Kalnis	1978
REGAL+: Reverse Engineering SPJA Queries	Wei Chit Tan, Meihui Zhang, Hazem Elmeleegy, Divesh Srivastava	1982
NLProveNAns: Natural Language Provenance for Non-Answers	Daniel Deutch, Nave Frost, Tomer Haimovich, Amir Gilad	1986
Fault-Tolerance for Distributed Iterative Dataflows in Action	Chen Xu, Rudi Poepsel Lemaitre, Juan Soto, Volker Markl	1990
QuestPro: Queries in SPARQL Through Provenance	Efrat Abramovitz, Daniel Deutch, Amir Gilad	1994
GOLDRUSH: Rule Sharing System for Fraud Detection	Ariel Jarovsky, Tova Milo, Slava Novgorodov, Wang-Chiew Tan	1998
Discovering Diversified Paths in Knowledge Bases	Christian Aebeloe, Gabriela Montoya, Vinay Setty, Katja Hose	2002
Declarative and distributed graph analytics with GRADOOP	Martin Junghanns, Max Kießling, Niklas Teichmann, Kevin Gómez, André Petermann, Erhard Rahm	2006
A collaborative framework for tweaking properties in a synthetic dataset	Jiangwei Zhang, Yu Wang, Y.C. Tay	2010
Tooling Framework for Instantiating Natural Language Querying System	Manasa Jammi, Jaydeep Sen, Ashish Mittal, Sagar Verma, Vardaan Pahuja, Rema Ananthanarayanan, Pranay Lohia, Hima Karanam, Diptikalyan Saha, Karthik Sankaranarayanan	2014
Koko: A System for Scalable Semantic Querying of Text	Xiaolan Wang, Jiyu Komiya, Yoshihiko Suhara, Aaron Feng, Behzad Golshan, Alon Halevy, Wang-Chiew Tan	2018
GC: A Graph Caching System for Subgraph/Supergraph Queries	Jing Wang, Zichen Liu, Shuai Ma, Nikos Ntarmos, Peter Triantafillou	2022

X2Q: Your Personal Example-based Graph Explorer	Matteo Lissandrini, Davide Mottin, Themis Palpanas, Yannis Velegrakis	2026
ConnectionLens: Finding Connections Across Heterogeneous Data Sources	Camille Chanial, Réduane Dziri, Helena Galhardas, Julien Leblay, Minh-Huong Le Nguyen, Ioana Manolescu	2030
ProvSQL:Provenance and Probability Management in PostgreSQL	Pierre Senellart, Louis Jachiet, Silviu Maniu, Yann Ramusat	2034
CYADB: A Database that Covers Your Ask	Zechao Shang, Will Brackenbury, Aaron Elmore, Michael Franklin	2038
CloudMatcher: A Hands-Off Cloud/Crowd Service for Entity Matching	Yash Govind, Erik Paulson, Palaniappan Nagarajan, Paul Suganthan G. C., Anhai Doan, Youngchoon Park, Glenn Fung, Devin Conathan, Marshall Carter, Mingju Sun	2042
Collaborative Edge and Cloud Neural Networks for Real-Time Video Processing	Philipp Grulich, Faisal Nawab	2046
Dhalion in Action: Automatic Management of Streaming Applications	Ashvin Agrawal, Avrilila Floratou	2050
Ease.ml in Action: Towards Multi-tenant Declarative Learning Services	Bojan Karlaš, Ji Liu, Wentao Wu, Ce Zhang	2054
MustaCHE: A Multiple Clustering Hierarchies Explorer	Antonio Cavalcante Araujo Neto, Mario Nascimento, Joerg Sander, Ricardo Campello	2058
HypDB: A Demonstration of Detecting, Explaining and Resolving Bias in OLAP queries	Babak Salimi, Corey Cole, Peter Li, Johannes Gehrke, Dan Suciu	2062
Learning Efficiently Over Heterogeneous Databases	Jose Picado, Arash Termehchy, Sudhanshu Pathak	2066
Scalable and Efficient Data Analytics and Mining with Lemonade	Walter Santos, Gustavo Avelar, Manoel Horta Ribeiro, Dorgival Guedes, Wagner Meira Jr.	2070
SkinnerDB: Regret-Bounded Query Evaluation via Reinforcement Learning	Immanuel Trummer, Samuel Moseley, Deepak Maram, Saehan Jo, Joseph Antonakakis	2074
iSPEED: a Scalable and Distributed In-Memory Based Spatial Query System for Large and Structurally Complex 3D Data	Hoang Vo, Yanhui Liang, Jun Kong, Fusheng Wang	2078
DfAnalyzer: Runtime Dataflow Analysis of Scientific Applications using Provenance	Vítor Sousa, Daniel Oliveira, Marta Mattoso, Patrick Valduriez	2082
A Demonstration of Sterling: A Privacy-Preserving Data Marketplace	Nick Hynes, David Dao, David Yan, Raymond Cheng, Dawn Song	2086
ConTPL: Controlling Temporal Privacy Leakage in Differentially Private Continuous Data Release	Yang Cao, Li Xiong, Masatoshi Yoshikawa, Yonghui Xiao, Si Zhang	2090

Tutorials

Data Integration and Machine Learning: A Natural Synergy	Luna Dong, Theodoros Rekatsinas	2094
Database and Distributed Computing Fundamentals for Scalable, Fault-tolerant, and Consistent Maintenance of Blockchains	Sujaya Maiyya, Victor Zakhary, Divy Agrawal, Amr El Abbadi	2098
Forecasting Big Time Series: Old and New	Christos Faloutsos, Jan Gasthaus, Tim Januschowski, Yuyang Wang	2102
Graph Data Models, Query Languages and Programming Paradigms	Alin Deutsch, Yannis Papakonstantinou	2106
Computational fact-checking: a content management perspective	Sylvie Cazalens, Julien Leblay, Ioana Manolescu, Philippe Lamarre, Xavier Tannier	2110

Award Talks and Panel

Information and Data Management at PUC-Rio and UFMG	Antonio Furtado, Nivio Ziviani	2114
Open Data Integration	Renee Miller	2130
Ten Years of WebTables	Michael Cafarella, Alon Halevy, Hongrae Lee, Jayant Madhavan, Cong Yu, Daisy Zhe Wang, Eugene Wu	2140
Northstar: An Interactive Data Science System	Tim Kraska	2150
Panel: A Debate on Data and Algorithmic Ethics	Julia Stoyanovich, Bill Howe, H. Jagadish, Jerome Miklau	2165

VLDB 2018 ORGANIZATION AND REVIEW BOARD

General Chairs

Alberto Laender, Universidade Federal de Minas Gerais
Fabio Porto, LNCC
Marco Antonio Casanova, PUC Rio

Honorary Chair

Antonio Furtado, PUC Rio
Nivio Ziviani, UFMG

Organization Committee Chair

Stephan Günnemann, TUM
Alfons Kemper, TUM
Thomas Neumann, TUM

Program Chairs and Editors in Chief of PVLDB 11

Jian Pei, Simon Fraser University
Sihem Amer-Yahia, University of Grenoble Alpes, CNRS

Associate Editors of PVLDB 11

Andrew Pavlo, Carnegie Mellon University
Chris Jermaine, Rice University
Felix Naumann, Hasso Plattner Institute
Ioana Manolescu, INRIA Saclay
Jens Teubner, TU Dortmund
Jianliang Xu, Hong Kong Baptist U.
Jimmy Lin, University of Waterloo
Johannes Gehrke, Microsoft
Juliana Freire, New York University
Luc Bouganim, INRIA
Meihui Zhang, SUTD
Mohamed Mokbel, University of Minnesota
Renee Miller, University of Toronto
Srinivasan Parthasarathy, Ohio State University
S. Sudarshan, IIT Bombay
Wook-Shin Han, Postech
Xiaodong Zhang, Ohio State University
Yuanyuan Tian, IBM Almaden

VLDB Endowment Representative

Divesh Srivastava, AT&T Labs-research

Sponsorship Committee Chairs

Artur Ziviani, LNCC
Anand Deshpande, Persistent
Mike Carey, University of California, UCI
Patrick Valduriez, INRIA

Publicity Committee Chair

Carmem Hara, Universidade Federal do Paraná
Mahashweta Das, Visa Research

Tutorial Chairs

Nick Koudas, University of Toronto
Sergio Lifschitz, PUC Rio

Industrial Chairs

Karin Breitman
Rakesh Agrawal, Data Insight Laboratories

Demonstration Chairs

Ming Hua, Facebook
Vanessa Braganholo, Universidade Federal Fluminense

Panel Chairs

Letizia Tanca, Politecnico di Milano
Mario Nascimento, Univ. Alberta

Workshop Chairs

Mirella Moro, Universidade Federal Minas Gerais
Xuemin Lin, University of New South Wales

PhD Workshop Chairs

Altigran Silva, Universidade Federal do Amazonas
Senjuti Basu Roy, New Jersey Institute of Technology

Proceedings Chairs

Ricardo Torres, University of Campinas
Sourav Bhowmick, Nanyang Technological University

Website Chair

Daniel De Oliveira, Universidade Federal Fluminense
Enver Anibal Choque Cayo, LNCC

PVLDB Managing Editor

Divesh Srivastava, AT&T Labs-research

PVLDB Advisory Committee

Juliana Freire, Jayant Haritsa, Wolfgang Lehner, Chen Li, Renée J. Miller, Tova Milo, M. Tamer Özsü, Divesh Srivastava, Kian-Lee Tan

Research Track Review Board

Abdul Quamar, IBM Almaden
Aijun An, York University, Canada
Alan Fekete, University of Sydney
Alex Thomo, University of Victoria
Alexandra Meliou, University of Massachusetts Amherst
Allison Holloway, Oracle
Anastasia Ailamaki, EPFL
Andrea Cali, Birkbeck Univ. of London, UK
Andrew Pavlo, Carnegie Mellon University
Anja Gruenheid, Google Research
Anshumali Shrivastava, Rice University
Antonios Deligiannakis, Technical University of Crete
Arbee Chen, Asia University, Taiwan
Aristides Gionis, Aalto University
Arnab Bhattacharya, IIT Kanpur
Arun Kumar, University of California, San Diego
Ashraf Aboulnaga, Qatar Computing Research Institute
Ashwin Machanavajjhala, Duke
Asterios Katsifodimos, TU Berlin, Germany
Atsuyuki Morishima, University of Tsukuba
Avrilina Floratou, Microsoft
Azza Abouzied, New York University Abu Dhabi
Baihua Zheng, Singapore Management University
Barzan Mozafari, University of Michigan
Beng Chin Ooi, NUS
Bernd Amann, Université Pierre et Marie Curie, France
Bolin Ding, Microsoft Research
Byron Choi, HKBU
Carlo Curino, Microsoft
Ce Zhang, ETH
Chee-Yong Chan, National University of Singapore
Chi Wang, Microsoft Research
Chris Jermaine, Rice University
Christopher Re, Stanford University
Chuan Xiao, Nagoya Univ., Japan
Cristian Bizer, University of Mannheim
Da Yan, University of Alabama
Daisy Zhe Wang, University of Florida
Dan Ports, Univ. of Washington USA
Dario Colazzo, U. Paris Dauphine
David Koop, U Mass Dartmouth
De-Nian Yang, Academia Sinica
Denilson Barbosa, University of Alberta - Canada
Divesh Srivastava, AT&T Labs Research
Elke Rundensteiner, WPI
Emmanuel Muller, Hasso Plattner Institute
Essam Mansour, QCRI
Fatma Ozcan, IBM Almaden
Feida Zhu, Singapore Management University
Feifei Li, University of Utah
Felix Naumann, Hasso Plattner Institute
Fernando Chirigati, NYU
Florian Rusu, University of California, Merced
Floris Geerts, University of Antwerp, USA

Francesco Bonchi, Yahoo Labs Barcelona, Spain
Fran ois Goasdou , U. Rennes 1
Gao Cong, Nanyang Technological University
George Fletcher, Eindhoven University of Technology the Netherlands
George Kollios, Boston University
Georgia Koutrika, ATHENA Research Center, Greece
Gillian Dobbie, Univ. of Auckland, New Zealand
Guoliang Li, Tsinghua University
H. Jagadish, University of Michigan
Haibo Hu, Hong Kong Polytechnic
Haixun Wang, Facebook
Hakan Ferhatosmanoglu, Bilkent University
Harish Doraiswamy, NYU
Haryadi Gunawi, Univ. of Chicago, USA
Heiko Mueller, NYU
Herodotos Herodotou, Cyprus University of Technology
Holger Pirk, MIT
Hong Cheng, Chinese University of Hong Kong
Huy Vo, CUNY
Ihab Ilyas, University of Waterloo
Immanuel Trummer, EPFL, Switzerland
Ioana Manolescu, INRIA Saclay, France
Ira Assent, University of Aarhus
Isabel Cruz, University of Illinois at Chicago, USA
Jaideep Vaidya, Rutgers University
James Cheng, Chinese University of Hong Kong, Hong Kong
Jeffrey Xu Yu, Chinese University of Hong Kong, Hong Kong
Jens Dittrich, Saarland University
Jens Teubner, TU Dortmund
Jianliang Xu, Hong Kong Baptist U.
Jiannan Wang, SFU
Jignesh Patel, UW - Madison
Jimmy Lin, University of Waterloo
Jing Gao, State University of New York at Buffalo
Johannes Gehrke, Microsoft
Jonathan Goldstein, Microsoft
Josep Domingo-Ferrer, Universitat Rovira i Virgili, Catalonia
Ju Fan, Remin University
Juliana Freire, New York University
Justin Levandoski, Microsoft Research
Karthik Ramachandra, Microsoft Gray Systems Lab
Ke Wang, SFU
Ken Barker, University of Calgary, Canada
Khuzaima Daudjee, University of Waterloo
Kyuseok Shim, Seoul National University
Laks V.S. Lakshmanan, The University of British Columbia
Lei Chen, Hong Kong University of Science and Technology
Letizia Tanca, Politecnico di Milano, Italy
Li Xiong, Emory University
Luc Bouganim, INRIA
Lukasz Golab, University of Waterloo

Luna Dong, Amazon.com
Magdalena Balanziska, University of Washington
Marco Serafini, Qatar Computing Research Institute, Qatar
Maria Damiani, University of Milano, Italy
Martin Theobald, University of Luxembourg
Masaru Kitsuregawa, University of Tokyo, Japan
Matteo Golfarelli, University of Bologna, Italy
Matthias Boehm, IBM Almaden
Matthias Renz, George Mason Univ., USA
Matthieu Latapy, LIP6, France
Meihui Zhang, SUTD
Melanie Herschel, Universität Stuttgart
Michael Cafarella, University of Michigan
Mohamed Mokbel, University of Minnesota
Mohamed Sharaf, University of Queensland, Australia
Mohamed Sarwat, ASU
Mohammad Sadoghi, Purdue University
Nesime Tatbul, Intel Labs and MIT
Nicolas Anciaux, INRIA
Niketan Pansare, IBM Almaden
Nikos Mamoulis, The University of Hong Kong
Ninghui Li, Purdue University
Norman May, SAP Research
Oktie Hassanzadeh, IBM Research
Olga Papaemmanouil, Brandeis University
Oliver Kennedy, University of Buffalo
Panagiotis Bouros, Aarhus University
Panagiotis Karras, Aalborg University
Panagiotis Papapetrou, Stockholm University
Pankaj Agarwal, Duke University
Paolo Papotti, Arizona State University
Peter Bailis, MIT and Stanford
Philippe Lamarre, INSA-Lyon France
Pinar Tozun, IBM Research
Quanquan Gu, University of Virginia
Rainer Gemulla, Universität Mannheim
Rajeev Rastogi, Amamazon
Ralf Schenkel, University of Trier
Rebecca Taft, MIT
Rene Mueller, IBM Research - Almaden
Renee Miller, University of Toronto
Reynold Cheng, The University of Hong Kong, China
Reza Akbarinia, INRIA
Ryan Johnson, Logic Blox USA
S. Sudarshan, IIT Bombay
Sandeep Tata, Google, USA
Sang Won Lee, Sungkyunkwan University, Korea
Sara Cohen, The Hebrew University of Jerusalem
Selçuk Candan, Arizona State University
Sergey Melnik, Google, USA
Sergio Greco, Univ. of Calabria, Italy

Shady Elbassuoni, AUB
Shahram Ghandeharizadeh, UCS
Shel Finkelstein, University of California at Santa Cruz, USA
Sourav S Bhowmick, Nanyang Technological University
Spyros Blanas, Ohio State University
Srikanta Bedathur, IBM India
Srikanta Tirthapura, Iowa State Univ., USA
Stéphane Bressan, National University of Singapore, Singapore
Steven Whang, Google, USA
Sudipto Das, Microsoft Research
Sungpack Hong, Oracle
Theodore Johnson, AT&T Labs, USA
Thomas Neumann, TU Munich
Tiark Rompf, Purdue University
Tim Kraska, Brown University
Tingjian Ge, University of Massachusetts Lowell, USA
Ulf Leser, Humboldt-Universität zu Berlin
Umar Farooq Minhas, Microsoft Research
Venkatesan Chakaravarthy, IBM Research, India
Vijayshankar Raman, IBM Research - Almaden
Viktor Leis, Technische Universität München
Vincent Leroy, University Grenoble-Alps, CNRS, LIG, France
Vineet Chaoji, Amazon
Walid Aref, Purdue Univ., USA
Wang-Chien Lee, Pennsylvania State University, USA
Wei Lu, Renmin University of China
Wei Wang, National University of Singapore
Willis Lang, Microsoft Gray Systems
Wook-Shin Han, Postech
Wynne Hsu, National University of Singapore
Xiaochun Yang, Northeast University
Xiaodong Zhang, Ohio State University
Xiaofang Zhou, University of Queensland
Xuan Liu, Baidu
Xuemin Lin, University of New
Yael Amsterdamer, Tel-aviv Univ., Israel
Yizhou Sun, UCLA
Yongxin Tong, Beihang University, China
Yoshiharu Ishikawa, Nagoya University
Yuanyuan Tian, IBM Almaden
Yufei Tao, Univ. of Queensland
Zhenhui Li, Penn State University
Zhifeng Bao, RMIT University
Ziawasch Abedjan, TU Berlin
Zoi Kaoudi, Qatar Computing Research Institute, Qatar