



Proceedings of the VLDB Endowment

Volume 19, No. 1 – September 2025

Editors in Chief:

Yanlei Diao and Xiaokui Xiao

Associate Editors:

Alkis Polyzotis, Alkis Simitsis, Andrew Pavlo, Angela Bonifati, Anh Dinh, Antonis Deligiannakis, Ashraf Aboulnaga, Badrish Chandramouli, Bin Cui, Bogdan Cautis, Ce Zhang, Elena Ferrari, Evaggelia Pitoura, Fatemeh Nargesian, Guoliang Li, Hong Cheng, Immanuel Trummer, Jana Giceva, Jennie Rogers, Jian Pei, Jianliang Xu, Karima Echihabi, Katja Hose, Khuzaima Daudjee, Kunsoo Park, Kyuseok Shim, Laks Lakshmanan, Lei Cao, Lei Chen, Li Xiong, Mauro Sozio, Meihui Zhang, Melanie Herschel, Michael Böhlen, Nan Tang, Niv Dayan, Norman May, Raul Castro Fernandez, Raymond Chi-Wing Wong, Reynold Cheng, Ruben Mayer, Semih Salihoglu, Shimin Chen, Sibor Wang, Sourav S Bhowmick, Spyros Blanas, Steven Whang, Sudipto Das, Umar Farooq Minhas, Wei Wang, Wook-Shin Han, Yannis Velegrakis, Yanyan Shen, Yi Chen, Yuncheng Wu, Zhifeng Bao, Zi Huang

Publication Editors:

Andrea Mauri, Giovanni Simonini, Siqiang Luo, Stefan Halfpap, Subhadeep Sarkar

PVLDB – Proceedings of the VLDB Endowment

Volume 19, No. 1, September 2025.

All papers published in this issue will be presented at the 52nd International Conference on Very Large Data Bases, Boston, MA, USA, 2026.

Copyright 2025 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 19, Number 1, September 2025

Pages i – viii and 1 - 83

ISSN 2150-8097

Available at: <http://www.pvldb.org> and <https://dl.acm.org/journal/pvldb>

TABLE OF CONTENTS

Front Matter

Copyright Notice	i
Table of Contents	ii
PVLDB Organization and Review Board – Vol. 19	iii

Research Papers

FlatStor: An Efficient Embedded-Index Based Columnar Data Layout for Multimodal Data Workloads	1
<i>Chi Zhang, Shihao Zhang, Yunfei Gu, Chentao Wu, Jie Li, Qin Zhang, Xusheng Chen, Jie Meng</i>	
TIMEST: Temporal Information Motif Estimator Using Sampling Trees	15
<i>Yunjie Pan, Omkar Bhalerao, C. Seshadhri, Nishil Talati</i>	
ConANN: Conformal Approximate Nearest Neighbor Search	29
<i>Sonia Horchidan, Fabian Zeiher, Henrik Boström, Paris Carbone</i>	
RayDB: Building Databases with Ray Tracing Cores	43
<i>Xuri Shi, Kai Zhang, X. Sean Wang, Xiaodong Zhang, Rubao Lee</i>	
NeutronCloud: Resource-Aware Distributed GNN Training in Fluctuating Cloud Environments	56
<i>Mingyi Cao, Chunyu Cao, Yanfeng Zhang, Zhenbo Fu, Xin Ai, Qiange Wang, Yu Gu, Ge Yu</i>	
CLaP - State Detection from Time Series	70
<i>Arik Ermshaus, Patrick Schäfer, Ulf Leser</i>	

PVLDB ORGANIZATION AND REVIEW BOARD - Vol. 19

Editors in Chief of PVLDB

Yanlei Diao (Ecole Polytechnique and Amazon Web Services)
Xiaokui Xiao (National University of Singapore)

Associate Editors of PVLDB

Alkis Polyzotis (Databricks)
Alkis Simitsis (Athena Research Center)
Andrew Pavlo (Carnegie Mellon University)
Angela Bonifati (Univ. of Lyon)
Anh Dinh (Deakin University)
Antonis Deligiannakis (Technical University of Crete)
Ashraf Aboulmaga (University of Texas at Arlington)
Badrish Chandramouli (Microsoft Research)
Bin Cui (Peking University)
Bogdan Cautis (University of Paris-Saclay)
Ce Zhang (University of Chicago)
Elena Ferrari (University of Insubria, Varese)
Evaggelia Pitoura (Univ. of Ioannina)
Fatemeh Nargesian (University of Rochester)
Guoliang Li (Tsinghua University)
Hong Cheng (Chinese University of Hong Kong)
Immanuel Trummer (Cornell University)
Jana Giceva (TU Munich)
Jennie Rogers (Northwestern University)
Jian Pei (Duke University)
Jianliang Xu (Hong Kong Baptist University)
Karima Echihabi (Mohammed VI Polytechnic University)
Katja Hose (TU Wien)
Khuzaima Daudjee (University of Waterloo)
Kunsoo Park (Seoul National University)
Kyuseok Shim (Seoul National University)
Laks Lakshmanan (The University of British Columbia)
Lei Cao (University of Arizona)
Lei Chen (Hong Kong University of Science and Technology)
Li Xiong (Emory University)
Mauro Sozio (Luiss University of Rome)
Meihui Zhang (Beijing Institute of Technology)
Melanie Herschel (Nanyang Technological University)
Michael Böhlen (University of Zurich)
Nan Tang (HKUST (GZ))
Niv Dayan (University of Toronto)
Norman May (SAP SE)
Raul Castro Fernandez (The University of Chicago)
Raymond Chi-Wing Wong (Hong Kong University of Science and Technology)
Reynold Cheng (The University of Hong Kong, China)
Ruben Mayer (University of Bayreuth)
Semih Salihoglu (University of Waterloo)
Shimin Chen (Chinese Academy of Sciences)
Sibo Wang (The Chinese University of Hong Kong)
Sourav S Bhowmick (Nanyang Technological University)
Spyros Blanas (The Ohio State University)
Steven Whang (KAIST)

Sudipto Das (Amazon Web Services)
Umar Farooq Minhas (Apple)
Wei Wang (ByteDance)
Wook-Shin Han (POSTECH)
Yannis Velegrakis (Utrecht University)
Yanyan Shen (Shanghai Jiao Tong University)
Yi Chen (NJIT)
Yuncheng Wu (Renmin University of China)
Zhifeng Bao (The University of Queensland)
Zi Huang (University of Queensland)

Publication Editors

Andrea Mauri (Lyon 1 University)
Giovanni Simonini (University of Modena and Reggio Emilia)
Siqiang Luo (Nanyang Technological University)
Stefan Halfpap (TU Berlin)
Subhadeep Sarkar (Brandeis University)

PVLDB Managing Editor

Jun Yang (Duke University)

PVLDB Advisory Board

Alexandra Meliou (University of Massachusetts Amherst)
Divesh Srivastava (AT&T Labs - Research)
Fatma Ozcan (Google)
Felix Naumann (HPI)
Katja Hose (Technische Universität Wien)
Lei Chen (Hong Kong University of Science and Technology)
Matthias Boehm (Technische Universität Berlin)
Meihui Zhang (Beijing Institute of Technology)
Nesime Tatbul (Intel Labs and MIT)
Sourav S. Bhowmick (Nanyang Technological University)
Themis Palpanas (Universite Paris Cite)
Torsten Grust (University of Tuebingen)
Vanessa Braganholo (Universidade Federal Fluminense)
Wolfgang Lehner (TU Dresden)
Xiaokui Xiao (National University of Singapore)
Xin Luna Dong (Meta)
Yanlei Diao (Ecole Polytechnique, Amazon Web Services)

Review Board

Abhishek Roy (Microsoft)
Ahmed Aly (Google)
Ahmed Eldawy (University of California, Riverside)
Ahmed Mahmood (Google)
Alberto Lerner (Computing Flows GmbH)
Alberto Sonnino (MystenLabs & University College London)
Alexander Artikis (University of Piraeus)
Alexander Böhm (SAP SE)
Alexander Krause (TU Dresden)
Amarnadh Sai Eluri (Google)
Amelie Marian (Rutgers University)
Amine Mhedhbi (Polytechnique Montréal)
Amir Shaikhha (University of Edinburgh)
Amr Magdy (University of California Riverside)
Andrea Mauri (Lyon 1 University)
Andreas Züfle (Emory University)
Antonio Boffa (EPFL)
Arash Termehchy (Oregon State University)
Arijit Khan (Bowling Green State University)
Aristides Gionis (KTH Royal Institute of Technology)
Arkaprava Saha (University of Tsukuba)
Arnab Phani (TU Berlin)
Arnd Christian König (Microsoft)
Avinash Kumar (Google)
Baihua Zheng (Singapore Management University)
Berthold Reinwald (IBM Research - Almaden)
Bin Yang (Aalborg University)
Bo Tang (Southern University of Science and Technology)
Bo Zhao (Aalto University)
Bobbi W Yogatama (NVIDIA)
Bojan Karlaš (Harvard University)
Boris Glavic (University of Illinois Chicago)
Brian Kroth (Microsoft)
Brit Youngmann (Technion)
Calisto Zuzarte (IBM)
Carlo Curino (Microsoft)
Chang Ge (University of Minnesota)
Chao Zhang (University of Waterloo)
Chen Zhang (The Hong Kong Polytechnic University)
Cheng Long (Nanyang Technological University)
Chenghao Lyu (Amazon)
Chengkai Li (The University of Texas at Arlington)
Chengliang Chai (Beijing Institute of Technology)
Chenhao Ma (The Chinese University of Hong Kong, Shenzhen)
Christan Grant (University of Florida)
Christos Doukeridis (University of Piraeus)
Christos Koutras (New York University)
Chrysanthi Kosyfaki (The University of Hong Kong)
Chuan Lei (Oracle)
Chunwei Liu (MIT CSAIL)
Cindy Chen (University of Massachusetts Lowell)
Cong Yue (National University of Singapore)
Daniel Kang (UIUC)
Daniel Ritter (SAP)
Davood Rafiei (University of Alberta)
Demetris Zeinalipour (University of Cyprus)
Dimitrios Skoutas (Athena Research Center)

Dixin Tang (The University of Texas, Austin)
Domagoj Vrgoč (PUC)
Dominik Durner (CedarDB)
Donatella Firmani (Sapienza University)
Donato Tiano (Università degli Studi di Modena e Reggio Emilia)
Dong Deng (Alibaba Cloud Computing)
Dong Xie (Penn State University)
Dumitrel Loghin (OKX)
Eduard Dragut (Temple Univ.)
Egemen Tanin (University of Melbourne)
El Kindi Rezig (University of Utah)
Eleni Tziritza Zacharitou (Hasso Plattner Institute (HPI))
Eliana Pastor (Politecnico di Torino)
Elisa Bertino (Purdue University)
Enzo Veltri (Università della Basilicata)
Ergute Bao (Mohamed bin Zayed University of Artificial Intelligence)
Eser Kandogan (Megagon Labs)
Essam Mansour (Concordia University)
Farnoush Banaei-Kashani (University of Colorado Denver)
Felix M Schuhknecht (Johannes Gutenberg University Mainz)
Florian Hahn (University of Twente)
Florin Rusu (UC Merced)
Francesco Gullo (University of L'Aquila)
Fuad Jamour (Amazon Web Services)
Gao Cong (Nanyang Technological University)
Garima Gaur (Inria Saclay, Ecole Polytechnique)
Gengrui Zhang (Concordia University)
George Christodoulou (TU Delft)
George Papadakis (University of Athens)
George Papastefanatos (ATHENA Research Center)
Georgios Siachamis (Inria)
Georgios R Theodorakis (Nvidia)
Giorgio Vinciguerra (Università di Pisa)
Giuseppina Andresini (University of Bari Aldo Moro)
Goce Trajcevski (Iowa State University)
Grigorios Loukides (King's College London)
Guido Moerkotte (University of Mannheim)
Guillaume Lachaud (Ecole Polytechnique)
Haibo Hu (Hong Kong Polytechnic University)
Haipeng Dai (Nanjing University)
Hannes Voigt (Neo4j)
Hantian Zhang (Google)
Hanzhi Wang (University of Copenhagen)
Haralampos Gavrilidis (BIFOLD & Technische Universität Berlin)
Haridimos Kondylakis (FORTH-ICS & Computer Science Department, University of Crete)
Harry Kai-Ho Chan (The University of Sheffield)
Hazar Harmouch (University of Amsterdam)
Herald Kllapi (Google Inc)
Hongzhi Wang (Harbin Institute of Technology)
Hua Lu (Aalborg University)
Huanchen Zhang (Tsinghua University)
Huiping Chen (University of Birmingham)
Hyungsoo Jung (Seoul National University)
Hyunjoon Kim (Hanyang University)
Ibrahim Sabek (University of Southern California)

Igor Zablotchi (Mysten Labs)
 Ilia Petrov (Reutlingen University)
 Ilias Azizi (Mohammed VI Polytechnic University)
 Ilie Sarpe (KTH Royal Institute of Technology)
 Indrakshi Ray (Colorado State University)
 Ioannis Demertzis (UCSC)
 Jaeyoung Do (Seoul National University)
 Jan Hidders (Birkbeck, University of London)
 Jeeta Ann Chacko (Technical University of Munich)
 Jeffrey Xu Yu (The Hong Kong University of Science and Technology (Guangzhou))
 Jelle Hellings (McMaster University)
 Jesús Camacho-Rodríguez (Microsoft)
 Jia Li (Hong Kong University of Science and Technology)
 Jia Zou (Arizona State University)
 Jialin Ding (Princeton University)
 Jianguo Wang (Purdue University)
 Jiannan Wang (Tsinghua University)
 Jianxin Li (Edith Cowan University)
 Jiawei Jiang (Wuhan University)
 Jieming Shi (The Hong Kong Polytechnic University)
 Jignesh Patel (Carnegie Mellon University)
 Jin Wang (Arizona State University)
 Jiwon Seo (Seoul National University)
 Johannes Pietrzyk (TU Dresden)
 Johes Bater (Tufts University)
 John Paparrizos (The Ohio State University, USA & Aristotle University of Thessaloniki, Greece)
 Jonathan Fürst (ZHAW Zurich University of Applied Sciences)
 Jonghyeok Park (Korea University)
 Joseph Near (University of Vermont)
 Ju Fan (Renmin University of China)
 Junghoon Kim (UNIST)
 Junhao Gan (University of Melbourne)
 K. Selçuk Candan (Arizona State University)
 Kaisong Huang (University of Calgary)
 Kai-Uwe Sattler (TU Ilmenau)
 Kanchan Chowdhury (Marquette University)
 Karim Benouaret (Univ Lyon)
 Katsiaryna Milylenka (Zalando SE)
 Kaustubh Beedkar (Indian Institute of Technology Delhi)
 Keke HUANG (The University of British Columbia)
 Kenneth A Ross (Columbia University)
 KI HYUN TAE (Samsung Research)
 Kostas Stefanidis (Tampere University)
 Kurt Stockinger (Zurich University of Applied Sciences)
 Kwanghyun Park (Yonsei University)
 Kyoungmin Kim (EPFL)
 Larissa Capobianco Shimomura (Hasselt University)
 Le Gruenwald (The University of Oklahoma)
 Lefteris Kokoris Kogias (MystenLabs)
 Lei Zou (Peking University)
 Leong Hou U (University of Macau)
 Leopoldo Bertossi (Carleton University)
 Liang Liang (EPFL)
 Lingyang Chu (McMaster University)
 Loredana Caruccio (University of Salerno)
 Lu Chen (Zhejiang University)
 Luca Gagliardelli (eCampus University)
 Lucas Braun (Oracle Labs)
 Lukasz Golab (University of Waterloo)
 Madhulika Mohanty (Inria & Institut Polytechnique de Paris)
 Magnus Mueller (AWS)
 Mahdi Esmailoghli (HU Berlin)
 Makoto Onizuka (Osaka University)
 Man Lung Yiu (Hong Kong Polytechnic University)
 Manuel Rigger (National University of Singapore)
 Marco Patella (University of Bologna)
 Markos Markakis (Massachusetts Institute of Technology)
 Martin Prammer (Carnegie Mellon University)
 Matteo Ceccarello (University of Padova)
 Matteo Interlandi (Microsoft)
 Matthaïos Olma (MongoDB)
 Matthew J Perron (Microsoft)
 Matthias Boehm (Technische Universität Berlin)
 Matthias Weidlich (Humboldt-Universität zu Berlin)
 Maximilian E Schüle (University of Bamberg)
 Meichun Hsu (Oracle America)
 Miao Qiao (The University of Auckland)
 Miao Yu (Meta)
 Michael J Cahill (University of Sydney)
 Michael Grossniklaus (University of Konstanz)
 Michael Gubanov (Florida State University)
 Michael J Mior (Rochester Institute of Technology)
 Mohamed Eltabakh (Qatar Foundation)
 Mohamed Mokbel (University of Minnesota - Twin Cities)
 Mohammad Sadoghi (University of California, Davis)
 Mohammad Javad Amiri (Stony Brook University)
 Mohammed J Saeed (Apple)
 Mostafa Milani (The University of Western Ontario)
 Nick Koudas (University of Toronto)
 Nikolay Yakovets (TU Eindhoven)
 Oktie Hassanzadeh (IBM Research)
 Oliver A Kennedy (University at Buffalo, SUNY)
 Oscar Romero (Universitat Politècnica de Catalunya)
 Panagiotis Bours (Johannes Gutenberg University Mainz)
 Panagiotis Karras (University of Copenhagen)
 Paolo Garza (Politecnico di Torino)
 Paolo Merialdo (Università degli Studi Roma Tre)
 Paolo Missier (University of Birmingham)
 Paolo Papotti (EURECOM)
 Patrick Damme (Technische Universität Berlin)
 Patrick Schäfer (Humboldt-Universität zu Berlin)
 Paul Boniol (Inria, Ecole normale supérieure)
 Peizhi Wu (University of Pennsylvania)
 Peng Peng (Hunan University)
 Periklis Chrysogelos (Oracle)
 Peter M. Fischer (University of Augsburg)
 Pierangela Samarati (Università degli Studi di Milano)
 Prashant Pandey (Northeastern University)
 Protiva Rahman (University of Florida)
 Qingqing Ye (Hong Kong Polytechnic University)
 Qitong Wang (Harvard University)
 Qizhen Zhang (University of Toronto)
 Rada Chirkova (NC State University)
 Rainer Gemulla (Universität Mannheim)

Rana Alotaibi (King Abdulaziz City for Science and Technology (KACST))
 Rana Shahout (Harvard)
 Renata Borovica-Gajic (University of Melbourne)
 Renchi Yang (Hong Kong Baptist University)
 Ria Borromeo (University of Philippines)
 Riccardo Torlone (Roma Tre University)
 Rihan Hai (TU Delft)
 Ritesh Sarkhel (Amazon)
 Roe Shraga (WPI)
 Romila Pradhan (Purdue University)
 Ruiyuan Li (Chongqing University)
 Ryan Marcus (University of Pennsylvania)
 Ryan McKenna (University of Massachusetts Amherst)
 Sai Wu (Zhejiang University)
 Sara Foresti (Universita' degli Studi di Milano)
 Sarah Kleest-Meißner (Hasselt University)
 Sebastian Link (University of Auckland)
 Sebastian Michel (RPTU Kaiserslautern-Landau)
 Sepanta Zeighami (University of California Berkeley)
 Shantanu Sharma (New Jersey Institute of Technology)
 Shaoux Song (Tsinghua University)
 Sharad Mehrotra (U.C. Irvine)
 Shen Liang (Université Paris Cité)
 Shihabur Chowdhury (Apple)
 Shimin Di (The Hong Kong University of Science and Technology)
 Silviu Maniu (Université Grenoble Alpes)
 Siqiang Luo (Nanyang Technological University)
 Søren Keiser Jensen (Aalborg University)
 Soror Sahri (Université Paris Cité)
 Stavros Maroulis (ATHENA Research Center)
 Stefania Dumbrava (ENSIIE, INRIA, IRIF, Télécom-SudParis)
 Stefano Marchesin (Università di Padova)
 Stefano Paraboschi (Universita' degli Studi di Bergamo)
 Steffen Zeuch (TU Berlin)
 Surajit Chaudhuri (Microsoft)
 Suyash Gupta (University of Oregon)
 Sven Groppe (Universität zu Lübeck/Institute of Information Systems (IFIS))
 Tanzima Hashem (Bangladesh University of Engineering and Technology)
 Tarique Ashraf Siddiqui (Microsoft Corporation)
 Tenindra Abeywickrama (RIKEN Center for Computational Science)
 Theodoros Chondrogiannis (Norwegian University of Science and Technology (NTNU))
 Thomas Neumann (TUM)
 Tianyi Li (Aalborg University)
 Tianzheng Wang (Simon Fraser University)
 Tieying Zhang (Bytedance)
 Ting Yu (MBZUAI)
 Tingjian Ge (University of Massachusetts, Lowell)
 Tong Chen (The University of Queensland)
 Torben Bach Pedersen (Aalborg University)
 Tristan Allard (Univ Rennes, CNRS, IRISA)
 Tsz Nam Chan (Shenzhen University)
 Ulf Leser (Humboldt-Universität zu Berlin)
 Utku Sirin (Harvard University)
 Venkata Vamsikrishna Meduri (IBM Research-Almaden)

Verena Kantere (University of Ottawa)
 Vikram Nathan (Amazon, Inc.)
 Viktor Leis (Technische Universität München)
 Vivek Narasayya (Microsoft)
 Vivek Shah (Samsung)
 Wang-Chien Lee (Pennsylvania State University, USA)
 Wei Dong (Nanyang Technological University)
 WEI LU (Renmin University of China)
 Weiguo Zheng (Fudan University)
 Wenqi FAN (The Hong Kong Polytechnic University)
 Wentao Wu (Microsoft Research)
 Wentao Zhang (Peking University)
 William Schultz (MongoDB)
 Xiang Lian (Kent State University)
 Xiangyao Yu (University of Wisconsin-Madison)
 Xiangyu Ke (Zhejiang University)
 Xiao Qin (Snowflake)
 Xiao Yan (Wuhan University)
 Xiaofei Zhang (University of Memphis)
 Xiaohui Yu (York University)
 Xiaou Ding (Harbin Institute of Technology)
 Xiaoying Wang (Microsoft)
 Xike Xie (University of Science and Technology of China)
 Xin Huang (Hong Kong Baptist University)
 Xuhao Chen (MSU)
 Xun Jian (Northwestern Polytechnical University)
 Xupeng Miao (Purdue University)
 Yael Amsterdamer (Bar-Ilan University)
 Yan Huang (University of North Texas)
 Yang Cao (Institute of Science Tokyo)
 Yang Wang (The Ohio State University)
 YAO LU (NUS)
 Yesdaulet Izenov (Nazarbayev University)
 Yeye He (Microsoft Research)
 Yifan Wang (University of Hawaii)
 Yihao Ang (National University of Singapore)
 Yin Yang (Hamad bin Khalifa University)
 Yinan Li (Microsoft Research)
 Yinghui Wu (Case Western Reserve University)
 Yingtai Xiao (TikTok)
 Yiwen Zhu (Microsoft)
 Yixiang Fang (School of Data Science, The Chinese University of Hong Kong, Shenzhen)
 Yongjoo Park (UIUC)
 Yongluan Zhou (University of Copenhagen)
 Yongxin Tong (Beihang University)
 Yu Yang (City University of Hong Kong)
 Yuan Qiu (Southeast University)
 Yujie Hui (Google)
 Yuke Wang (Rice University)
 Yuyu Luo (HKUST (GZ))
 Zeyu Ding (Binghamton University)
 Zhao Cao (Remin University of China)
 ZHAOJING LUO (Beijing Institute of Technology)
 Zhengjie Miao (Simon Fraser University)
 Zhewei Wei (Renmin University of China)
 ZHIWEI FAN (Meta)
 Zhongle Xie (Zhejiang University)
 Zhuoyue Zhao (University at Buffalo)
 Zoi Kaoudi (IT University of Copenhagen)

Light Load Review Board

Abdulkhakim Qahtan (Utrecht University)
Abolfazl Asudeh (University of Illinois Chicago)
Ahmed El-Roby (Carleton University)
Alberto Abelló (Universitat Politècnica de Catalunya)
Alex Conway (Cornell Tech)
Alexander Erben (Technical University of Munich)
Alexandros Labrinidis (University of Pittsburgh)
Anupam Sanghi (TU Darmstadt)
Ariful Azad (Texas A&M University)
Babak Salimi (University of California at San Diego)
Baotong Lu (Microsoft Research)
Bettina Kemme (McGill University)
C. Seshadhri (UCSC)
Curtis Dyreson (Utah State University)
Danfeng Zhang (Duke University)
Daniel Kocher (University of Salzburg)
Davide Mottin (Aarhus University)
Fabian Panse (University of Augsburg)
Felix Naumann (Hasso Plattner Institute, University of Potsdam)
Haitao Yuan (Nanyang Technological University)
Hangdong Zhao (Microsoft)
Hideyuki Kawashima (Keio University)
Hongyan Chang (NUS)
Hongzhi Yin (The University of Queensland)
Ingo Müller (Google)
Jiaheng Lu (University of Helsinki)
Jinho Lee (Seoul National University)
Juan Sequeda (data.world)
Katia Papakonstantinou (Athens University of Economics and Business)
Kexin Rong (Georgia Institute of Technology)
Konstantinos Mamouras (Rice University)
Kyriakos Mouratidis (Singapore Management University)
Lipeng Wan (Georgia State University)
Manolis Terrovitis (Athena Research Center)
Matteo Brucato (Microsoft Research)
Mayuresh Kunjir (Amazon AWS)
Michele Linardi (CYU)

Mo Sha (Alibaba Group)
Murat Demirbas (MongoDB Research)
Myeongjae Jeon (POSTECH)
Nikos Giatrakos (Technical University of Crete)
Odysseas Papapetrou (TU Eindhoven)
Panagiotis Liakos (Athens University of Economics and Business)
Panagiotis Liakos (University of Athens)
Panos Vassiliadis (University of Ioannina)
Paris Carbone (KTH Royal Institute of Technology)
Paul Groth (University of Amsterdam)
Pierre Bourhis (CNRS)
Quang-Trung Ta (National University of Singapore)
Rathijit Sen (Microsoft)
Remy Wang (University of California, Los Angeles)
Renzo Angles (Universidad de Talca)
Seokki Lee (University of Cincinnati)
Sergi Nadal (Universitat Politècnica de Catalunya)
Sivaprasad Sudhir (MIT)
Song Jiang (University of Texas, Arlington)
Sonia Bergamaschi (Università di Modena e Reggio Emilia)
Subarna Chatterjee (Datastax)
Subhadeep Sarkar (Brandeis University)
Sujaya Maiyya (University of Waterloo)
Supawit Chockchawat (University of Illinois Urbana-Champaign)
Theodore Johnson (AT&T Labs - Research)
Thomas Fahringer (University of Innsbruck)
Thorsten Papenbrock (Philipps University of Marburg)
Vassilis J. Tsotras (UC Riverside)
Venkatesh Emani (Microsoft)
Wenjia He (University of Michigan)
Wolfgang Gatterbauer (Northeastern University)
Xingguang Chen (National University of Singapore)
Yogesh Simmhan (Indian Institute of Science (IISc), Bangalore)
Yuxin Tang (Rice University)
Zhe Jiang (University of Florida)
Ziawasch Abedjan (BIFOLD/TU Berlin)

LETTER FROM THE EDITORS IN CHIEF

We are pleased to introduce the first issue of Volume 19 of PVLDB – the Proceedings of the VLDB Endowment. PVLDB continues to publish original, high-quality research advancing the broad field of data and information management, processing, and analytics. Our scope encompasses foundational theory, novel data models, forward-looking system architectures, new techniques and applications, and comprehensive assessment of real-world deployments at scale. In the research track, PVLDB welcomes contributions in four equally important categories: (a) regular research papers, (b) scalable data science (SDS), (c) experiment, analysis and benchmark (EA&B), and (d) vision papers.

This year, we have introduced several extensions. First, to support submissions from emerging research areas while ensuring that PVLDB can properly evaluate their contributions, we have added a “self-assessment of relevance” item to the submission form. If a paper does not clearly fall within traditional core database topics, authors are invited to explain its relevance to the PVLDB community by identifying (i) the key data management challenges addressed, and (ii) the principled data management ideas or contributions offered. Authors may also point reviewers to specific sections that substantiate this self-assessment. This information assists the Review Board in assessing relevance in rapidly expanding or interdisciplinary topic areas.

We have also strengthened the PVLDB review process. PVLDB remains committed to a rigorous, fair, and constructive review pipeline. Every submission is screened for plagiarism and potential conflicts of interest before being assigned to reviewers. Each paper is evaluated by at least three experienced reviewers under the coordination of an Associate Editor, and a fourth reviewer may be added when specialized domain expertise is required. A structured three-week discussion phase follows the initial reviews, culminating in a consensus documented in a meta-review. Some submissions may proceed to a revision phase, in which authors are given up to 2.5 months to address feedback. Accepted papers are published in PVLDB and will also be presented at the upcoming VLDB Conference. To support scale and review quality, PVLDB employs CMT for workflow management, TPMS for reviewer identification, CLOSET for conflict-of-interest detection, and iThenticate for plagiarism screening.

In addition, we have improved on how we recruit and deploy reviewing capacity. We significantly expanded the PVLDB Review Board to improve topical coverage across the community. Furthermore, to ensure access to domain expertise in emerging areas, each submission is required to nominate one qualified reviewer (PhD and at least two prior publications in SIGMOD, VLDB, or ICDE). When appropriate, nominated authors may be invited to serve as Light Load Reviewers, who may be assigned at most one review per month and up to three reviews in total. This mechanism enables PVLDB to secure authoritative assessments precisely in those domains where specialized expertise is needed.

PVLDB also continues to encourage artifact availability to support transparency and reproducibility. Associate Editors assess artifact accessibility during the meta-review, and accepted papers whose artifacts satisfy established availability requirements receive the official ACM badge.

Finally, beginning in Volume 19, PVLDB is introducing a Shadow PC program. The Shadow PC is educational and wholly independent of the official review process. Authors may opt in to have their submissions included in the Shadow PC pool, and selected participants gain hands-on reviewing experience by evaluating real submissions on a schedule that mirrors the official review cycles. Shadow PC reviews remain confidential and do not influence any PVLDB decisions. This initiative aims to help develop the next generation of reviewers in the data management community.

This first issue of Volume 19 includes six papers, covering novel database architectures exploiting emerging hardware, efficient search in vector databases, data management support for machine learning workloads, data mining and analytics over graph data, and distributed training in cloud environments.

We extend our sincere appreciation to our Review Board, Associate Editors, reviewers, and Proceedings Chairs, whose efforts are instrumental to the operation and success of PVLDB.

Yanlei Diao and Xiaokui Xiao
Editors-in-Chief of PVLDB Vol. 19
Program Chairs for VLDB 2026