

2025 IEEE International Conference on Data Mining (ICDM 2025)

**Washington, District of Columbia, USA
12-15 November 2025**

Pages 1–583

IEEE Catalog Number: CFP25278-POD
ISBN: 979-8-3315-9600-2



Copyright © 2025, IEEE

All Rights Reserved

Copyright and Reprint Permissions:

Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

IEEE Catalog Number:	CFP25278-POD
ISBN (Print-On-Demand):	979-8-3315-9600-2
ISBN (Online):	979-8-3315-9599-9
ISSN:	1550-4786

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA

Phone:	(845) 758-0400
Fax:	(845) 758-2633
E-mail:	curran@proceedings.com
Web:	www.proceedings.com

TABLE OF CONTENTS

Bayesian Natural Gradient Fine-Tuning of CLIP Models via Kalman Filtering	1
<i>Hossein Abdi, Mingfei Sun, Wei Pan</i>	
XCalBid: Robust and Efficient Real-Time Bidding Via Exploratory Pre-Training and Calibrated Q-Learning	11
<i>Ningyuan Zhao, Fan Yang</i>	
Bounds on Kappa-Error Diagrams for Diversity Analysis	21
<i>Krzysztof Grąbczewski</i>	
On Predicting Post-Click Conversion Rate via Counterfactual Inference	30
<i>Junhyung Ahn, Sanghack Lee</i>	
Advancing Climate Model Interpretability: Feature Attribution for Arctic Melt Anomalies	40
<i>Tolulope Ale, Nicole-Jeanne Schlegel, Vandana P. Janeja</i>	
Early Detection and Attribution of Structural Changes in Dynamic Networks	50
<i>Izhar Ali, Shen-Shyang Ho</i>	
Information-Theoretic Active Correlation Clustering	60
<i>Linus Aronsson, Morteza Haghir Chehreghani</i>	
Read-write LSTM: A Novel Approach Integrating Backpropagation to Data in LSTM	70
<i>Yassine Baghoussi, Carlos Soares, João Mendes Moreira</i>	
MuRAL-CPD: Active Learning for Multiresolution Change Point Detection	80
<i>Stefano Bertolasi, Diego Carrera, Diego Stucchi, Pasqualina Fragneto, Luigi Amedeo Bianchi</i>	
Invariant and Environment-specific Preference Learning with Auxiliary Information for Unbiased Recommendation	90
<i>Ting Bi, Hangtong XU, Yuanbo Xu</i>	
Resilient Pattern Mining	100
<i>Pengxin Bian, Panagiotis Charalampopoulos, Lorraine A. K. Ayad, Manal Mohamed, Solon P. Pissis, Grigorios Loukides</i>	
Efficient Large-Scale Learning of Minimax Risk Classifiers	109
<i>Kartheek Bondugula, Santiago Mazuelas, Aritz Pérez</i>	
Edge Probability Graph Models Beyond Edge Independency: Concepts, Analyses, and Algorithms	119
<i>Fanchen Bu, Ruochen Yang, Paul Bogdan, Kijung Shin</i>	
Exact Sparse Orthogonal Dictionary Learning	129
<i>Yarui Cao, Kai Liu</i>	
DynaCLIP: A Novel Framework for Video-Text Retrieval Via Dynamic Curriculum Learning and Adaptive Prompt Mixture-of-Experts	139
<i>Ning Chen, Xingming Liao, Chengzhong Lin, Zhuowei Wang, Peijian Zeng</i>	
fair-LDP: Uncertainty-Guided Fairness and Privacy for Federated Healthcare Learning	149
<i>Dian Chen, Qi Zhang, Lance Kaplan, Audun Josang, Donghyun Jeong, Feng Chen, Jin-Hee Cho</i>	

Heterogeneous Graph-Based Sequential Recommendation with Disentangled Methods	159
<i>Jinpeng Chen, Huachen Guan, Fan Zhang, Zhenye Yang, Jianxiang He, Hongbo Gao, Kaimin Wei</i>	
Revisiting One-Versus-One and One-Versus-Rest: Insights into Imbalanced Multi-Class Classification	169
<i>Kuan-Ting Chen, Chih-Jen Lin</i>	
EC-LDA: Label Distribution Inference Attack Against Federated Graph Learning with Embedding Compression	178
<i>Tong Cheng, Jie Fu, Xinpeng Ling, Huifa Li, Zhili Chen, Haifeng Qian, Junqing Gong</i>	
SPOT: Spatio-Temporal Pattern Mining and Optimization for Load Consolidation in Freight Transportation Networks	188
<i>Sikai Cheng, Amira Hijazi, Jeren Konak, Alan Erera, Pascal Van Hentenryck</i>	
HyperSearch: Prediction of New Hyperedges Through Unconstrained yet Efficient Search	198
<i>Hyunjin Choo, Fanchen Bu, Hyunjin Hwang, Young-Gyu Yoon, Kijung Shin</i>	
Attributed Hypergraph Generation with Realistic Interplay Between Structure and Attributes	208
<i>Jaewan Chun, Seokbum Yoon, Minyoung Choe, Geon Lee, Kijung Shin</i>	
Twice the Gradient, Twice the Privacy Risk in Federated Learning? A Case Study of Federated Recommendation Systems	218
<i>Zhenyu Deng, Ying Liu, Ming Tang, Xiangyu Zhao</i>	
Incorporating Interactive User Feedback Through Precision Matrix Adjustments for High-Dimensional Anomaly Detection	227
<i>Taylor Dinkins, Weng-Keen Wong, Haifeng Chen, Yanchi Liu, Kai Ishikawa</i>	
Multi-Label Transfer Learning in Non-Stationary Data Streams	237
<i>Honghui Du, Leandro L. Minku, Aonghus Lawlor, Huiyu Zhou</i>	
High-Quality Label Learning in Generalized Category Discovery	247
<i>Yu Duan, Junzhi He, Feiping Nie, Quanyue Gao, Cheng Deng</i>	
A Universal Metric of Dataset Similarity for Cross-Silo Federated Learning	256
<i>Ahmed Elhussein, Gamze Gürsoy</i>	
xLSTMAD: A Powerful xLSTM-based Method for Anomaly Detection	266
<i>Kamil Faber, Marcin Pietron, Dominik Zurek, Roberto Corizzo</i>	
Cluster Skeleton Exploration: An Effective and Scalable Active Constrained Clustering	276
<i>Xun Fu, Xin Wang, Yang Ni</i>	
ProHD: Projection-Based Hausdorff Distance Approximation	286
<i>Jiuzhou Fu, Luanzheng Guo, Nathan R. Tallent, Dongfang Zhao</i>	
Imitation-Inspired Semantic-Guided Distillation for User-Conditioned Memorability Prediction	296
<i>Indrajeet Ghosh, Mohammad Saeid Anwar, Kasthuri Jayarajah, Nirmalya Roy</i>	
Modularity-Fair Deep Community Detection	306
<i>Christos Gkartzios, Evaggelia Pitoura, Panayiotis Tsaparas</i>	
PG3D-ViT: A Prompt-Guided 3D Vision Transformer for Medical Image Classification	316
<i>Gong Juan., Zuo Ke, Wang Qinglin, Wang Siqi, Mao Xiaoguang, Liu Jie</i>	

Zero-Shot Cross-City Trajectory Prediction Using Hypernetworks	326
<i>Jonas Stickel, Andrea Tundis, Max Mühlhäuser</i>	
QuadraFormer: Unified Query and Resource Forecasting for Database Workloads	336
<i>Songwei Han, Jiangtao Cui, Luming Sun, Yingfan Liu, Zhangqian Mu, Ming Li</i>	
STREAM: Hierarchical Dynamic Traffic Pattern Inference for Sparse Trajectory Recovery	346
<i>Xiaolin Han, Tianwen Zhang, Yuke Li, Gaukhar Issayeva, Chenhao Ma, Lingyun Song, Xuequn Shang</i>	
HadaSmileNet: Hadamard Fusion of Handcrafted and Deep-Learning Features for Enhancing Facial Emotion Recognition of Genuine Smiles	356
<i>Mohammad Junayed Hasan, Nabeel Mohammed, Shafin Rahman, Philipp Koehn</i>	
MREF: Metric-Based Instance Re-Weighting for Rationale Enhancement	366
<i>Yibo Huang, Zixin Kuang, Meng-Fen Chiang, Wang-Chien Lee</i>	
EM-Based Transfer Learning for Gaussian Causal Models Under Covariate and Target Shift	376
<i>Mohammad Ali Javidian</i>	
DelayNetODE: Delay-Aware System Modelling Using Graph Attention and Continuous-Time Neural Dynamics	386
<i>Saumya Karunadhika, Ling Luo, Bastian Oetomo, Michele Discepola, Sandra Kentish, Sally Gras Uwe Aickelin</i>	
D-HUMOR: Dark Humor Understanding Via Multimodal Open-Ended Reasoning	396
<i>Sai Kartheek Reddy Kasu, Mohammad Zia Ur Rehman, Shahid Shafi Dar, Rishi Bharat Junghare Dhanvin Sanjay Namboodiri, Nagendra Kumar</i>	
DMFI: A Dual-Modality Log Analysis Framework for Insider Threat Detection with LoRA-Tuned Language Models	406
<i>Kaichuan Kong, Dongjie Liu, Xiaobo Jin, Guanggang Geng, Zhiying Li, Jian Weng</i>	
Burger: Robust Graph Denoising-Augmentation Fusion and Multi-Semantic Modeling for Social Recommendation	416
<i>Yuqin Lan, Laurence T. Yang</i>	
Improving Generalization Capabilities of Models Trained on Time Series Data Using Novel Downsampling Methods	426
<i>Ofir Landau, Nir Nissim</i>	
Fast Sampling for Privacy-Preserving Lazy Multiplicative Weight Update	436
<i>Xiaoyu Li, Zhao Song, Jiale Zhao</i>	
Spline-Interpolated Density and Dependency-Aware Outlier Scoring for Lightweight Deployment	446
<i>Angela Li, David Li</i>	
Test-Time GNN Model Evaluation on Dynamic Graphs	456
<i>Bo Li, Xin Zheng, Ming Jin, Can Wang, Shirui Pan</i>	
OTESGN: Optimal Transport-Enhanced Syntactic-Semantic Graph Networks for Aspect-Based Sentiment Analysis	466
<i>Xinfeng Liao, Xuanqi Chen, Lianxi Wang, Jiahuan Yang, Zhuowei Chen, Ziying Rong</i>	

The Demon is in Ambiguity: Revisiting Situation Recognition with Single Positive Multi-Label Learning	476
<i>Yiming Lin, Yuchen Niu, Shang Wang, Kaizhu Huang, Qiufeng Wang, Xiao-Bo Jin</i>	
Beyond the Pre-Service Horizon: Infusing In-Service Behavior for Improved Financial Risk Forecasting	486
<i>Senhao Liu, Zhiyu Guo, Zhiyuan Ji, Yueguo Chen, Yateng Tang, Yunhai Wang, Xuehao Zheng, Xiang Ao</i>	
Detect, Investigate, Judge and Determine: A Knowledge-Guided Framework for Few-Shot Fake News Detection	496
<i>Ye Liu, Jiajun Zhu, Xukai Liu, Haoyu Tang, Yanghai Zhang, Kai Zhang, Xiaofang Zhou, Enhong Chen</i>	
DiffuGC: Diffusion Model Can Help Discover Granger Causality from Interventional Time Series	506
<i>Bo Liu, Hongyan Li, Shenda Hong</i>	
Efficient Cardinality Estimation with Query-induced Probability Inference	516
<i>Huashuai Liu, Xinran Wu, Kun Yue, Bingbing Xiang, Liang Duan</i>	
Hierarchical Structure Enhanced Graph Representation for Link Prediction	526
<i>Wenjie Liu, Kun Yue, Zhenyu Zhang, Liang Duan</i>	
Negative-Free Graph Contrastive Learning for Recommendation	536
<i>Junping Liu, Mingchao Yu, Xinrong Hu, Jie Yang, Yi Guo, Wanqing Li, Wenbin Zhang</i>	
Learning to Retrieve for Environmental Knowledge Discovery: An Augmentation-Adaptive Self-Supervised Learning Framework	546
<i>Shiyuan Luo, Runlong Yu, Chonghao Qiu, Rahul Ghosh, Robert Ladwig, Paul C. Hanson, Yiqun Xie Xiaowei Jia</i>	
A Data-Free Analytical Quantization Scheme for Deep Learning Models	556
<i>Ahmed Luqman, Khuzemah Hassan Qazi, Murray Patterson, Malik Jahan Khan, Imdadullah Khan</i>	
Effective Series Decomposition and Components Learning for Time Series Generation	564
<i>Zixuan Ma, Chenfeng Huang</i>	
Hypergraph Representation Learning with Adaptive Broadcasting and Receiving	574
<i>Tianyi Ma, Yiyue Qian, Zheyuan Zhang, Zehong Wang, Shinan Zhang, Chuxu Zhang, Yanfang Ye</i>	
PromptEG: Scalable Prompt-Based Temporal Generalization on Evolving Graphs	584
<i>Tingyan Ma, Bin Lu, Ze Zhao, Xiaoying Gan, Luoyi Fu, Xinbing Wang, Chenghu Zhou</i>	
A Theoretical Framework for Self-Supervised Contrastive Learning for Continuous Dependent Data	594
<i>Alexander Marusov, Aleksandr Yugay, Alexey Zaytsev</i>	
Learning from Two-Sample-Averaged Data	604
<i>Ryuta Matsuno, Akira Kitaoka</i>	
CGLE: Class-Label Graph Link Estimator for Link Prediction	614
<i>Ankit Mazumder, Srikanta Bedathur</i>	
Koopman Spectral Dynamics for Interpretable and Predictive Semantic Drift in Language Models	624
<i>Satyam Mishra, Vi Phung, Phuc Vu, Shivam Mishra, Sundaram Mishra, Vishwanath Bijalwan Tran Duc Tan</i>	

CellFMCount: A Fluorescence Microscopy Dataset, Benchmark, and Methods for Cell Counting	632
<i>Abdurahman Ali Mohammed, Catherine Fonder, Ying Wei, Wallapak Tavanapong, Donald S. Sakaguchi</i>	
<i>Qi Li, Surya K. Mallapragada</i>	
Uncertainty Awareness and Trust in Explainable AI - On Trust Calibration Using Local and Global	
Explanations	642
<i>Carina Newen, Daniel Bodemer, Sonja Glantz, Emmanuel Müller, Magdalena Wischniewski</i>	
<i>Lenka Schnaubert</i>	
Neural Autoregressive Flows for Markov Boundary Learning	651
<i>Khoa Nguyen, Bao Duong, Viet Huynh, Thin Nguyen</i>	
Federated Domain Generalization with Latent Space Inversion	661
<i>Ragja Palakkadavath, Hung Le, Thanh Nguyen-Tang, Svetha Venkatesh, Sunil Gupta</i>	
Towards Propagation-Aware Representation Learning for Supervised Social Media Graph Analytics	671
<i>Wei Jiang, Tong Chen, Wei Yuan, Xiangyu Zhao, Quoc Viet Hung Nguyen, Hongzhi Yin</i>	
Explanations Go Linear: Post-Hoc Explainability for Tabular Data with Interpretable Meta-Encoding	682
<i>Simone Piaggese, Riccardo Guidotti, Fosca Giannotti, Dino Pedreschi</i>	
Interpretable and Interactive Deep Survival Analysis with Time-dependent EXtreme Gradient	
Integration	692
<i>Xinyu Qin, Ruiheng Yu, Armin Khayati, Zixiao Qiu, Gengyi Zou, Yan Li, Lu Wang</i>	
Explanation Space: A New Perspective into Time Series Interpretability	702
<i>Shahbaz Rezaei, Xin Liu</i>	
MAC: An Efficient Gradient Preconditioning Using Mean Activation Approximated Curvature	712
<i>Hyunseok Seung, Jaewoo Lee, Hyunsuk Ko</i>	
HyHG: A Temporal Hypergraph Contrastive Learning Framework for Biomedical Hypothesis	
Generation	722
<i>Amir Hassan Shariatmadari, Sikun Guo, Nathan C. Sheffield, Aidong Zhang, Kishlay Jha</i>	
LHGEL: Large Heterogeneous Graph Ensemble Learning using Batch View Aggregation	732
<i>Jiajun Shen, Yufei Jin, Yi He, Xingquan Zhu</i>	
Beyond Parameters: Locally-Guided Knowledge Distillation for Decentralized Federated Learning	742
<i>Behnaz Soltani, Yipeng Zhou, Saqr Thabet, Elaf Alhazmi, Lina Yao, Quan Z. Sheng</i>	
Empowering Large Language Models for Time Series Forecasting with Patterns and Semantics	752
<i>Jialiang Tang, Shuo Chen, Chen Gong, Jing Zhang, Dacheng Tao</i>	
Learn while Unlearn: An Iterative Unlearning Framework for Generative Language Models	762
<i>Haoyu Tang, Ye Liu, Xi Zhao, Xukai Liu, Yanghai Zhang, Kai Zhang, Xiaofang Zhou, Enhong Chen</i>	
CAST-GNN: Continual Adaptive Learning for Custom Spatio-Temporal Knowledge Graphs via Graph	
Neural Networks	772
<i>Gözde Ayşe Tataroğlu Özbülak, Yash Raj Shrestha, Jean-Paul Calbimonte</i>	
Trend-Aware Multivariate Time Series Forecasting Based on Mutual Information and Cross Attention	782
<i>Jie Tu, Kun Yue, Zhenyu Zhang, Liang Duan</i>	

Detecting Intent Drift in Continuous Conversation via Temporal Transition Accumulation	792
<i>Yue Wang, Dehang Fu, Jie Tan, Junxiao Han, Yao Wan, Lixin Cui, Lu Bai, Philip S. Yu</i>	
FAIM-RL: A Reinforcement Learning Approach for Fairness-Aware Adaptive Influence Maximization	802
<i>Fangzheng Wang, Yi Zhou, Yanhao Wang, Panagiotis Karras, Yuchen Li</i>	
High Rank Matrix Completion with Adaptive Neighbor Graphs	812
<i>Shiqin Wang, Kun Xie, Jiazheng Tian, Jigang Wen, Gaogang Xie</i>	
AdaGen: Adaptive Domain-Specific Classification via Zero-Shot Dataset Generation	822
<i>Zhan-Hao Xu, Fei-Yao Liang, Hui-Yu Zhou, Chang-Dong Wang</i>	
DP-FedLoRA: Privacy-Enhanced Federated Fine-Tuning for On-Device Large Language Models	832
<i>Honghui Xu, Shiva Shrestha, Wei Chen, Zhiyuan Li, Zhipeng Cai</i>	
MTS-DMAE: Dual-Masked Autoencoder for Unsupervised Multivariate Time Series Representation Learning	842
<i>Yi Xu, Yitian Zhang, Yun Fu</i>	
Balanced and Discrete Projection Collaborative Clustering with Probabilistic Regression	852
<i>Guangyu Yang, Yu Duan, Quanxue Gao, Jingjing Xue, Xuhong Dong</i>	
KnobTuneX:LLM-Enhanced Automatic Database Tuning via Structured Reasoning*	862
<i>Jianwen Yang, Qihong Zhang, Xinrun Xu, Yurong Wu, Shuo Zhang, Zhiming Ding</i>	
Fine-Grained Zero-Shot Composed Image Retrieval with Complementary Visual-Semantic Integration	872
<i>Yongcong Ye, Kai Zhang, Yanghai Zhang, Enhong Chen, Longfei Li, Jun Zhou</i>	
Equilibrium-Based NFT Marketplace Recommendation for NFTs with Breeding	882
<i>Chin-Yuan Yeh, Hsi-Wen Chen, De-Nian Yang, Wang-Chien Lee, Philip S. Yu, Ming-Syan Chen</i>	
Effective and Efficient Similarity Search for DNA Sequences Through de Bruijn Sum Graph Embedding	892
<i>Zhaochong Yu, Zihang Yang, Chris Ding, Chao Zeng, Feijuan Huang, Yuanzhe Cai</i>	
Rethinking Invertible Neural Networks: Architecture Tradeoffs and Customization Across Domains	902
<i>Jingyi Yuan, Muhao Guo, Yang Weng</i>	
LR-IAD: Mask-Free Industrial Anomaly Detection with Logical Reasoning	912
<i>Peijian Zeng, Feiyan Pang, Zhanbo Wang, Aimin Yang</i>	
Beyond Static LLM Policies: Imitation-Enhanced Reinforcement Learning for Recommendation	922
<i>Yi Zhang, Lili Xie, Ruihong Qiu, Jiajun Liu, Sen Wang</i>	
Efficient Sequential Recommendation for Long Term User Interest Via Personalization	932
<i>Qiang Zhang, Hanchao Yu, Ivan Ji, Chen Yuan, Yi Zhang, Chihuang Liu, Xiaolong Wang</i>	
<i>Christopher E. Lambert, Ren Chen, Chen Kovacs, Xinzhu Bei, Renqin Cai, Rui Li, Lizhu Zhang</i>	
<i>Xiangjun Fan, Qunshu Zhang, Benyu Zhang</i>	
Heterogeneous Graph Anomaly Detection with Graph Wavelet Transformer	942
<i>Xiaoou Zhang, Chuan Zhou, Yang Liu, Shuai Zhang, Peng Zhang, Yujia Zhu, Qingyun Liu</i>	
POSFed: Tackling Non-IID Challenges in One-Shot Federated Learning via Personalization	952
<i>Yinghao Zhang, Xuanzhe Xiao, Jianxiong Guo, Zhiqing Tang, Qiufen Ni, Weili Wu</i>	

Retrieval-Augmented Feature Generation for Domain-Specific Classification	962
<i>Xinhao Zhang, Jinghan Zhang, Fengran Mo, Dakshak Keerthi Chandra, Yu-Zhong Chen, Fei Xie Kunpeng Liu</i>	
Sharpness-Aware Optimization Through Variance Suppression on Deep AUC Maximization	972
<i>Xinwen Zhang, Hongchang Gao</i>	
Test-Time Graph Rebirth for GNN Generalization Under Distribution Shifts	982
<i>Xin Zheng, Bo Li, Yu Zheng, Qin Zhang, Haishuai Wang, Yuxuan Liang, Alan Wee-Chung Liew, Shirui Pan</i>	
CL ³ M-Rec: Contrastive Learning Enhanced LLMs for Recommendation	992
<i>Yu-Xuan Zhou, Ru-Bin Li, Zhe Xuan-Yuan, Pei-Yuan Lai, Chang-Dong Wang</i>	
Federated Graph Out-of-Distribution Generalization via Representation Propagation and Scattering	1002
<i>Yukai Zhu, He Sun, Mingjun Xiao</i>	
Trusted Collective Learning for Conflictive Multi-View Decision-Making	1012
<i>Nengjun Zhu, Zhiyu Zhang, Chenmeijin Liang, Jian Cao, Siji Zhu, Xiao Wei</i>	
MARCEL: Multifaceted SpAtial-TempoRal ContrastivE Learning for Generic Spatial-Temporal Representations	1022
<i>Yuhang Liu, Yingxue Zhang, Xin Zhang, Yu Yang, Yanhua Li, Jun Luo</i>	
HyperModal: Dynamic Hypergraph Contrastive Learning for Multi-Modal Representation	1032
<i>Lulwah Al Kulaib</i>	
Sc-GRIP: a Graph Convolutional Approach to Infer Gene Interaction Polarity from Single-Cell Data	1039
<i>Carolina E. Atria, Yitao Cai, Pascal Weber, Anna Beer, Nils Kriege, Christian Böhm Roger Revilla-i-Domingo, Claudia Plant</i>	
Extracting Actionable Insights from Building Energy Data using Vision LLMs on Wavelet and 3D Recurrence Representations	1049
<i>Amine Bechar, Adel Oulefki, Abbes Amira, Fatih Kurogollu, Yassine Himeur</i>	
OA ² H-SP: One-Step Anchor-Adaptive Hypergraph Spectral Clustering	1057
<i>Kamal Berahmand, Razieh Sheikhpour, Farid Saberi-Movahed, Mahdi Jalili</i>	
Mining Trustworthy Symbolic Regression Models in Federated Settings	1064
<i>Mattia Billa, Veronica Guidetti, Luca La Rocca, Federica Mandreoli</i>	
Discovering Communities in Continuous-Time Temporal Networks by Optimizing L-Modularity	1074
<i>Victor Brabant, Angela Bonifati, Rémy Cazabet</i>	
Identifying Group Anchors in Real-World Group Interactions Under Label Scarcity	1084
<i>Fanchen Bu, Geon Lee, Kijung Shin, Minyoung Choe</i>	
PULSAR: Advancing Interval-Based Time Series Classification to State-of-the-Art Performance	1094
<i>Nestor Cabello, Lars Kulik</i>	
Feature Generation Machine for Learning with Label Proportions	1104
<i>Jing Chai</i>	
LifelongSkill: Toward Modality-Varying Lifelong Learning with Latent Knowledge Hypergraph	1114
<i>Jiayi Chen, Kishlay Jha, Aidong Zhang</i>	

ClusterSSFDA: Clustered Semi-Supervised Federated Domain Adaptation	1124
<i>Michele Craighero, Taguhi Mesropyan, Diego Carrera, Beatrice Rossi, Diego Stucchi</i> <i>Pasqualina Fragneto, Giacomo Boracchi</i>	
Fast Percolation Centrality Approximation with Importance Sampling	1134
<i>Antonio Cruciani, Leonardo Pellegrina</i>	
Flexible Windowing for Correlation-Aware Ranking in Anomalous Environments	1144
<i>Anwesha Das, Henry Hoffmann, Alex Aiken</i>	
Selective Cloud Offloading for Accurate and Efficient Object Detection	1154
<i>Davood Dehghani, Yueting Chen, Xiaohui Yu, Nick Koudas</i>	
ECHO: Effective Coreset-Driven Learning via Hierarchical Optimizations	1164
<i>Alec F. Diallo, Weihe Li, Paul Patras</i>	
STRIDE: Spectral-Temporal Representation and Instance-Weighted Domain Expansion	1174
<i>Doan Ngoc Chi Nam, Tran Van Tung, Karkulali Pugalenth</i>	
Beyond Discriminant Patterns: On the Robustness of Decision Rule Ensembles	1183
<i>Xin Du, Subramanian Ramamoorthy, Wouter Duivesteijn, Jin Tian, Mykola Pechenizkiy</i>	
MNN-Closure Meets Local Maxima: A Double-Knee Approach to Anomaly Detection	1193
<i>Walid Durani, Philipp Jahn, Thomas Seidl, Claudia Plant, Christian Böhm</i>	
TIMED: Adversarial and Autoregressive Refinement of Diffusion-Based Time Series Generation	1203
<i>MohammadReza EskandariNasab, Shah Muhammad Hamdi, Soukaina Filali Boubrahimi</i>	
Prompt Learning with Text-Augmented Cues for Out-of-Distribution Detection	1213
<i>Mingxu Feng, Dian Chao, Yuxuan Zhang, Yang Yang, Weili Guo</i>	
GeoToken: Hierarchical Geolocalization of Images via Next Token Prediction	1223
<i>Narges Ghasemi, Amir Ziashahabi, Salman Avestimehr, Cyrus Shahabi</i>	
Hierarchically Disentangled Recurrent Network for Factorizing System Dynamics of Multi-scale Systems: An application on Hydrological Systems	1233
<i>Rahul Ghosh, Arvind Renganthan, Zachary McEachran, Kelly Lindsay, Michael Steinbach, John Nieber</i> <i>Christopher Duffy, Vipin Kumar</i>	
Boosting Clinical Outcome Prediction with Context-Aware Feature Imputation and Disentanglement	1243
<i>Lei Gong, Aidong Zhang, Kishlay Jha</i>	
Auditing Approximate Machine Unlearning for Differentially Private Models	1253
<i>Yuechun Gu, Jiajie He, Keke Chen</i>	
Data-Driven Super-Resolution Reconstruction of Quasi-Geostrophic Turbulence Via Enhanced Diffusion Model and Fourier Neural Operator	1263
<i>Yanan Guo, Junqiang Song, Xiaoqun Cao, Hongze Leng</i>	
BiSparse-AAS: Bilinear Sparse Attention and Adaptive Spans Framework for Scalable and Efficient Text Summarization	1273
<i>Desta Haileselassie Hagos, Legand L. Burge, Anietie Andy, Anis Yazidi, Vladimir Vlassov</i>	
Hierarchy-Aware Generative Modeling for Enhanced Label Differential Privacy	1283
<i>Yichen Hu, Changsheng Wan</i>	

SBAN: A Framework & Multi-Dimensional Dataset for Large Language Model Pre-Training and Software Code Mining	1293
<i>Hamed Jelodar, Mohammad Meymani, Samita Bai, Roozbeh Razavi-Far, Ali A. Ghorbani</i>	
Multi Level Vision Language Adapter	1300
<i>Noriaki Kawamae</i>	
Higher-Order Neural Additive Models: An Interpretable Machine Learning Model with Feature Interactions	1310
<i>Minkyu Kim, Hyun-Soo Choi, Jinho Kim</i>	
FAP: A Foveation-Inspired Adversarial Purification Pipeline for Enhancing Robustness in Mammography Classification	1320
<i>Ghazal Lalooa, Wenjie Ruan, Venus Haghighi, Xinshu Li, Quan Z. Sheng</i>	
Trivial Graph Features and Classical Learning are Enough to Detect Random Anomalies	1330
<i>Matthieu Latapy, Stephany Rajeh</i>	
Accelerating Long-Term Molecular Dynamics with Physics-Informed Time-Series Forecasting	1340
<i>Hung Le, Sherif Abbas, Minh Hoang Nguyen, Van Dai Do, Huu Hiep Nguyen, Dung Nguyen</i>	
TED++: Submanifold-Aware Backdoor Detection via Layerwise Tubular-Neighbourhood Screening	1350
<i>Nam Le, Leo Yu Zhang, Kewen Liao, Shirui Pan, Wei Luo</i>	
Dilution of Unreliable Information: Learning in Graph with Noisy Structures and Absent Attributes	1360
<i>Xinxin Li, Yang Liu, Siyong Xu, Weigao Wen, Qing He, Xiang Ao</i>	
Unveiling the Merits and Defects of LLMs in Automatic Review Generation for Scientific Papers	1370
<i>Ruochi Li, Haoxuan Zhang, Edward Gehringer, Ting Xiao, Junhua Ding, Haihua Chen</i>	
xTime: Extreme Event Prediction with Hierarchical Knowledge Distillation and Expert Fusion	1380
<i>Quan Li, Wenchao Yu, Suhang Wang, Minhua Lin, Lingwei Chen, Wei Cheng, Haifeng Chen</i>	
When LLM Meets Simplicial Complex: A Novel Graph Prompt Learning on Ethereum Transaction Networks	1390
<i>Yuxin Liu, Stephen Chan, Jeffrey Chu, Yuanyuan Zhang, Yuzhou Chen</i>	
Federated Hypergraph Learning with Local Differential Privacy: Toward Privacy-Aware Hypergraph Structure Completion	1400
<i>Linfeng Luo, Zhiqi Guo, Fengxiao Tang, Zihao Qiu, Ming Zhao</i>	
DELTA: Variational Disentangled Learning for Privacy-Preserving Data Reprogramming	1410
<i>Arun Vignesh Malarkkan, Haoyue Bai, Anjali Kaushik, Yanjie Fu</i>	
Modeling the Impact of U.S.-China Flight Connectivity on Pandemic Dynamics and China's Economy	1420
<i>Yuhong Mu, Mengyu Jiang, Shanshan Zhang, Lichao Yang</i>	
Disentangled Contrastive Representation Learning for Zero-Shot Biomedical Text Classification	1425
<i>Ratri Mukherjee, Shailesh Dahal, Kishlay Jha</i>	
Towards Generalizable Time Series Forecasting Via IB-Regularized Transformer-Diffusion	1435
<i>Dayeong Na, Jinho Kang, Junseok Kwon</i>	

InSquaD: In-Context Learning for Efficient Retrieval via Submodular Mutual Information to Enforce Quality and Diversity	1445
<i>Souradeep Nanda, Anay Majee, Rishabh Iyer</i>	
Score-Based Integrated Gradient for Root Cause Explanations of Outliers	1455
<i>Phuoc Nguyen, Truyen Tran, Sunil Gupta, Svetha Venkatesh</i>	
TabFairGDT: A Fast Fair Tabular Data Generator Using Autoregressive Decision Trees	1465
<i>Emmanouil Panagiotou, Benoît Ronval, Arjun Roy, Ludwig Bothmann, Bernd Bischl, Siegfried Nijssen Eirini Ntoutsi</i>	
On the Relationship Between Populated Regions and Adversarial Robustness in Deep Neural Networks	1475
<i>Seongjin Park, Haedong Jeong, Tair Djanibekov, Giyoung Jeon, Jinseok Seol, Jaesik Choi</i>	
PiGLEt: Probabilistic Message Passing for Semi-Supervised Link Sign Prediction	1485
<i>Ka Hyun Park, Junghun Kim, Jinhong Jung, U Kang</i>	
Reasoning Over User Preferences: Knowledge Graph-Augmented LLMs for Explainable Conversational Recommendations	1495
<i>Zhangchi Qiu, Linhao Luo, Shirui Pan, Alan Wee-Chung Liew</i>	
UP-Bern: A Unified Progressive Transition Framework for Biomedical Entity Recognition and Normalization	1505
<i>Yanlong Qiu, Canqun Yang, Siqi Wang</i>	
On the Necessity of Multi-Domain Explanation: An Uncertainty Principle Approach for Deep Time Series Models	1515
<i>Shahbaz Rezaei, Avishai Halev, Xin Liu</i>	
Contrastive Joint Embedding of Attributed Multiplex Networks	1525
<i>Ylli Sadikaj, Yllka Velaj, Claudia Plant</i>	
WWAggr: A Window Wasserstein-Based Aggregation for Ensemble Change Point Detection	1535
<i>Alexander Stepikin, Evgenia Romanenkova, Alexey Zaytsev</i>	
FreIE: Low-Frequency Spectral Bias in Neural Networks for Time-Series Tasks	1545
<i>Jialong Sun, Xinpeng Ling, Jiaxuan Zou, Jiawen Kang, Kejia Zhang</i>	
BLB-HGNN: Bag of Little Bootstraps for Training Heterogeneous GNNs	1555
<i>Aditya T. Vadlamani, Sama Salarian, Saket Gurukar, Srinivasan Parthasarathy</i>	
AI-Optimized Serverless Computing for Scalable Customer Sentiment Analysis in Open Banking APIs	1565
<i>Rajesh Vayyala</i>	
Class-Aware Spatio-Temporal Graph Contrastive Learning for Multivariate Time Series Data	1570
<i>Yining Wang, Ke Li, Fujun Han, Shuhan Liu, Xuan Hou, Dejun Teng, Zhaohui Peng</i>	
Explainability-Guided Defense: Attribution-Aware Model Refinement Against Adversarial Data Attacks	1579
<i>Longwei Wang, Mohammad Navid Nayyem, Abdullah Al Rakin, KC Santosh, Chaowei Zhang, Yang Zhou</i>	
One-Pass Multi-Label Learning with Missing Features and Labels	1587
<i>Jun-Tong Wang, Cun-Yuan Xing, Wei Gao</i>	

Towards Trustworthy Vital Sign Forecasting: Leveraging Uncertainty for Prediction Intervals	1597
<i>Li Rong Wang, Thomas C. Henderson, Yew Soon Ong, Yih Yng Ng, Xiuyi Fan</i>	
Cellular Traffic Prediction Based on Two-Stage Cross-City Transfer Learning	1607
<i>Hao Wen, Junhui Zhan, Jiahao Ling, Shimin Gong, Bo Gu</i>	
Incorporating Dynamic Logic Alignment into Knowledge Graph Reasoning Based on Reinforcement Learning	1617
<i>Yiyang Weng, Tong Li, Zifang Tang, Yiting Wang, Zhen Yang</i>	
Speciated Unsupervised Skill Discovery	1627
<i>Ryan Wickman, Xiaofei Zhang</i>	
Bi-NAS: Towards Effective and Personalized Explanation for Recommender Systems via Bi-Level Neural Architecture Search	1636
<i>Longfeng Wu, Yao Zhou, Tong Zeng, Zhimin Peng, Bhanu Pratap Singh Rawat, Lecheng Zheng, Giovanni Seni, Dawei Zhou</i>	
AdaSports-Traj: Role- and Domain-Aware Adaptation for Multi-Agent Trajectory Modeling in Sports	1646
<i>Yi Xu, Yun Fu</i>	
How Effective is In-Context Learning with Large Language Models for Rare Cell Identification in Single-Cell Expression Data?	1656
<i>Huaiyuan Yao, Zhenxiao Cao, Zhongman Wang, Xiewei Ni, Jinyan Dong, Hongyi Cai, Yuqiang Han, Xiao Luo</i>	
Tracking Latent Communities Evolution with Hierarchical Edge Partition Models	1666
<i>Xincan Yu, Nan Fang, Hao Liao, Sikun Yang</i>	
Self-Supervised Distribution Correction to Boost Information Gain in Offline Reinforcement Learning	1676
<i>Jingyi Yuan, Hamad Alduaij, Yang Weng</i>	
DAMA: A Dual Alignment Framework for Enhanced LLM-Powered Recommendations	1686
<i>Qingwen Zeng, Lining Chen, Jushang Qiu, Fangchen Liu, Huaming Chen, Ling Chen</i>	
Customized Retrieval-Augmented Generation with LLM for Debiasing Recommendation Unlearning	1696
<i>Haichao Zhang, Chong Zhang, Peiyu Hu, Shi Qiu, Jia Wang</i>	
Uncertainty Quantification of Conformalized Spatio-Temporal Graph Convolutional Network on Forecasting	1706
<i>Yang Zhao, Yuzhou Chen, Xinghua Shi</i>	
Link Completion for Dynamic Knowledge Graphs with Entity Drift	1716
<i>Xiulin Zheng, Pei-Pei Li, Yi He, Xindong Wu</i>	
Layer-Wise Unlearning for Model Adaption in Non-Stationary Environments	1726
<i>Yanbing Zhou, Yimin Wen, Zhanhua Liu, Xiang Liu, Hang Yu, Yikui Zhai</i>	
Owen-Based Semantics and Hierarchy-Aware Explanation (O-Shap)	1735
<i>Xiangyu Zhou, Chenhan Xiao, Yang Weng</i>	
Differentiable Distance Between Hierarchically-Structured Data	1745
<i>Matěj Zorek, Tomáš Pevný, Václav Šmídl</i>	