Paper Title	Authors
SESSION 1	
Tuesday, August 16, 10:00 AM-12:00 PM, Room 1, (Graphs and Networks)	
Streaming Graph Neural Networks with Generative Replay	Junshan Wang (Alibaba)*; Wenhao Zhu (Peking University); Guojie Song (Peking University); Liang Wang (Alibaba group)
Graph Rationalization with Environment-based Augmentations	Gang Liu (University of Notre Dame)*; Tong Zhao (Snap Inc.); JIAXIN XU (UNIVERSITY OF NOTRE DAME); Tengfei Luo (University of Notre Dame); Meng Jiang (University of Notre Dame)
Causal Attention for Graph Classification	Yongduo Sui (University of Science and Technology of China)*; Xiang Wang (National University of Singapore); Jiancan Wu (University of Science and Technology of China); Min Lin (University of Montreal); Xiangnan He (University of Science and Technology of
Minimizing Congestion for Balanced Dominators	Yosuke Mizutani (University of Utah)*; Annie Staker (University of Utah); Blair D Sullivan (University of Utah)
SMORE: Knowledge Graph Completion and Multi-hop Reasoning in Massive Knowledge Graphs	Hongyu Ren (Stanford University)*; Hanjun Dai (Google Brain); Bo Dai (Google Brain); Xinyun Chen (UC Berkeley); Denny Zhou (Google Brain); Jure Leskovec (Stanford University); Dale Schuurmans (Google / University of Alberta)
FlowGEN: A Generative Model for Flow Graphs	Ambuj K Singh (UCSB); Arlei Silva (Rice University); Furkan Kocayusufoglu (UC, Santa Barbara)*
Tuesday, August 16, 10:00 AM-12:00 PM, Room 2, (Interdisciplinary Applications: Biology, Climate and Physics)	
Graph-in-Graph Network for Automatic Gene Ontology Description Generation	Fenglin Liu (Peking University)*; Bang Yang (Peking University); Xian Wu (Tencent Medical AI Lab); Shen Ge (Tencent Medical AI Lab); Adelaide Chambers (University of Washington); Sheng Wang (Paul G. Allen School of Computer Science, University of Washingt
Deep Representations for Time-varying Brain Datasets	Sikun Lin (University of California, Santa Barbara)*; Shuyun Tang (University of California, Santa Barbara); Ambuj K Singh (UCSB); Scott T Grafton (UC Santa Barbara)
Geometric Graph Representation Learning on Protein Structures	Sarp Aykent (Auburn University)*; Tian Xia (Auburn University)
RetroGraph: Retrosynthetic Planning with Graph Search	Shufang Xie (Gaoling School of Artificial Intelligence, Renmin University of China)*; Peng Han (KAUST); Yingce Xia (Microsoft Research Asia); Lijun Wu (Microsoft Research); Tao Qin (Microsoft Research Asia); Chenjuan Guo (Aalborg University); Bin Yang (Aa
KRATOS: Context-aware cell type classification and interpretation using joint dimensionality reduction and clustering	Zihan Zhou (Purdue University); Zijia Du (Shanghai Jiao Tong University); Somali Chaterji (Purdue University)*
Dense feature tracking of atmospheric winds with deep optical flow	Thomas J Vandal (NASA Ames)*; Kate Duffy (NASA Ames); Akira Sewnath (NASA Goddard Space Flight Center); Will McCarty (NASA); Ramakrishna Nemani (NASA Ames Research Center)
Tuesday, August 16, 10:00 AM-12:00 PM, Room 3, (Causal Analysis and Explainability)	
Causal Discovery on Non-Euclidean Data	Jing Yang (Heifei University of Technology); Kai Xie (Heifei University of Technology); Ning An (Hefei University of Technology)*
Improving Data-driven Heterogeneous Treatment Effect Estimation Under Structure Uncertainty	Christopher Tran (University of Illinois at Chicago)*; Elena Zheleva (University of Illinois at Chicago)
ML4S: Learning Causal Skeleton from Vicinal Graphs	Pingchuan Ma (HKUST)*; Rui Ding (Microsoft Research); Haoyue Dai (Carnegie Mellon University); Yuanyuan Jiang (Renmin University of China); Shuai Wang (HKUST); Shi Han (Microsoft Research); Dongmei Zhang (Microsoft Research Asia)
Discovering Invariant and Changing Mechanisms from Data	Sarah Mameche (CISPA Helmholtz-Zentrum fŸr Informationssicherheit)*; David Kaltenpoth (CISPA Helmholtz Center for Information Security); Jilles Vreeken (CISPA Helmholtz Center for Information Security)
Variational Flow Graphical Model	Shaogang Ren (Baidu Research, USA)*; Belhal Karimi (Baidu Research); Dingcheng Li (Baidu Research); Ping Li (Baidu Research)
Framing Algorithmic Recourse for Anomaly Detection	Debanjan Datta (Virginia Tech)*; Feng Chen (UT Dallas); Naren Ramakrishnan (Virginia Tech)
Tuesday, August 16, 10:00 AM-12:00 PM, Room 4, (Data Privacy, Ethics and Data Science for Society)	
What Makes Your Data Unavailable To Deep Learning?	Da Yu (Sun Yat-sen University)*; Huishuai Zhang (Microsoft Research Asia); Wei Chen (Chinese Academy of Sciences); Jian Yin (Sun Yat-Sen University); Tie-Yan Liu (Microsoft Research)
MetaV: A Meta-Verifier Approach to Task-Agnostic Model Fingerprinting	Xudong Pan (Fudan University)*; Yifan Yan (Fudan University); Mi Zhang (Fudan University); Min Yang (Fudan University)
Scalable Differentially Private Clustering via Hierarchically Separated Trees	Vincent Cohen-Addad (Google); Alessandro Epasto (Google)*; Silvio Lattanzi (Google); Vahab Mirrokni (Google); andres munoz (Google); David Saulpic (LIP6); Chris Schwiegelshohn (Aarhus University); Sergei Vassilvitskii (Google)
MetroGAN: Simulating Urban Morphology with Generative Adversarial Network	Weiyu Zhang (Institude of Remote Sensing and Geographic Information System, Peking University); Yiyang Ma (Wangxuan Institute of Computer Technology, Peking University); Di Zhu (University of Minnesota, Twin Cities); Lei Dong (PKU); Yu Liu (Peking Univers
A Nearly-Linear Time Algorithm for Minimizing Risk of Conflict in Social Networks	Liwang Zhu (Fudan University)*; Zhongzhi Zhang (Fudan University)
Tuesday, August 16, 10:00 AM - 12:00 PM, Room 5, (Adverserial Learning and Information Security)	
A Model-Agnostic Approach to Differentially Private Topic Mining	Han Wang (Illinois Institute of Technology); Jayashree Sharma (Illinois Institute of Technology); Shuya Feng (Illinois Institute of Technology); Kai Shu (Illinois Institute of Technology); Yuan Hong (Illinois Institute of Technology)*
Model Integrity Authentication in Gradient Boosting Machine	Weijie Zhao (Rochester Institute of Technology)*; Yingjie Lao (Clemson University); Ping Li (Baidu)
Pairwise Adversarial Training for Unsupervised Class-imbalanced Domain Adaptation	WEILI SHI (University of Georgia)*; Ronghang Zhu (University of Georgia); Sheng Li (University of Georgia)
LeapAttack: Hard-Label Adversarial Attack on Text via Gradient-Based Optimization	Muchao Ye (The Pennsylvania State University)*; Jinghui Chen (Penn State University); Chenglin Miao (University of Georgia); Ting Wang (Penn State); Fenglong Ma (Pennsylvania State University)
Bilateral Dependency Optimization: Defending Against Model-inversion Attacks	Xiong Peng (NUDT)*; Feng Liu (UTS/RIKEN); Jingfeng Zhang (RIKEN); long lan (NUDT); Junjie Ye (PolyU Hong Kong); Tongliang Liu (The University of Sydney); Bo Han (HKBU / RIKEN)

SESSION 2

Tuesday, August 16, 1:30 PM-3:30 PM, Room 1, (Graphs and Networks)	
Task-Adaptive Few-shot Node Classification	Song Wang (University of Virginia); Kaize Ding (Arizona State University); Chuxu Zhang (Brandeis University); Chen Chen (University of Virginia); Jundong Li (University of Virginia)*
Core-periphery Models for Hypergraphs	Marios Papachristou (Cornell University)*; Jon Kleinberg (Cornell)
Geometer: Graph Few-Shot Class-Incremental Learning via Prototype Representation	Bin Lu (Shanghai Jiao Tong University); Xiaoying Gan (Shanghai Jiao Tong University)*; Lina Yang (Shanghai Jiao Tong University); Weinan Zhang (Shanghai Jiao Tong University); Luoyi Fu (Shanghai Jiao Tong University); Xinbing Wang (Shanghai Jiao Tong Uni
Avoiding Biases due to Similarity Assumptions in Node Embeddings	Deepayan Chakrabarti (University of Texas at Austin)*
Repository Embedding via Heterogeneous Graph Adversarial Contrastive Learning	Yiyue Qian (University of Notre Dame)*; Yiming Zhang (Case Western Reserve University); Qianlong Wen (University of Notre Dame); Yanfang Ye (University of Notre Dame); Chuxu Zhang (Brandeis University)
Towards a Native Quantum Paradigm for Graph Representation Learning: a Sampling-based Recurrent Embedding Approach	Ge Yan (Shanghai Jiaotong University); Yehui Tang (Shanghai Jiao Tong University); Junchi Yan (Shanghai Jiao Tong University)*

Tuesday, August 16, 1:30 PM-3:30 PM, Room 2, (Interdisciplinary Applications: Medicine, Humanities and Social Good)	
Fair and interpretable models for survival analysis	Md Mahmudur Rahman (University of Maryland Baltimore County); Sanjay Purushotham (University of Maryland, Baltimore County)*
SIPF: Sampling Method for Inverse Protein Folding	Tianfan Fu (Georgia Institute of Technology)*; Jimeng Sun (UIUC)
Antibody Complementarity Determining Regions (CDRs) design using Constrained Energy Model	Tianfan Fu (Georgia Institute of Technology)*; Jimeng Sun (UIUC)
Deconfounding Actor-Critic Network with Policy Adaptation for Dynamic Treatment Regimes	Changchang Yin (The Ohio State University)*; Ruoqi Liu (The Ohio State University); Jeffrey Caterino (The Ohio State University); Ping Zhang (The Ohio State University)
Predicting Opinion Dynamics via Sociologically-Informed Neural Networks	Maya Okawa (NTT)*; Tomoharu Iwata (NTT)
Incremental Cognitive Diagnosis for Intelligent Education	Shiwei Tong (University of Science and Technology of China (USTC))*; Jiayu Liu (University of Science and Technology of China); Yuting Hong (ustc); Zhenya Huang (University of Science and Technology of China); Le Wu (Hefei University of Technology); Qi Li

Tuesday, August 16, 1:30 PM-3:30 PM, Room 3, (Anomaly Detection)	
Detecting Cash-out Users via Dense Subgraphs	Yingsheng Ji (Tsinghua University)*; zheng zhang (China Etek Service & Technology); xinlei tang (Fudan university); Jiachen Shen (China Etek Service & Technology Co.,Ltd.); Xi Zhang (Beijing University of Posts and Telecommunications); Guangwen Yang (Tsin
Scaling Time Series Anomaly Detection to Trillions of Datapoints and Ultra-fast Arriving Data Streams	Yue Lu (University of California, Riverside)*; Renjie Wu (University of California, Riverside); Abdullah Mueen (University of New Mexico, USA); Maria A. Zuluaga (EURECOM); Eamonn Keogh (UC Riverside)
Adaptive Model Pooling for Online Deep Anomaly Detection from a Complex Evolving Data Stream	Susik Yoon (UIUC); Youngjun Lee (KAIST); Jae-Gil Lee (KAIST)*; Byung Suk Lee (University of Vermont)
Subset Node Anomaly Tracking over Large Dynamic Graphs	Xingzhi Guo (Stony Brook University)*; Baojian Zhou (Fudan University); Steven Skiena (Stony Brook University)
PAC-Wrap: Semi-Supervised PAC Anomaly Detection	Shuo Li (University of Pennsylvania)*; Xiayan Ji (University of Pennsylvania); Edgar Dobriban (University of Pennsylvania); Oleg Sokolsky (University of Penssylvania); Insup Lee (University of Pennsylvania)
Toward Learning Robust and Invariant Representations with Alignment Regularization and Data Augmentation	Haohan Wang (Carnegie Mellon University)*; Zeyi Huang (Carnegie Mellon University); Xindi Wu (Carnegie Mellon University); Eric Xing (MBZUAI, CMU, and Petuum Inc.)

Tuesday, August 16, 1:30 PM-3:30 PM, Room 4, (Spatio-Temporal Data)	
Modeling Network-level Traffic Flow Transitions on Sparse Data	Xiaoliang Lei (Xi'an Jiaotong University); hao mei (New jersey institue of technology); Bin Shi (Xi'an jiaotong University); Hua Wei (NJIT)*
Selective Cross-city Transfer Learning for Traffic Prediction via Source City Region Re-weighting	Yilun Jin (The Hong Kong University of Science and Technology)*; Kai Chen (HKUST); Qiang Yang (Hong Kong UST)
Semisupervised Drifted Stream Learning with Short Lookback	Weijieying Ren (universivity of Central Florida); Pengyang Wang (University of Macau); Xiaolin Li (Nanjing University); Charles E Hughes (University of Central Florida); Yanjie Fu (University of Central Florida)*
Human mobility prediction with causal and spatial-constrained multi-task network	Zongyuan Huang (Shanghai Jiao Tong University); Shengyuan Xu (Shanghai Jiao Tong University); Menghan Wang (ebay); Hansi Wu (eBay Inc.); Yaohui Jin (Shanghai Jiao Tong University); Yanyan Xu (Shanghai Jiao Tong Unniversity)*
TrajGAT: A Graph-based Long-term Dependency Modeling Approach for Trajectory Similarity Computation	Di Yao (Institute of Computing Technology, Chinese Academy of Sciences)*; Haonan Hu (Institute of Computing Technology, Chinese Academy of Sciences); Lun Du (Microsoft Research); Gao Cong (Nanyang Technological Univesity); Shi Han (Microsoft Research); Ji
Spatio-Temporal Trajectory Similarity Learning in Road Networks	Ziquan Fang (Zhejiang University); Yuntao Du (Zhejiang University); xinjun zhu (zhejiang university); Danlei Hu (Zhejiang University); Lu Chen (Zhejiang University); Yunjun Gao (Zhejiang University)*; Christian S Jensen (Aalborg University)

SESSION 3

Tuesday, August 16, 4:00 PM-6:00 PM, Room 1, (Classsification and Clustering)	
Contrastive Learning with Complex Heterogeneity	Lecheng Zheng (University of Illinois at Urbana-Champaign)*; Jinjun Xiong (University at Buffalo); Yada Zhu (IBM); Jingrui He (University of Illinois at Urbana-Champaign)

Delayed Feedback Modeling with a Time Window Assumption	Shota Yasui (Cyberagent)*; Masahiro Kato (Cyberagent / The University of Tokyo)
Partial Label Learning with Semantic Label Representations	Shuo He (University of Electronic Science and Technology of China); Lei Feng (Chongqing University); Fengmao Lv (Southwest Jiaotong University); Wen Li (University of Electronic Science and Technology of China); Guowu Yang (Big Data Research Center and Sc
A Generalized Backward-Compatibility Metric	Tomoya Sakai (IBM)*
On missing labels, long-tails and propensities in extreme multi-label classification	Erik Schultheis (Aalto University); Marek Wydmuch (Poznan University of Technology); Rohit Babbar (Aalto University); Krzysztof Dembczynski (Poznan University of Technology)*
HyperAid: Denoising in hyperbolic spaces for tree-fitting and hierarchical clustering	Eli Chien (UIUC)*; Puoya Tabaghi (University of Illinois at Urbana-Champaign); Olgica Milenkovic (University of Illinois UC)

Tuesday, August 16, 4:00 PM-6:00 PM, Room 2, (Deep Learning Applications)

ERNet: Unsupervised Collective Extraction and Registration in Neuroimaging Data	Yao Su (Worcester Polytechnic Institute)*; Zhentian Qian (Worcester Polytechnic Institute); Lifang He (Lehigh University); Xiangnan Kong (Worcester Polytechnic Institute)
Learned Token Reduction for Efficient Transformer Inference	Sehoon Kim (University of California, Berkeley)*; Sheng Shen (UC Berkeley); David Thorsley (Samsung Semiconductor, Inc.); Amir Gholami (UC Berkeley); Woosuk Kwon (UC Berkeley); Joseph Hassoun (Samsung Semiconductor, Inc.); Kurt Keutzer (EECS, UC Berkeley
Comprehensive Fair Meta-learned Recommender System	Tianxin Wei (University of Illinois Urbana Champaign)*; Jingrui He (University of Illinois at Urbana-Champaign)
Compute Like Humans: Interpretable Step-by-step Symbolic Computation with Deep Neural Network	Shuai Peng (Peking University)*; Di Fu (Bytedance); Yong CAO (Bytedance Inc.); Yijun Liang (ByteDance); Gu Xu (Bytedance Inc.); Liangcai Gao (Peking University); Zhi Tang (Peking University)
Group-wise Reinforcement Feature Generation for Optimal and Explainable Representation Space Reconstruction	Dongjie Wang (University of Central Florida)*; Yanjie Fu (University of Central Florida); Kunpeng Liu (University of Central Florida); Xiaolin Li (Nanjing University); Yan Solihin (University of Central Florida)
Probing Schema Linking Information from Pre-trained Language Models for Text-to-SQL Parsing	Lihan Wang (Chinese Academy of Sciences)*; Bowen Qin (Chinese Academy of Sciences); Binyuan Hui (Alibaba Group); Bowen Li (University of Edinburgh); Min Yang (Chinese Academy of Sciences); Bailin Wang (Unviersity of Edinburgh); Binhua Li (Alibaba Group)

Tuesday, August 16, 4:00 PM-6:00 PM, Room 3, (Deep Learning: New Architectures and Models)

Demystify Hyperparameters for Stochastic Optimization with Transferable Representations	Jianhui Sun (University of Virginia)*; Mengdi Huai (University of Virginia); Kishlay Jha (University of Virginia); Aidong Zhang (University of Virginia)
Global Self-Attention as a Replacement for Graph Convolution	Md Shamim Hussain (Rensselaer Polytechnic Institute)*; Mohammed Zaki (RPI); Dharmashankar Subramanian (IBM Research)
ROLAND: Graph Learning Framework for Dynamic Graphs	Jiaxuan You (Stanford University)*; Tianyu Du (Stanford University); Jure Leskovec (Stanford University)
Multi-fidelity Hierarchical Neural Processes	Dongxia Wu (University of California, San Diego)*; Matteo Chinazzi (Northeastern University); Alessandro Vespignani (Northeastern University); Yian Ma (UCSD); Rose Yu (University of California, San Diego)
Graph Neural Networks with Node-wise Architecture	Zhen Wang (Alibaba Group)*; Yaliang Li (Alibaba Group); Zhewei Wei (Renmin University of China); Weirui Kuang (Alibaba Group); Bolin Ding ("Data Analytics and Intelligence Lab, Alibaba Group")
Improving Social Network Embedding via New Second-Order Continuous Graph Neural Networks	Yanfu Zhang (University of Pittsburgh); Shangqian Gao (University of Pittsburgh); Jian Pei (Simon Fraser University); Heng Huang (University of Pittsburgh)*

Tuesday, August 16, 4:00 PM-6:00 PM, Room 4, (Ethics, Explainability and Society)

Explaining Recurrent Neural Networks by Learning Automata with Adaptive States	Dat Hong (The University of Iowa); Alberto Segre (The University of Iowa); Tong Wang (University of Iowa)*
Optimal Interpretable Clustering Using Oblique Decision Trees	Magzhan Gabidolla (University of California, Merced)*; Miguel A Carreira-Perpinan (UC Merced)
Fair Representation Learning: An Alternative to Mutual Information	Ji Liu (Nanjing University); Zenan Li (Nanjing University); Yuan Yao (Nanjing University)*; Feng Xu (Nanjing University); Xiaoxing Ma (Nanjing University); Miao Xu (University of Queensland); Hanghang Tong (University of Illinois at Urbana-Champaign)
Fair Labelled Clustering	Seyed A Esmaeili (University of Maryland, College Park)*; Sharmila Duppala (University of Maryland, College Park); Brian Brubach (Wellesley College); John P Dickerson (University of Maryland)
Learning Fair Representation via Distributional Contrastive Disentanglement	Changdae Oh (University of Seoul); Heeji Won (Korea University); Junhyuk So (University Of Seoul); Taero Kim (University of Seoul); Yewon Kim (University of Seoul); Hosik Choi (University of Seoul); Kyungwoo Song (University of Seoul)*
Adaptive Fairness-Aware Online Meta-Learning for Changing Environments	Chen Zhao (Kitware Inc.)*; Feng Mi (University of Texas at Dallas); Xintao Wu (University of Arkansas); Kai Jiang (University of Texas at Dallas); Latifur Khan (The university of Texas at Dallas); Feng Chen (UT Dallas)

SESSION 4

Wednesday, August 17, 10:00 AM-12:00 PM, Room 1, (Graph Mining)

Few-shot Heterogeneous Graph Learning via Cross-domain Knowledge Transfer	Qiannan Zhang (King Abdullah University of Science and Technology)*; Xiaodong Wu (King Abdullah University of Science and Technology); Qiang Yang (King Abdullah University of Science and Technology); Chuxu Zhang (Brandeis University); Xiangliang Zhang (Un
Multiplex Heterogeneous Graph Convolutional Network	Pengyang Yu (Ocean University of China); Chaofan Fu (Ocean University of China); Yanwei Yu (Ocean University of China)*; Chao Huang (University of Hong Kong); Junyu Dong (Ocean University of China)
Disentangled Heterogeneous Dynamic Graph Learning for Opioid Overdose Prediction	Qianlong Wen (University of Notre Dame)*; Zhongyu Ouyang (University of Notre Dame); Jianfei Zhang (University of Alberta); Yiyue Qian (University of Notre Dame); Yanfang Ye (University of Notre Dame); Chuxu Zhang (Brandeis University)
JuryGCN: Quantifying Jackknife Uncertainty on Graph Convolutional Networks	Jian Kang (University of Illinois at Urbana-Champaign)*; Qinghai Zhou (University of Illinois at Urbana-Champaign); Hanghang Tong (University of Illinois at Urbana-Champaign)

SL-VAE: Variational Autoencoder for Source Localization in Graph Information Diffusion	Chen Ling (Emory University)*; Junji Jiang (Tianjin University); Junxiang Wang (Emory University); Zhao Liang (Emory University)
Towards an Optimal Asymmetric Graph Structure for Robust Semi-supervised Node Classification	Zixing Song (The Chinese University of Hong Kong)*; Yifei Zhang (The Chinese University of Hong Kong); Irwin King (The Chinese University of Hong Kong)

Wednesday, August 17, 10:00 AM-12:00 PM, Room 2, (Time Series and Spatiotemporal Data)

Graph-Flashback Network for Next Location Recommendation	Xuan Rao (University of Electronic Science and Technology of China)*; Lisi Chen (KAUST); Yong Liu (Nanyang Technological University); Shuo Shang (KAUST); Bin Yao (Shanghai Jiao Tong University); Peng Han (KAUST)
MSDR: Multi-Step Dependency Relation Networks for Spatial Temporal Forecasting	Dachuan Liu (University of Electronic Science and Technology of China); Jin Wang (UCLA); Shuo Shang (KAUST); Peng Han (KAUST)*
Quantifying and Reducing Registration Uncertainty of Spatial Vector Labels on Earth Imagery	Wenchong He (University of Florida)*; Marcus Kriby (University of Alabama); Zhe Jiang (University of Florida); Yiqun Xie (The University of Maryland); Xiaowei Jia (University of Pittsburgh); Da Yan (University of Alabama at Birmingham); Yang Zhou (Auburn
Multi-Agent Graph Convolutional Reinforcement Learning for Dynamic Electric Vehicle Charging Pricing	Weijia Zhang (School of Computer Science, University of Science and Technology of China)*; Hao Liu (HKUST); Jindong Han (The Hong Kong University of Science and Technology); Yong Ge (The University of Arizona); Hui Xiong (Hong Kong University of Science a
Mining Spatio-Temporal Relations via Self-Paced Graph Contrastive Learning	Rongfan Li (School of Information and Software Engineering, University of Electronic Science and Technology of China); Xinke Jiang (University of Electronic Science and Technology of China); Fan Zhou (School of Information and Software Engineering, Univer
Beyond Point Prediction: Capturing Zero-Inflated & Heavy-Tailed Spatiotemporal Data with Deep Extreme Mixture Models	Tyler Wilson (Michigan State University); Andrew R McDonald (Michigan State University)*; Asadullah Hill Galib (Michigan State University); Pang-Ning Tan (Michigan State University); Lifeng Luo (Michigan State University)

Wednesday, August 17, 10:00 AM-12:00 PM, Room 3, (Deep Learning Applications)

Robust and Informative Text Augmentation (RITA) via Constrained Worst-Case Transformations for Low-Resource Named Entity Recognition	Hyunwoo Sohn (North Carolina State University)*; Baekkwan Park (The University of Missouri)
Deep Learning For Prognosis Using Task-fMRI: A Novel Architecture and Training Scheme	Ge Shi (UC Davis)*; Jason Smucny (University of California Davis); Ian Davidson (UC Davis)
Modeling Individual Decision-Making Style in Chess	Reid H McIlroy-Young (University of Toronto)*; Russell Wang (University of California, Berkeley); Siddhartha Sen (Microsoft Research); Jon Kleinberg (Cornell); Ashton Anderson (University of Toronto)
Robust Event Forecasting with Spatiotemporal Confounder Learning	Songgaojun Deng (STEVENS INSTITUTE OF TECHNOLOGY)*; Huzefa Rangwala (George Mason University); Yue Ning (Stevens Institute of Technology)
Physics-infused Machine Learning for Crowd Simulation	Guozhen Zhang (Tsinghua University)*; Zihan Yu (Tsinghua University); Depeng Jin (Tsinghua University); Yong Li (Tsinghua University)
Learning Binarized Graph Representations with Multi-faceted Quantization Reinforcement for Top-K Recommendation	Yankai Chen (The Chinese University of Hong Kong)*; Huifeng Guo (Huawei Noah's Ark Lab); Yingxue Zhang (Huawei Technologies Canada); Chen Ma (City University of Hong Kong); Ruiming Tang (Huawei Noah's Ark Lab); Jingjie Li (Huawei Noah's Ark Lab); Irwin Ki

Wednesday, August 17, 10:00 AM-12:00 PM, Room 4, (Online Learning and Transfer Learning)

S2RL: Do We Really Need to Perceive All States in Deep Multi-Agent Reinforcement Learning?	Shuang Luo (Zhejiang University); Yinchuan Li (Huawei NoahÕs Ark Lab); Jiahui Li (Zhejiang University); Kun Kuang (Zhejiang University); Furui Liu (Huawei Noah's Ark Lab); Yunfeng Shao (Huawei Noah's Ark Lab); Chao Wu (Zhejiang University)*
Neural Bandit with Arm Group Graph	Yunzhe Qi (University of Illinois at Urbana-Champaign)*; Yikun Ban (University of Illinois at Urbana-Champaign); Jingrui He (University of Illinois at Urbana-Champaign)
Domain Adaptation with Dynamic Open-Set Targets	Jun Wu (University of Illinois at UrbanaÐChampaign)*; Jingrui He (University of Illinois at Urbana-Champaign)
Active Model Adaptation Under Unknown Shift	Jie-Jing Shao (Nanjing University)*; Yunlu Xu (Hikvision Research Institute); Zhanzhan Cheng (Zhejiang University & Hikvision Research Institute); Yu-Feng Li (Nanjing University)
External Knowledge Infusion for Tabular Pre-training Models with Dual-adapters	Can Qin (Northeastern University)*; Sungchul Kim (Adobe); Handong Zhao (Adobe Research); Tong Yu (Adobe Research); Ryan A. Rossi (Adobe Research); YUN FU (Northeastern University)
Spatio-Temporal Graph Few-Shot Learning with Cross-City Knowledge Transfer	Bin Lu (Shanghai Jiao Tong University); Xiaoying Gan (Shanghai Jiao Tong University)*; Weinan Zhang (Shanghai Jiao Tong University); Huaxiu Yao (Stanford University); Luoyi Fu (Shanghai Jiao Tong University); Xinbing Wang (Shanghai Jiao Tong University)

Wednesday, August 17, 10:00 AM -12:00 PM, Room 5, (Few Shot Learning)

Collaboration Equilibrium in Federated Learning	Sen Cui (Department of Automation, Tsinghua University)*; Jian Liang (Alibaba Group); Weishen Pan (Tsinghua University); Kun Chen (University of Connecticut); Changshui Zhang (Tsinghua University); Fei Wang (Cornell University)
Connected Low-Loss Subspace Learning for a Personalization in Federated Learning	Seok-Ju Hahn (Ulsan National Institute of Science and Technology); Minwoo Jeong (Kakao Enterprise); Junghye Lee (Ulsan National Institute of Science and Technology)*
FedMSplit: Correlation-Adaptive Federated Multi-Task Learning across Multimodal Split Networks	Jiayi Chen (University of Virginia)*; Aidong Zhang (University of Virginia)
p-Meta: Towards On-device Deep Model Adaptation	Zhongnan Qu (ETH Zurich)*; Zimu Zhou (Singapore Management University); Yongxin Tong (Beihang University); Lothar Thiele (ETH ZŸrich)
Dual Bidirectional Graph Convolutional Networks for Zero-shot Node Classification	Qin Yue (Shanxi University); Jiye Liang (Shanxi University)*; Junbiao Cui (Shanxi University); Liang Bai (Shanxi University, China)
Finding Meta Winning Ticket to Train Your MAML	Dawei Gao (Alibaba-inc); Yuexiang Xie (Alibaba Group)*; Zimu Zhou (Singapore Management University); Zhen Wang (Alibaba Group); Yaliang Li (Alibaba Group); Bolin Ding ("Data Analytics and Intelligence Lab, Alibaba Group")

SESSION 5

Wednesday, August 17, 1:30 PM-3:30 PM, Room 1, (Text Mining)	
SagDRE: Sequence-Aware Graph-Based Document-Level Relation Extraction with Adaptive Margin Loss	Ying Wei (Iowa State University)*; Qi Li (Iowa State University)
Variational Graph Author Topic Modeling	Delvin Ce Zhang (Singapore Management University)*; Hady Lauw (Singapore Management University)
Label-enhanced Prototypical Network with Contrastive Learning for Multi-label Few-shot Aspect Category Detection	Han Liu (Dalian University of Technology)*; Feng Zhang (Peking University); Xiaotong Zhang (Dalian University of Technology); Siyang Zhao (Dalian University of Technology); Junjie Sun (Dalian University of Technology); Hong Yu (Dalian University of Techno
Open-Domain Aspect-Opinion Co-Mining with Double-Layer Span Extraction	Adithya Mr. Kulkarni (Iowa State University)*; Mohna Chakraborty (Iowa State University); Qi Li (Iowa State University)
Unsupervised Key Event Detection from Massive Text Corpus	Yunyi Zhang (University of Illinois at Urbana-Champaign)*; Fang Guo (Westlake University); Jiaming Shen (Google Research); Jiawei Han (UIUC)
Few-Shot Fine-Grained Entity Typing with Automatic Label Interpretation and Instance Generation	Jiaxin Huang (University of Illinois Urbana-Champaign)*; Yu Meng (University of Illinois Urbana-Champaign); Jiawei Han (UIUC)
Wednesday, August 17, 1:30 PM-3:30 PM, Room 2, (Graph Mining)	
Joint Knowledge Graph Completion and Question Answering	Lihui Liu (University of Illinois at Urbana-Champaign)*; Boxin Du (University of Illinois at Urbana-Champaign); Jiejun Xu (HRL); Yinglong Xia (Facebook); Hanghang Tong (University of Illinois at Urbana-Champaign)
Learning Causal Effects on Hypergraphs	Jing Ma (University of Virginia)*; Mengting Wan (Microsoft); Longqi Yang (Microsoft); Jundong Li (University of Virginia); Brent Hecht (Microsoft); Jaime Teevan (Microsoft)
Meta-Learned Metrics over Multi-Evolution Temporal Graphs	Dongqi Fu (University of Illinois at Urbana-Champaign)*; Liri Fang (University of Illinois Urbana-Champaign); Ross Maciejewski (Arizona State University); Vetle I Torvik (University of Illinois at Urbana-Champaign); Jingrui He (University of Illinois at
On Structural Explanation of Bias in Graph Neural Networks	Yushun Dong (University of Virginia)*; Song Wang (University of Virginia); Yu Wang (Vanderbilt university); Tyler Derr (Vanderbilt University); Jundong Li (University of Virginia)
Accurate Node Feature Estimation with Structured Variational Graph Autoencoder	Jaemin Yoo (Carnegie Mellon University)*; Hyunsik Jeon (Seoul National University); Jinhong Jung (Jeonbuk National University); U Kang (Seoul National University)
GUIDE: Group Equality Informed Individual Fairness in Graph Neural Networks	Weihao Song (University of Virginia)*; Yushun Dong (University of Virginia); Ninghao Liu (University of Georgia); Jundong Li (University of Virginia)
Wednesday, August 17, 1:30 PM-3:30 PM, Room 3, (Mining, Inference and Learning)	
Detecting Arbitrary Order Beneficial Feature Interactions for Recommender Systems	Yixin Su (The University of Melbourne)*; Yunxiang Zhao (The University of Melbourne); Sarah Erfani (University of Melbourne); Junhao Gan (University of Melbourne); Rui Zhang (ruizhang.info)
pureGAM: Learning an Inherently Pure Additive Model	Xingzhi Sun (Yale University)*; Ziyu Wang (Peking University); Rui Ding (Microsoft Research); Shi Han (Microsoft Research); Dongmei Zhang (Microsoft Research Asia)
Balancing Bias and Variance for Active Weakly Supervised Learning	Hitesh Sapkota (Rochester Institute of Technology); Qi Yu (Rochester Institute of Technology)*
Training Graph Neural Networks in Extreme Low-Data Regime	Danning Lao (Shanghai Jiao Tong University)*; Xinyu Yang (Shanghai Jiao Tong University); Qitian Wu (Shanghai Jiao Tong University); Junchi Yan (Shanghai Jiao Tong University)
Practical Counterfactual Policy Learning for Top-K Recommendations	Yaxu Liu (National Taiwan University)*; Jui-Nan Yen (National Taiwan University); Bowen Yuan (National Taiwan University); Rundong Shi (Meituan); Peng Yan (Meituan); Chih-Jen Lin (National Taiwan University)
Wednesday, August 17, 1:30 PM-3:30 PM, Room 4, (Recommendation Systems)	
Addressing Unmeasured Confounder for Recommendation with Sensitivity Analysis	Sihao Ding (University of Science and Technology of China)*; Peng Wu (Peking University); Fuli Feng (University of Science and Technology of China); Yitong Wang (University of Science and Technology of China); Xiangnan He (University of Science and Techno
Towards Representation Alignment and Uniformity in Collaborative Filtering	Chenyang Wang (Tsinghua University)*; Yuanqing Yu (Tsinghua University); Weizhi Ma (Tsinghua University); Min Zhang (Tsinghua University); Chong Chen (Tsinghua University); Yiqun LIU (Tsinghua University); Shaoping Ma (Tsinghua University)
A Generalized Doubly Robust Learning Framework for Debiasing Post-Click Conversion Rate Prediction	Quanyu Dai (Huawei Noah's Ark Lab)*; Peng Wu (Peking University); Haoxuan Li (Peking University); Zhenhua Dong (Huawei Noah's Ark Lab); Xiao-Hua Zhou (Peking University); Rui Zhang (ruizhang.info); Rui zhang (Huawei Technologies Co., Ltd.); Jie Sun (Theor
CoRGi: Content-Rich Graph Neural Networks with Attention	Jooyeon Kim (RIKEN)*; Angus Lamb (Microsoft); Simon Woodhead (Eedi); Simon Pyton Jones (Microsoft); Cheng Zhang (Microsoft); Miltiadis Allamanis (MSR Cambridge)
Knowledge-enhanced Black-box Attacks for Recommendations	Jingfan Chen (Nanjing University)*; Wenqi FAN (The Hong Kong Polytechnic University); Guanghui Zhu (Nanjing University); Xiangyu Zhao (City University of Hong Kong); Chunfeng Yuan (Nanjing University); Qing Li (The Hong Kong Polytechnic University); Yih
Towards Universal Sequence Representation Learning for Recommender Systems	Yupeng Hou (Renmin University of China)*; Shanlei Mu (Renmin University of China); Wayne Xin Zhao (Renmin University of China); Yaliang Li (Alibaba Group); Bolin Ding ("Data Analytics and Intelligence Lab, Alibaba Group"); Ji-Rong Wen (Renmin University o
Wednesday, August 17, 1:30 PM-3:30 PM, Room 5 , (Graph and Networks)	
Ultrahyperbolic Knowledge Graph Embeddings	Bo Xiong (University of Stuttgart)*; Shichao Zhu (Institute of Information Engineering, Chinese Academy of Sciences); Mojtaba Nayyeri (University of Stuttgart); Chengjin Xu (University of Bonn); Shirui Pan (Monash University); Chuan Zhou (Chinese Academy
Core-periphery Partitioning and Quantum Annealing	Catherine F Higham (University of Glasgow); Desmond J Higham (University of Edinburgh); Francesco Tudisco (Gran Sasso Science Institute)*
A Spectral Representation of Networks: The Path of Subgraphs	Shengmin Jin (Syracuse University)*; Hao Tian (Syracuse University); Jiayu Li (Syracuse University); Reza Zafarani (Syracuse University)

Enhancing Machine Learning Approaches for Graph Optimization Problems with Diversifying Graph Augmentation	Chen-Hsu Yang (National Tsing Hua University); Chih-Ya Shen (National Tsing Hua University)*
CLARE: A Semi-supervised Community Detection Algorithm	Xixi Wu (Fudan University)*; Yao Zhang (Fudan Univeristy); Yun Xiong (Fudan University); Yizhu Jiao (Fudan University); Caihua Shan (microsoft); Yangyong Zhu (Fudan University); Philip S Yu (UIC)
Efficient Join Order Selection Learning with Graph-based Representation	Jin Chen (University of Electronic Science and Technology of China(UESTC)); Guanyu Ye (University of Electronic Science and Technology of China); Yan Zhao (Aalborg University); Shuncheng Liu (University of Electronic Science and Technology of China); Liwe

SESSION 6

Thursday, August 18, 10:00 AM-12:00 PM, Room 1, (Graph Mining)

COSTA: Covariance-Preserving Feature Augmentation for Graph Contrastive Learning	Yifei Zhang (The Chinese University of Hong Kong)*; Hao Zhu (Australian National University); Zixing Song (The Chinese University of Hong Kong); Piotr Koniusz (ANU College of Engineering and Computer Science); Irwin King (The Chinese University of Hong Ko
RLogic: Recurrent Logical Rule Learning from Knowledge Graphs	Kewei Cheng (UCLA)*; Jiahao Liu (Tongji University); Wei Wang (UCLA); Yizhou Sun (UCLA)
Nimble GNN Embedding with Tensor-Train	Chunxing Yin (Georgia Institute of Technology)*; Da Zheng (Amazon); Israt Nisa (Amazon); Christos Faloutsos (Amazon); George Karypis (Amazon); Richard Vuduc (Georgia Institute of Technology)
Condensing Graphs via One-Step Gradient Matching	Wei Jin (Michigan State University)*; Xianfeng Tang (Amazon); Haoming Jiang (Georgia Tech); Zheng Li (Amazon); Danqing Zhang (Amazon); Jiliang Tang (Michigan State University); Bing Yin (Amazon)
Graph Structural Attack by Perturbing Spectral Distance	Lu Lin (University of Virginia)*; Ethan Blaser (University of Virginia); Hongning Wang (University of Virginia)
Feature Overcorrelation in Deep Graph Neural Networks: A New Perspective	Wei Jin (Michigan State University)*; Xiaorui Liu (Michigan State University); Yao Ma (Michigan State University); Charu Aggarwal (IBM); Jiliang Tang (Michigan State University)

Thursday, August 18, 10:00 AM-12:00 PM, Room 2, (Mining, Inference and Learning)

Sample-Efficient Kernel Mean Estimator with Marginalized Corrupted Data	Xiaobo Xia (The University of Sydney)*; Shuo Shan (Southeast University); Mingming Gong (University of Melbourne); Nannan Wang (Xidian University); Fei Gao (Hangzhou Dianzi University); Haikun Wei (Southeast University); Tongliang Liu (The University of
Non-stationary A/B Tests	Yuhang Wu (Department of Industrial Engineering and Operations Research, University of California, Berkeley); Guangyu Zhang (Amazon); Zeyu Zheng (Department of Industrial Engineering and Operations Research, University of California, Berkeley)*; Zuohua Zh
Nonlinearity Encoding for Extrapolation of Neural Networks	Gyoung S. Na (KRICT)*; Chanyoung Park (KAIST)
Batch Stochastic Bin Packing in Cloud: A Chance-constrained Optimization Approach	Jie Yan (Microsoft Research)*; Yunlei Lu (MSRA); Liting Chen (Microsoft); Si Qin (Microsoft Research); Yixin Fang (Microsoft); Qingwei Lin (Microsoft Research); Thomas Moscibroda (Microsoft, USA); Saravan Rajmohan (Microsoft 365); Dongmei Zhang (Microsoft
LinE: Logical Query Reasoning over Hierarchical Knowledge Graphs	Zijian Huang (University of Auckland); Meng-Fen Chiang (University of Auckland)*; Wang-Chien Lee (Pennsylvania State University, USA)
Learning Task-relevant Representations for Generalization via Characteristic Functions of Reward Sequence Distributions	Rui Yang (University of Science and Technology of China); Jie Wang (University of Science and Technology of China)*; Zijie Geng (University of Science and Technology of China); Mingxuan Ye (University of Science and Technology of China); Shuiwang Ji (Texa

Thursday, August 18, 10:00 AM-12:00 PM, Room 3, (Recommendation Systems)

Towards Unified Conversational Recommender Systems via Knowledge-Enhanced Prompt Learning	Xiaolei Wang (Renmin University of China); Kun Zhou (Renmin University of China); Ji-Rong Wen (Renmin University of China); Wayne Xin Zhao (Renmin University of China)*
Debiasing Learning for Membership Inference Attacks Against Recommender Systems	Zihan Wang (Shandong University)*; Na Huang (Shandong University); Fei Sun (Alibaba Group); Pengjie Ren (Shandong University); Zhumin Chen (Shandong University); Hengliang Luo (Meituan); Maarten de Rijke (University of Amsterdam); Zhaochun Ren (Shandong U
BLISS: A Billion scale Index using Iterative Re-partitioning	Gaurav Gupta (Rice University)*; Tharun Medini (ThirdAI Corp.); Anshumali Shrivastava (Rice University); Alex J Smola (Amazon)
Debiasing the Cloze Task in Sequential Recommendation with Bidirectional Transformers	Khalil Damak (University of Louisville)*; Sami Khenissi (University of Louisville); Olfa Nasraoui (university of Louisville)
User-Event Graph Embedding Learning for Context-Aware Recommendation	Dugang Liu (Shenzhen University)*; Mingkai He (Shenzhen University); Jinwei Luo (Shenzhen University); Jiangxu Lin (Southeast University); Meng Wang (Southeast University); Xiaolian Zhang (Huawei 2012 lab); Weike Pan (Shenzhen University); Zhong Ming (She
Aligning Dual Disentangled User Representations from Ratings and Textual Content	Nhu-Thuat Tran (Singapore Management University)*; Hady Lauw (Singapore Management University)

Thursday, August 18, 10:00 AM-12:00 PM, Room 4, (Unstructured and Temporal Data)

Knowledge Enhanced Search Result Diversification	Zhan Su (Renmin University of China)*; Zhicheng Dou (Renmin University of China); Yutao Zhu (UniversitŽ de MontrŽal); Ji-Rong Wen (Renmin University of China)
Mask and Reason: Pre-Training Knowledge Graph Transformers for Complex Logical Queries	Xiao Liu (Tsinghua University)*; Shiyu Zhao (Tsinghua University); Kai Su (Tsinghua University); Yukuo Cen (Tsinghua University); Jiezhong Qiu (Tencent); Mengdi Zhang (Meituan-Dianping Group); Wei Wu (Meituan-Dianping Group); Yuxiao Dong (Tsinghua Univers
Learning the Evolutionary and Multi-scale Graph Structure for Multivariate Time Series Forecasting	Junchen Ye (Beihang University)*; Zihan Liu (Beihang University); Bowen Du (Beihang Univeristy); Leilei Sun (Beihang Univerisity); Weimiao Li (BeiHang University); Yanjie Fu (University of Central Florida); Hui Xiong (Hong Kong University of Science and
Task-Aware Reconstruction for Time-Series Transformer	Ranak Roy Chowdhury (University of California, San Diego)*; Xiyuan Zhang (University of California, San Diego); Jingbo Shang (UC San Diego); Rajesh Gupta (UC San Diego); Dezhi Hong (UC San Diego)
Multi-Variate Time Series Forecasting on Variable Subsets	Jatin Chauhan (Google AI)*; Aravindan Raghuveer (Google Research); Rishi Saket (Google Research); Jay Nandy (Google Research); Balaraman Ravindran (Indian Institute of Technology, Madras)
ProActive: Self-Attentive Temporal Point Process Flows for Activity Sequences	Vinayak Gupta (IIT Delhi)*; Srikanta Bedathur (IIT Delhi)

Thursday, August 18, 10:00 AM-12:00 PM, Room 5, (Ethics, Explainabiliy and Fairness)	
Fair Ranking as Fair Division: Impact-Based Individual Fairness in Ranking	Yuta Saito (Cornell University)*; Thorsten Joachims (Cornell)
Make Fairness More Fair: Fair Item Utility Estimation and Exposure Re-Distribution	Jiayin Wang (Tsinghua University)*; Weizhi Ma (Tsinghua University); Jiayu Li (Tsinghua University); Hongyu Lu (Tsinghua University); Min Zhang (Tsinghua University); Biao Li (Kuaishou Inc.); Yiqun LIU (Tsinghua University); Peng Jiang (Kuaishou Inc.); Sh
Fair View Graph Neural Network for Fair Node Representation Learning	Yu Wang (Vanderbilt university)*; Yuying Zhao (Vanderbilt university); Yushun Dong (University of Virginia); Huiyuan Chen (Case Western Reserve University); Jundong Li (University of Virginia); Tyler Derr (Vanderbilt University)
Invariant Preference Learning for General Debiasing in Recommendation	Zimu Wang (Tsinghua University)*; Yue He (Tsinghua University); Jiashuo Liu (Tsinghua University); Wenchao Zou (Siemens China); Philip S Yu (UNIVERSITY OF ILLINOIS AT CHICAGO); Peng Cui (Tsinghua University)
RES: A Robust Framework for Visual Explanation Supervision	Yuyang Gao (Emory University)*; Tong Sun (George Mason University); Guangji Bai (Emory University); Siyi Gu (Emory University); Sungsoo Hong (George Mason University); Zhao Liang (Emory University)
ExMeshCNN: An Explainable Convolutional Neural Network Architecture for 3D Shape Analysis	SeongGyeom Kim (Hanyang University); Dong-Kyu Chae (Hanyang University)*

Thursday, August 18, 10:00 AM-12:00 PM, Room 6, (Potpourri Applications)	
Robust Inverse Framework using Self-Supervised Learning: An application to Hydrology	Rahul Ghosh (University of Minnesota)*; Arvind Renganathan (University of Minnesota); Kshitij Tayal (University of Minnesota); Xiang Li (University of Minnesota Twin Cities); Ankush Khandelwal (University of Minnesota); Xiaowei Jia (University of Pittsbur
Domain Adaptation in Physical Systems via Graph Kernel	Haoran Li (Arizona State University)*; Hanghang Tong (University of Illinois at Urbana-Champaign); Yang Weng (Arizona State University)
State Dependent Parallel Neural Hawkes Process for Limit Order Book Event Stream Prediction and Simulation	Zijian Shi (University of Bristol)*; John Cartlidge (University of Bristol)
Sparse Conditional Hidden Markov Model for Weakly Supervised Named Entity Recognition	Yinghao Li (Georgia Institute of Technology)*; Le Song (Biomap & MBZUAI); Chao Zhang (Georgia Institute of Technology)
Knowledge-Guided Pre-training of Graph Transformer for Molecular Property Prediction	Han Li (Tsinghua University); Dan Zhao (Tsinghua University); Jianyang Zeng (Tsinghua)*
Intrinsic-Motivated Sensor Management: Exploring with Physical Surprise	Jingyi Yuan (Arizona State University)*; Yang Weng (Arizona State University); Erik Blasch (AFRL)

SESSION 7

Thursday, August 18, 1:30 PM-3:30 PM, Room 1, (Mining, Inference, and Learning)	
Efficient Approximate Algorithms for Empirical Variance with Hashed Block Sampling	Xingguang Chen (The Chinese University of Hong Kong); Fangyuan ZHANG (The Chinese Univesity of Hong Kong); Sibo Wang (The Chinese University of Hong Kong)*
Discovering Significant Patterns under Sequential False Discovery Control	Sebastian Dalleiger (CISPA Helmholtz Center for Information Security)*; Jilles Vreeken (CISPA Helmholtz Center for Information Security)
Flexible Modeling and Multitask Learning using Differentiable Tree Ensembles	Shibal Ibrahim (Massachusetts Institute of Technology)*; Hussein Hazimeh (MIT); Rahul Mazumder (Massachusetts Institute of Technology)
How does Heterophily Impact Robustness of Graph Neural Networks? Theoretical Connections and Practical Implications	Jiong Zhu (University of Michigan)*; Junchen Jin (University of Michigan, Ann Arbor); Donald Loveland (University of Michigan Ann Arbor); Michael Schaub (RWTH Aachen University); Danai Koutra (U Michigan)
Saliency-regularized Deep Multi-task Learning	Guangji Bai (Emory University)*; Zhao Liang (Emory University)
Geometric Policy Iteration for Markov Decision Processes	Yue Wu (UC Davis)*; Jesus de Loera (UC Davis)

Thursday, August 18, 1:30 PM-3:30 PM, Room 2, (Data Cleaning, Transformation and Integration)	
Evaluating Knowledge Graph Accuracy Powered by Optimized Human-machine Collaboration	Yifan Qi (Fudan University); Weiguo Zheng (Fudan University)*; Liang Hong ("Wuhan University, China"); Lei Zou (Peking University)
Communication-Efficient Robust Federated Learning with Noisy Labels	Junyi Li (University of Pittsburgh); Jian Pei (Simon Fraser University); Heng Huang (University of Pittsburgh)*
In Defense of Core-set: A Density-aware Core-set Selection for Active Learning	Yeachan Kim (Deargen Inc.)*; Bonggun Shin (Deargen Inc.)
HyperLogLogLog: Cardinality Estimation With One Log More	Matti Karppa (IT University of Copenhagen)*; Rasmus Pagh (University of Copenhagen)
Learning Optimal Priors for Task-Invariant Representations in Variational Autoencoders	Hiroshi Takahashi (NTT Computer and Data Science Laboratories)*; Tomoharu Iwata (NTT); Atsutoshi Kumagai (NTT Computer and Data Science Laboratories); Sekitoshi Kanai (NTT); Masanori Yamada (NTT Social Informatics Laboratories); Yuuki Yamanaka (NTT Social
PARSRec: Explainable Personalized Attention-fused Recurrent Sequential Recommendation Using Session Partial Actions	Ehsan Gholami (University of California, Davis)*; Mohammad Motamedi (University of California, Davis); Ashwin Aravindakshan (University of California-Davis)

Thursday, August 18, 1:30 PM-3:30 PM, Room 3, (Clustering, Imbalanced Data and Tensors)	
The DipEncoder: Enforcing Multimodality in Autoencoders	Collin Leiber (LMU Munich)*; Lena Greta Marie Bauer (University of Vienna, ds:UniVie); Michael Neumayr (LMU Munich); Claudia Plant (University of Vienna, Austria); Christian Boehm (University of Munich)
Clustering with fair center representation: parameterized approximation algorithms and heuristics	Suhas Thejaswi (Aalto Univeristy)*; Ameet Gadekar (Aalto University); Bruno Ordozgoiti (Queen Mary University of London); Micha_ Osadnik (Aalto University)
An Embedded Feature Selection Framework for Control	Jiawen Wei (Central South University); Fangyuan Wang (Zhejiang Sci-Tech University); Wanxin Zeng (Central South university); Wenwei Lin (Central South University); Ning Gui (Central South University)*

SOS: Score-based Oversampling Minor Classes for Tabular Data	jayoung kim (Yonsei University); ChaeJeong Lee (Yonsei University); Yehjin Shin (Yonsei University); Sewon Park (Samsung SDS); Minjung Kim (Samsung SDS); Noseong Park (Yonsei University, Korea)*; Jihoon Cho (Samsung SDS)
Low-rank Nonnegative Tensor Decomposition in Hyperbolic Space	Bo Hui (Auburn University)*; Wei-Shinn Ku (Auburn University)
Robust Tensor Graph Convolutional Networks via T-SVD based Graph Augmentation	Zhebin Wu (Sun Yat-Sen University)*; Lin Shu (Sun Yat-sen University); Ziyue Xu (Sun Yat-Sen University); Yaomin Chang (Sun Yat-sen University); Chuan Chen (Sun Yat-sen University); Zibin Zheng (Sun Yat-sen University)

Thursday, August 18, 1:30 PM-3:30 PM, Room 4, (User Modeling, Knowledge and Ontologies, Web and Commerce)

CrossCBR: Cross-view Contrastive Learning for Bundle Recommendation	Yunshan Ma (National University of Singapore)*; Yingzhi He (National University of Singapore); An Zhang (National University of Singapore); Xiang Wang (National University of Singapore); Tat-Seng Chua (National university of Singapore)
HICF: Hyperbolic Informative Collaborative Filtering	Menglin Yang (The Chinese University of Hong Kong)*; Li Zhihao (Harbin Institute of Technology, Shenzhen); Min Zhou (Huawei Technologies co. ltd); Jiahong Liu (Harbin Institute of Technology(Shenzhen)); Irwin King (The Chinese University of Hong Kong)
Dual-Geometric Space Embedding Model for Two-View Knowledge Graphs	Roshni Iyer (University of California, Los Angeles)*; Yunsheng Bai (University of California, Los Angeles); Wei Wang (UCLA); Yizhou Sun (UCLA)
Disentangled Ontology Embedding for Zero-shot Learning	Yuxia Geng (Zhejiang University)*; Jiaoyan Chen (University of Oxford); Wen Zhang (Zhejiang University); yajing xu (zhejiang university); Zhuo Chen (Zhejiang University); Jeff Z. Pan (The University of Edinburgh); yufeng huang (Zhejiang University); Feiyu
Scalar is Not Enough: Vectorization-based Unbiased Learning to Rank	Mouxiang Chen (Zhejiang University)*; Chenghao Liu (Salesforce); Zemin Liu (Singapore Management University); Jianling Sun (Zhejiang University)
Learning Relevant Information in Conversational Search and Recommendation using Deep Reinforcement Learning	Ali Montazeralghaem (University of Massachusetts Amherst)*; James Allan (University of Massachusetts Amherst)

Thursday, August 18, 1:30 PM-3:30 PM, Room 5 , (Time Series and Streaming Data)

Local Evaluation of Time Series Anomaly Detection Algorithms	Alexis Huet (Huawei Technologies France)*; Jose M Navarro (Huawei Technologies Co. Ltd.); dario rossi (Huawei)
Learning to Rotate: Quaternion Transformer for Complicated Periodical Time Series Forecasting	Weiqi Chen (Alibaba Group)*; Wenwei WANG (Alibaba Group); Bingqing Peng (Alibaba Group); Qingsong Wen (Alibaba Group U.S.); Tian Zhou (Alibaba DAMO Academy); Liang Sun (Alibaba Group)
Learning Differential Operators for Interpretable Time Series Modeling	Yingtao Luo (Carnegie Mellon University)*; Chang Xu (Microsoft); Yang Liu (Microsoft); Weiqing Liu (Microsoft Research); Shun Zheng (Microsoft Research); Jiang Bian (Microsoft Research)
Non-stationary Time-aware Kernelized Attention for Temporal Event Prediction	Yu Ma (AntGroup)*; Zhining Liu (Ant Group); Chenyi Zhuang (Ant Financial); Yize Tan (Ant Financial Services Group); Yi Dong (Ant Financial Services Group); WENLIANG ZHONG (Ant Group); Jinjie Gu (Ant Group)
RL2: A Call for Simultaneous Representation Learning and Rule Learning for Graph Streams	Qu Liu (University of Massachusetts, Lowell); Tingjian Ge (University of Massachusetts, Lowell)*
Streaming Hierarchical Clustering based on Point-set Kernel	Xin Han (University of Macau); Ye Zhu (Deakin University)*; Kai Ming Ting (Nanjing University); De-Chuan Zhan (Nanjing University); Gang Li (Deakin Univeristy, Australia)

Special Session: All Other Papers Accepted in Research Track

Paper ID	Paper Title	Authors
	Sufficient Vision Transformer	Zhi Cheng (The University of Sydney)*; Xiu Su (University of Sydney); XUEYU WANG (The University of Sydney); Shan You (SenseTime); Chang Xu (University of Sydney)
	Estimating Individualized Causal Effect with Confounded Instruments	Haotian Wang (National University of Defense Technology)*; Wenjing Yang (National University of Defense Technology); Longqi Yang (National University of Defense Technology); Anpeng Wu (Zhejiang University); liyang xu (National University of Defense Techno
	MDP2 Forest: A Constrained Continuous Multi-dimensional Policy Optimization Approach for Short-video Recommendation	Sizhe Yu (Shanghai University of Finance and Economics)*; Ziyi Liu (School of Statistics, Renmin University of China); Shixiang Wan (Tencent); zero Jay (Tencent); Zang Li (DiDi AI Labs, Didi Chuxing); Fan Zhou (Shanghai University of Finance and Economics
	FLDetector: Detecting Malicious Clients in Federated Learning via Checking Model-Updates Consistency	ZAIXI ZHANG (University of Science and Technology of China)*; Xiaoyu Cao (Duke University); Jinyuan Jia (Duke University); Neil Zhenqiang Gong (Duke University)
	Adaptive Learning for Weakly Labeled Streams	Zhen-Yu Zhang (Nanjing University)*; Yu-Yang Qian (Nanjing University); Yu-Jie Zhang (Nanjing University); Yuan Jiang (Nanjing University); Zhi-Hua Zhou (Nanjing University)
	MetaPTP: An Adaptive Meta-optimized Model for Personalized Spatial Trajectory Prediction	Yuan Xu (Soochow University)*; Jiajie Xu (Soochow University); Jing ZHAO (HKUST); Kai Zheng (University of Electronic Science and Technology of China); An Liu (Soochow University); Lei Zhao (Soochow University); Xiaofang Zhou (The Hong Kong University of
	Partial Label Learning with Discrimination Augmentation	Wei Wang (Southeast University); Min-Ling Zhang (Southeast University)*
	UD-GNN: Uncertainty-aware Debiased Training on Semi-Homophilous Graphs	Yang Liu (Institute of Computing Technology_Chinese Academy of Sciences)*; Xiang Ao (Institute of Computing Technology, CAS); Fuli Feng (University of Science and Technology of China); Qing He (Institute of Computing Technology, Chinese Academy of Scienc
	Unified 2D and 3D Pre-Training of Molecular Representations	Jinhua Zhu (University of Science and Technology of China); Yingce Xia (Microsoft Research Asia)*; Lijun Wu (Microsoft Research); Shufang Xie (Microsoft Research Asia); Tao Qin (Microsoft Research Asia); Wengang Zhou (University of Science and Technology
	On Aligning Tuples for Regression	Chenguang Fang (Tsinghua University); Shaoxu Song (Tsinghua University)*; Yinan Mei (Tsinghua University); Ye Yuan (Beijing Institute of Technology); Jianmin Wang ("Tsinghua University, China")

Toward Real-life Dialogue State Tracking Involving Negative Feedback Utterances	Puhai Yang (Beijing Institute of Technology)*; Heyan Huang (Beijing Institute of Technology); Wei Wei (Huazhong University of Science and Technology); Xian-Ling Mao (Beijing Institute of Technology)
M3Care: Learning with Missing Modalities in Multimodal Healthcare Data	Chaohe Zhang (Peking University)*; Xu Chu (Peking University); Liantao Ma (Peking University); Yinghao Zhu (Beihang University); Yasha Wang (Peking University); Jiangtao Wang (Coventry University); Junfeng Zhao (peking university)
Counteracting User Attention Bias in Music Streaming Recommendation via Reward Modification	Xiao Zhang (Renmin University of China); Sunhao Dai (Renmin University of China); Jun Xu (Renmin University of China)*; Zhenhua Dong (Huawei Noah's Ark Lab); Quanyu Dai (Huawei Noah's Ark Lab); Ji-Rong Wen (Renmin University of China)
Pre-training Enhanced Spatial-temporal Graph Neural Network for Multivariate Time Series Forecasting	Zezhi Shao (Institute of Computing Technology, Chinese Academy of Sciences)*; Zhao Zhang (Institute of Computing Technology, Chinese Academy of Sciences); Fei Wang (Institute of Computing Technology, Chinese Academy of Sciences); yongjun xu (Institute of
Practical Lossless Federated Singular Vector Decomposition Over Billion-Scale Data	Di Chai (HKUST)*; Leye Wang (Peking University, China); Junxue Zhang (HKUST); Liu Yang (HKUST); Shuowei Cai (HKUST); Kai Chen (HKUST); Qiang Yang (Hong Kong UST)
HierCDF: A Bayesian Network-based Hierarchical Cognitive Diagnosis Framework	___ Jiatong (University of Science and Technology of China)*; Fei Wang (University of Science and Technology of China); Qi Liu (" University of Science and Technology of China, China"); Mengxiao Zhu (University of Science and Technology of China); Wei Hua
Multi-View Clustering for Open Knowledge Base Canonicalization	Wei Shen (Nankai University)*; Yang Yang (Nankai university); Yinan Liu (Nankai University)
OODGAT: Learning on Graphs with Out-of-distribution Nodes	Yu Song (Westlake University)*; Donglin Wang (Westlake University)
Adversarial Gradient Driven Exploration for Deep Click-Through Rate Prediction	Kailun Wu (Alibaba Group)*; Weijie Bian (Alibaba Group); Zhangming Chan (Alibaba Group); Lejian Ren (Alibaba Group); SHIMING XIANG (Chinese Academy of Sciences, China); Shu-Guang Han (Alibaba Group); Hongbo Deng (Alibaba Group); Bo Zheng (Alibaba Group)
Multi-modal Siamese Network for Entity Alignment	Liyi Chen (University of Science and Technology of China)*; Zhi Li (University of Science and Technology of China); Tong Xu (University of Science and Technology of China); Han Wu (University of Science and Technology of China); Zhefeng Wang (Huawei Cloud
Stabilizing Voltage in Power Distribution Networks via Multi-Agent Reinforcement Learning with Transformer	Minrui Wang (University of Science and Technology of China)*; Mingxiao Feng (University of Science and Technology of China); Wengang Zhou (University of Science and Technology of China); Houqiang Li (University of Science and Technology of China)
m-mix: Generating Hard Negatives via Multi-sample Mixing for Contrastive Learning	Shaofeng Zhang (Shanghai Jiao Tong University); Meng Liu (Shanghai Jiao Tong University); Junchi Yan (Shanghai Jiao Tong University)*; Hengrui Zhang (University of Illinois at Chicago); Lingxiao Huang (Huawei TCS Lab); Pinyan Lu (Shanghai University of F
On-Device Learning for Model Personalization with Large-Scale Cloud-Coordinated Domain Adaption	Yikai Yan (Shanghai Jiao Tong University); Chaoyue Niu (Shanghai Jiao Tong University); Renjie Gu (Shanghai Jiao Tong University); Fan Wu (Shanghai Jiao Tong University)*; Shaojie Tang (University of Texas at Dallas); Lifeng Hua (Alibaba Group); Chengfei
Noisy Interactive Graph Search	Qianhao Cong (National University of Singapore); Jing Tang (The Hong Kong University of Science and Technology)*; Kai Han (Soochow University); Yuming Huang (National University of Singapore); Lei Chen (Hong Kong University of Science and Technology); Ye
Continuous-Time and Multi-Level Graph Representation Learning for Origin-Destination Demand Prediction	Liangzhe Han (Beihang University)*; Xiaojian Ma (Beihang University); Leilei Sun (Beihang Univerisity); Bowen Du (Beihang Univeristy); Yanjie Fu (University of Central Florida); Weifeng Lv (Beihang University); Hui Xiong (Hong Kong University of Science a
Efficient Orthogonal Multi-view Subspace Clustering	Man-Sheng Chen (Sun Yat-sen University); Chang-Dong Wang (Sun Yat-sen University)*; Dong Huang (South China Agricultural University); Jian-Huang Lai (Sun Yat-sen University); Philip S Yu (UNIVERSITY OF ILLINOIS AT CHICAGO)
Submodular Feature Selection for Partial Label Learning	Wei-Xuan Bao (Southeast University); Jun-Yi Hang (Southeast University); Min-Ling Zhang (Southeast University)*
FedWalk: Communication Efficient Federated Unsupervised Node Embedding with Differential Privacy	Qiying Pan (Shanghai Jiao Tong University); Yifei Zhu (Shanghai Jiao Tong University)*
Compressing Deep Graph Neural Networks via Adversarial Knowledge Distillation	Huarui He (University of Science and Technology of China)*; Jie Wang (University of Science and Technology of China); Zhanqiu Zhang (University of Science and Technology of China); Feng Wu (University of Science and Technology of China)
Free-direction Knowledge Distillation via Reinforcement Learning for Graph Neural Networks	Kaituo Feng (Beijing Institute of Technology)*; Changsheng Li (Beijing Institute of Technology); Ye Yuan (Beijing Institute of Technology); Guoren Wang (Beijing Institute of Technology)
GraphMAE: Self-Supervised Masked Graph Autoencoders	Zhenyu Hou (Tsinghua University)*; Xiao Liu (Tsinghua University); Yukuo Cen (Tsinghua University); Yuxiao Dong (Tsinghua University); Hongxia Yang (Alibaba Group); chunjie wang (BirenTech Research); Jie Tang (Tsinghua University)
RGVisNet: A Hybrid Retrieval-Generation Neural Framework Towards Automatic Data Visualization Generation	Yuanfeng Song (The Hong Kong University of Science and Technology)*; Xuefang Zhao (WeBank Co., Ltd); Raymond Chi-Wing Wong (Hong Kong University of Science and Technology); Di Jiang (WeBank)
Partial-Quasi-Newton Methods: Efficient Algorithms for Minimax Optimization Problems with Unbalanced Dimensionality	Chengchang Liu (The Chinese University of Hong Kong)*; Shuxian Bi (University of Science and Technology of China); Luo Luo (Fudan University); John C. S. Lui (The Chinese University of Hong Kong)
Instant Graph Neural Networks for Dynamic Graphs	Yanping Zheng (Renmin University of China); Hanzhi Wang (Renmin University of China); Zhewei Wei (Renmin University of China)*; Jiajun Liu (CSIRO); Sibo Wang (The Chinese University of Hong Kong)
An Empirical Study of Deep Graph Neural Networks	Wentao Zhang (Peking University)*; Zeang Sheng (Peking University); Ziqi Yin (BeiJing Institute of Technology); Yuezihan Jiang (Peking University); Yikuan Xia (Peking University); Jun Gao (Peking University); Zhi Yang (Peking University); Bin Cui (Peking
Releasing Private Data for Numerical Queries	Yuan Qiu (Hong Kong Univ. of Science and Technology)*; Wei DONG (Hong Kong University of Science and Technology, Hong Kong); Ke Yi (Hong Kong Univ. of Science and Technology); Bin Wu (Alibaba); Feifei Li (Alibaba Group)
Multi-Behavior Hypergraph-Enhanced Transformer for Next-Item Recommendation	Yuhao Yang (Wuhan University); Chao Huang (University of Hong Kong)*; Lianghao Xia (South China University of Technology); Yuxuan Liang (National University of Singapore); Yanwei Yu (Ocean University of China); Chenliang Li (Wuhan University)
End-to-End Semi-Supervised Ordinal Regression AUC Maximization with Convolutional Kernel Networks	ziran xiong (Nanjing University of Information Science and Technology)*; Wanli Shi (Nanjing University of Information Science & Technology); Bin Gu (MBZUAI)

Sampling-based estimation of the number of distinct values in distributed environment	Jiajun Li (Renmin University of China)*; Zhewei Wei (Renmin University of China); Bolin Ding ("Data Analytics and Intelligence Lab, Alibaba Group"); Xiening Dai (Alibaba Group); Lu Lu (Alibaba Group); Jingren Zhou (Alibaba Group)
Self-Augmented Hypergraph Transformer for Recommender Systems	Lianghao Xia (South China University of Technology); Chao Huang (University of Hong Kong)*; Chuxu Zhang (Brandeis University)
GPPT: Graph Pre-training and Prompt Tuning to Generalize Graph Neural Networks	Ming-chen Sun (JiLin University)*; Kaixiong Zhou (Rice University); Xin He (Jilin university); Ying Wang (Jilin University); Xin Wang (Jilin University)
TransBO: Hyperparameter Optimization via Two-Phase Transfer Learning	Yang Li (Peking University)*; Yu Shen (Peking University); Huaijun Jiang (Peking University); Wentao Zhang (Peking University); Zhi Yang (Peking University); Ce Zhang (ETH); Bin Cui (Peking University)
Transfer Learning based Search Space Design for Hyperparameter Tuning	Yang Li (Peking University)*; Yu Shen (Peking University); Huaijun Jiang (Peking University); Tianyi Bai (Beijing Institute of Technology); Wentao Zhang (Peking University); Ce Zhang (ETH); Bin Cui (Peking University)
Semantic Enhanced Text-to-SQL Parsing via Iteratively Learning Schema Linking Graph	Aiwei Liu (Tsinghua University)*; Xuming Hu (Tsinghua University); Li Lin (Tsinghua University); Lijie Wen (Tsinghua University)
Reliable Representations Make A Stonger Defender:Unsupervised Structure Refinement for Robust GNN	Kuan Li (Institute of Computing Technology, Chinese Academy of Science)*; Yang Liu (Institute of Computing Technology_Chinese Academy of Sciences); Xiang Ao (Institute of Computing Technology, CAS); Jianfeng Chi (Alibaba Group); Jinghua Feng (Ailbaba Gro
Preserving Privacy and Robustness through the Lens of Causality	Qibing Ren (Shanghai Jiao Tong University)*; Yiting Chen (Shanghai Jiao Tong University); Yichuan Mo (Shanghai Jiao Tong University); Qitian Wu (Shanghai Jiao Tong University); Junchi Yan (Shanghai Jiao Tong University)
Numerical Tuple Extraction from Tables with Pre-training	Qingping Yang (Chinese Academy of Sciences (CAS), Institute of Computing Technology)*; Yixuan Cao (Institute of Computing Technology, CAS); Yingming Hu (Huatai Securities); Jianfeng Li (Huatai Securities); Nanbo Peng (Huatai Securities); Ping Luo (Chinese
ClusterEA: Scalable Entity Alignment with Stochastic Training and Normalized Mini-batch Similarities	Yunjun Gao (Zhejiang University)*; Xiaoze Liu (Zhejiang University); Junyang Wu (Zhejiang University); Tianyi Li (Aalborg Univeristy); Pengfei Wang (Zhejiang University); Lu Chen (Zhejiang University)
Reinforcement Subgraph Reasoning for Fake News Detection	Ruichao Yang (Hong Kong Baptist University)*; Xiting Wang (Microsoft Research Asia); Yiqiao Jin (University of California, Los Angeles); Chaozhuo Li (Microsoft Research Asia); Jianxun Lian (MSRA); Xing Xie (Microsoft Research Asia)
MT-FlowFormer: A Semi-Supervised Flow Transformer for Encrypted Traffic Classification	Ruijie Zhao (Shanghai Jiao Tong University)*; Xianwen Deng (Shanghai Jiao Tong University); Zhicong Yan (Shanghai JiaoTong University); Jun Ma (Shanghai Jiao Tong University); Zhi Xue (Shanghai Jiao Tong University); Yijun Wang (Shanghai Jiao Tong Univers
Motif Prediction with Graph Neural Networks	Maciej Besta (ETH Zurich)*; Raphael Grob (ETH Zurich); Cesare Miglioli (University of Geneva); Nicola Bernold (ETH Zürich); Grzegorz Kwasniewski (ETH Zurich); Gabriel Gjini (ETH Zurich); Raghavendra Kanakagiri (University of Illinois at Urbana-Champaign);
Synthesising Audio Adversarial Examples for Automatic Speech Recognition	Xinghua Qu (Bytedance AI Lab)*; Pengfei Wei (National University of Singapore); Mingyong Gao (USTC); Zhu Sun (Macquarie University); Yew Soon Ong (Nanyang Technological University, Nanyang View, Singapore); Zejun Ma (Bytedance)
Importance Prioritized Policy Distillation	Xinghua Qu (Bytedance AI Lab)*; Yew Soon Ong (Nanyang Technological University, Nanyang View, Singapore); Abhishek Gupta (Singapore Institute of Manufacturing Technology); Pengfei Wei (National University of Singapore); Zhu Sun (Macquarie University); Zej