

WSDM 2020: Research Papers Schedule

Research Paper Session 1: Recommender Systems (Tuesday 4th, 10:30 AM-12:30 PM), Session chair: Ben Carterette

Pseudo Dyna-Q: A Reinforcement Learning Framework for Interactive Recommendation.

Lixin Zou (Tsinghua Univ., China); Long Xia (JD.com, China); Zhuo Zhang (The Univ. of Melbourne, China); Pan Du (Univ. of Montreal, Canada); Ting Bai (Renmin Univ. of China, China); Weidong Liu (Tsinghua Univ., China); Jian-Yun Nie (Univ. of Montreal, Canada); Dawei Yin (JD.com, China).

End-to-End Deep Reinforcement Learning based Recommendation with Supervised Embedding.

Feng Liu (Harbin Institute of Technology, China); Huifeng Guo (Noah's Ark Lab, Huawei, China); Xutao Li (Harbin Institute of Technology, China); Ruiming Tang (Huawei, China); Yunming Ye (Harbin Institute of Technology, China); Xiuqiang He (Huawei Technologies Co. Ltd, China)

Unbiased Recommender Learning from Missing-Not-At-Random Implicit Feedback.

Yuta Saito (Tokyo Institute of Technology, Japan); Suguru Yaginuma (SMN Corporation, Japan); Yuta Nishino (SMN Corporation, Japan); Hayato Sakata (SMN Corporation, Japan); Kazuhide Nakata (Tokyo Institute of Technology, Japan)

RecVAE: A New Variational Autoencoder for Top-N Recommendations with Implicit Feedback.

Ilya Shenbin (Steklov Institute of Mathematics at St. Petersburg, Russian Federation); Anton Alekseev (Steklov Institute of Mathematics at St. Petersburg, Russian Federation); Elena Tutubalina (Steklov Institute of Mathematics at St. Petersburg, Russian Federation); Valentin Malykh (Moscow Institute of Physics and Technology, Russian Federation); Sergey Nikolenko (Steklov Institute of Mathematics at St. Petersburg, Russian Federation)

Estimation-Action-Reflection: Towards Deep Interaction Between Conversational and Recommender Systems.

Wenqiang Lei (National Univ. of Singapore, Singapore); Xiangnan He (Univ. of Science & Technology of China, China); Yisong Miao (National Univ. of Singapore, Singapore); Qingyun Wu (Univ. of Virginia, USA); Richang Hong (Hefei Univ. of Technology, China); Min-Yen Kan (National Univ. of Singapore, Singapore); Tat Seng Chua (National Univ. of Singapore, Singapore)

User Recommendation in Content Curation Platforms.

Jianling Wang (Texas A&M Univ., USA); Ziwei Zhu (Texas A&M Univ., USA); James Caverlee (Texas A&M Univ., USA)

Time Interval Aware Self-Attention for Sequential Recommendation.

Jiacheng Li (Univ. of California San Diego, USA); Yujie Wang (Florida state Univ., USA); Julian McAuley (Univ. of California San Diego, USA)

DDTCDR: Deep Dual Transfer Cross Domain Recommendation.

Pan Li (New York Univ., USA); Alexander Tuzhilin (New York Univ., USA)

Research Paper Session 2: Products, Ads & Multimedia (Wednesday 5th, 10:30 AM-12:30 PM), Session chair: Carsten Eickhoff

Language-Agnostic Representation Learning for Product Search on E-Commerce Platforms.

Aman Ahuja (Virginia Tech, USA); Nikhil Rao (Amazon, USA); Sumeet Katariya (Amazon, USA); Karthik Subbian (Amazon, USA); Chandan K. Reddy (Virginia Tech, USA)

Hierarchical User Profiling for E-commerce Recommender Systems.

Yulong Gu (JD.COM, China); Zhuoye Ding (JD.COM, China); Shuaiqiang Wang (JD.COM, China); Dawei Yin (JD.COM, China)

Product Knowledge Graph Embedding for E-commerce.

Da Xu (Walmart Labs, USA); Chuanwei Ruan (Walmart Labs, USA); Evren Korpeoglu (Walmart Labs, USA); Sushant Kumar (Walmart Labs, USA); Kannan Achan (Walmart Labs, USA)

Why Do People Buy Seemingly Irrelevant Items in Voice Product Search? On the Relation between Product Relevance and Customer Satisfaction in eCommerce.

David Carmel (Amazon, Israel); Elad Haramaty (Amazon, Israel); Arnon Lazerson (Amazon, Israel); Liane Lewin-Eytan (Amazon, Israel); Yoelle Maarek (Amazon, Israel)

Addressing Marketing Bias in Product Recommendations.

Mengting Wan (Univ. of California San Diego, USA); Jianmo Ni (Univ. of California San Diego, USA); Rishabh Misra (Twitter, USA); Julian McAuley (Univ. of California San Diego, USA)

Time to Shop for Valentine's Day: Shopping Occasions and Sequential Recommendation in E-commerce.

Jianling Wang (Texas A&M Univ., USA); Raphael Louca (Etsy Inc., USA); Diane Hu (Etsy Inc., USA); Caitlin Cellier (Etsy Inc., USA); James Caverlee (Texas A&M Univ., USA); Liangjie Hong (Etsy Inc., USA)

TSA: A Truthful Mechanism for Social Advertising.

Tobias Grubenmann (The Univ. of Hong Kong, Hong Kong); Reynold C.K. Cheng (The Univ. of Hong Kong, Hong Kong); Laks V.S. Lakshmanan (The Univ. of British Columbia, Canada)

Ultra Fine-Grained Image Semantic Embedding.

Da-Cheng Juan (Google, USA); Chun-Ta Lu (Google, USA); Zhen Li (Google, USA); Futang Peng (Google, USA); Aleksei Timofeev (Google, USA); Yi-Ting Chen (Google, USA); Yaxi Gao (Google, USA); Tom Duerig (Google, USA); Andrew Tomkins (Google, USA); Sujith Ravi (Google, USA)

Research Paper Session 3: Search (Wednesday 5th, 2:00 PM-3:00 PM), Session chair: Luna Dong

Investigating Examination Behavior in Mobile Search.

Yukun Zheng (Tsinghua Univ., China); Yiqun Liu (Tsinghua Univ., China); Jiabin Mao (Tsinghua Univ., China); Mark Sanderson (RMIT Univ., Australia); Min Zhang (Tsinghua Univ., China); Shaoping Ma (Tsinghua Univ., China)

Enhancing Re-finding Behavior with External Memories for Personalized Search.

Yujia Zhou (Renmin Univ. of China, China); Zhicheng Dou (Renmin Univ. of China, China); Ji-Rong

Wen (Renmin Univ. of China, China)

Extreme Regression for Dynamic Search Advertising.

Yashoteja Prabhu (Microsoft Research India); Aditya Kusupati (University of Washington); Nilesh Gupta (Microsoft Research India); Manik Varma (Microsoft Research India, Indian Institute of Technology Delhi)

Comparative Web Search Questions.

Alexander Bondarenko (Martin-Luther-Universität Halle-Wittenberg, Germany); Pavel Braslavski (Ural Federal University, Russian Federation); Michael Völzke (Bauhaus-Universität Weimar, Germany); Rami Aly (Univ. of Hamburg, Germany); Maik Fräbe (Martin-Luther-Universität Halle-Wittenberg, Germany); Alexander Panchenko (Skoltech, Russian Federation); Chris Biemann (U Hamburg, Germany); Benno Stein (Bauhaus-Universität Weimar, Germany); Matthias Hagen (Martin-Luther-Universität Halle-Wittenberg, Germany)

Research Paper Session 4: Graph & Networks (Wednesday 5th, 3:30 PM-5:00PM), Session chair: Manos Tsagkias

DySAT: Deep Neural Representation Learning on Dynamic Graphs via Self-Attention Networks.

Aravind Sankar (Univ. of Illinois at Urbana-Champaign, USA); Yanhong Wu (Visa Research, USA); Liang Gou (Visa Research, USA); Wei Zhang (Visa Research, USA); Hao Yang (Visa Research, USA)

LouvainNE: Hierarchical Louvain Method for High Quality and Scalable Network Embedding.

Ayan Kumar Bhowmick (Indian Institute of Technology, Kharagpur, India); Koushik Meneni (Indian Institute of Technology, Kharagpur, India); Maximilien Danisch (LIP6, Sorbonne Univ., 4 Place Jussieu, 25-26-306, 75005 Paris, France, France); Jean-Loup Guillaume (L3I, Univ. of La Rochelle, France, France); Bivas Mitra (Indian Institute of Technology, Kharagpur, India)

Relation Learning on Social Networks with Multi-Modal Graph Edge Variational Autoencoders.

Carl Yang (Univ. of Illinois at Urbana-Champaign, USA); Jieyu Zhang (Univ. of Illinois at Urbana-Champaign, USA); Haonan Wang (Univ. of Illinois at Urbana-Champaign, USA); Sha Li (Univ. of Illinois at Urbana-Champaign, USA); Myunghwan Kim (LinkedIn, USA); Matthew Walker (LinkedIn, USA); You Xia (LinkedIn, USA); Jiawei Han (Univ. of Illinois at Urbana-Champaign, USA)

Popularity Prediction on Social Platforms with Coupled Graph Neural Networks.

Qi Cao (Institute of Computing Technology, Chinese Academy of Sciences, China); Huawei Shen (Institute of Computing Technology, Chinese Academy of Sciences, China); Jinhua Gao (Institute of Computing Technology, Chinese Academy of Sciences, China); Bingzheng Wei (WeChat, Tencent Inc, China); Xueqi Cheng (Institute of Computing Technology, Chinese Academy of Sciences, China)

A structural graph representation learning framework.

Ryan Rossi (Adobe Research, USA); Nesreen Ahmed (Intel Labs, USA); Eunyee Koh (Adobe Research, USA); Sungchul Kim (Adobe Research, USA); Anup Rao (Adobe Research, USA); Yasin Abbasi-Yadkori (VinAI, Viet Nam)

Epidemic Graph Convolutional Network.

Tyler Derr (Michigan State Univ., USA); Yao Ma (Michigan State Univ., USA); Wenqi Fan (City Univ. of Hong Kong, China); Xiaorui Liu (Michigan State Univ., USA); Charu Aggarwal (IBM, USA); Jiliang Tang (Michigan State Univ., USA)

Research Paper Session 5: Explainability, Interpretability & Semantics (Thursday 6th, 10:30 AM-12:30 PM), Session chair: Krisztian Balog

PERQ: Predicting, Explaining, and Rectifying Failed Questions in KB-QA Systems.

Zhiyong Wu (The Univ. of Hong Kong, Hong Kong); Ben Kao (The Univ. of Hong Kong, Hong Kong); Tien-Hsuan Wu (The Univ. of Hong Kong, Hong Kong); Pengcheng Yin (Carnegie Mellon Univ., USA); Qun Liu (Huawei Noah's Ark Lab, Hong Kong, China, Hong Kong)

Distilling Structured Knowledge into Embeddings for Explainable and Accurate Recommendation.

Yuan Zhang (Peking University, China); Xiaoran Xu (Hulu LLC, China); Hanning Zhou (Facebook, USA); Yan Zhang (Peking University, China)

PRINCE: Provider-side Interpretability with Counterfactual Explanations in Recommender Systems.

Azin Ghazimatin (Max Planck Institute for Informatics, Germany); Oana Balalau (Inria and Ecole Polytechnique, France); Rishiraj Saha Roy (Max Planck Institute for Informatics, Germany); Gerhard Weikum (Max Planck Institute for Informatics, Germany)

Interpretable Click-Through Rate Prediction through Hierarchical Attention.

Zeyu Li (Univ. of California, Los Angeles, USA); Wei Cheng (NEC Laboratories America, Inc., USA); Yang Chen (Google, USA); Haifeng Chen (NEC Laboratories America, Inc., USA); Wei Wang (Univ. of California, Los Angeles, USA)

Temporal Context-Aware Representation Learning for Question Routing.

Xuchao Zhang (NEC Labs America, USA); Wei Cheng (NEC Labs America, USA); Bo Zong (NEC Labs America, USA); Yuncong Chen (NEC Labs America, USA); Jianwu Xu (NEC Labs America, USA); Ding Li (NEC Labs America, USA); Haifeng Chen (NEC Labs America, USA)

Stepwise Reasoning for Multi-Relation Question Answering over Knowledge Graph with Weak Supervision.

Yunqi Qiu (Institute of Computing Technology, Chinese Academy of Sciences, China); Yuanzhuo Wang (Institute of Computing Technology, Chinese Academy of Sciences, China); Xiaolong Jin (Institute of Computing Technology, Chinese Academy of Sciences, China); Kun Zhang (Institute of Computing Technology, Chinese Academy of Sciences, China)

Debiasing Word Embeddings from Sentiment Associations in Names.

Christoph Hube (L3S Research Center, Leibniz Univ. of Hannover, Germany); Maximilian Idahl (L3S Research Center, Leibniz Univ. of Hannover, Germany); Besnik Fetahu (L3S Research Center, Leibniz Univ. of Hannover, Germany)

ENTYFI: Entity Typing in Fictional Texts.

Cuong Xuan Chu (Max Planck Institute for Informatics, Germany); Simon Razniewski (Max Planck Institute for Informatics, Germany); Gerhard Weikum (Max Planck Institute for Informatics, Germany)

Research Paper Session 6: Adversarial learning (Thursday 6th, 2:00 PM-3:00 PM), Session chair: Vanessa Murdock

Adversarial Learning to Compare: Self-Attentive Prospective Customer Recommendation in Location based Social Networks.

Ruirui Li (Univ. of California, Los Angeles, USA); Xian Wu (Univ. of Notre Dame, USA); Wei Wang (Univ. of California, Los Angeles, USA)

Transferring Robustness for Graph Neural Network Against Poisoning Attacks.

Xianfeng Tang (Pennsylvania State Univ., USA); Yandong Li (Univ. of Central Florida, USA); Yiwei Sun (Pennsylvania State Univ., USA); Huaxiu Yao (Pennsylvania State Univ., USA); Prasenjit Mitra (Pennsylvania State Univ., USA); Suhang Wang (Pennsylvania State Univ., USA)

LARA: Attribute-to-feature Adversarial Learning for New-item Recommendation.

Changfeng Sun (Shandong Univ., China); Han Liu (Shandong Univ., China); Meng Liu (Shandong Univ.,

China); Zhaochun Ren (Shandong Univ., China); Tian Gan (Shandong Univ., China); Liqiang Nie (Shandong Univ., China)

Privacy-Aware Recommendation with Private-Attribute Protection using Adversarial Learning.

Ghazaleh Beigi (Arizona State Univ., USA); Ahmadreza Mosallanezhad (Arizona State Univ., USA); Ruo Cheng Guo (Arizona State Univ., USA); Hamidreza Alvari (Arizona State Univ., USA); Alexander Nou (Arizona State Univ., USA); Huan Liu (Arizona State Univ., USA)

Research Paper Session 7: Advanced methodology and measurement (Thursday 6th, 3:30 PM-5:30 PM), Session chair: Gianluca Demartini

Predicting human mobility via Attentive Convolutional Network.

Congcong Miao (Tsinghua Univ., China); Ziyang Luo (Tsinghua Univ., China); Fengzhu Zeng (Tsinghua Univ., China); Jilong Wang (Tsinghua Univ., China)

Context-aware Deep Model for Joint Mobility and Time Prediction.

Yile Chen (Nanyang Technological Univ., Singapore); Cheng Long (Nanyang Technological Univ., Singapore); Gao Cong (Nanyang Technological Univ., Singapore); Chenliang Li (Wuhan Univ., China)

Toward Activity Discovery in the Personal Web.

Tara Safavi (Univ. of Michigan Ann Arbor, USA); Adam Fournay (Microsoft, USA); Robert Sim (Microsoft, USA); Marcin Juraszek (Microsoft, USA); Shane Williams (Microsoft, USA); Ned Friend (Microsoft, USA); Danai Koutra (Univ. of Michigan Ann Arbor, USA); Paul Bennett (Microsoft, USA)

Learning Individual Causal Effects from Networked Observational Data.

Ruo Cheng Guo (Arizona State Univ., USA); Jundong Li (Univ. of Virginia, USA); Huan Liu (Arizona State Univ., USA)

Fast Item Ranking under Neural Network based Measures.

Shulong Tan (Baidu Research, USA); Zhixin Zhou (Baidu Research, USA); Zhaozhuo Xu (Baidu Research, USA); Ping Li (Baidu Research, USA)

Metrics, User Models, and Satisfaction.

Alfan Farizki Wicaksono (The University of Melbourne, Australia); Alistair Moffat (The University of Melbourne, Australia)

HyperML: A Boosting Metric Learning Approach in Hyperbolic Space for Recommender Systems.

Lucas Vinh Tran (Nanyang Technological Univ., Singapore); Yi Tay (Nanyang Technological Univ., Singapore); Shuai Zhang (The Univ. of New South Wales, Australia); Gao Cong (Nanyang Technological Univ., Singapore); Xiaoli Li (Institute for Infocomm Research, Singapore)

The Power of Pivoting for Exact Clique Counting.

Shweta Jain (Univ. of California, Santa Cruz, USA); C. Seshadhri (Univ. of California, Santa Cruz, USA)