SIGIR'20 Program at a Glance
(Time Zone: UTC+8)

Saturday, July 25, 2020 *SIGIR Summer School* [Room: Epang Palace]

Sunday, July 26

- **9:00-17:00** *Tutorial*
- **14:30-16:30** *DC Student Talk Session I* [Room: Xingqing Palace]
- **17:00-19:00** *DC Student Talk Session II* [Room: Xingqing Palace]
- **19:30-21:00** *DC Student Talk Session III* [Room: Xingqing Palace]
- **21:30-23:00** *Social Event I* (Student Event I) [Room: Weiyang Palace]

Monday, July 27, 2020

7:00-8:00 *Social Event II* (Student Event II) [Room: Weiyang Palace]

8:10-8:30 *Welcome & Conference Opening* [Room: Xi'an]

8:30-9:30 *Keynote I* (Playback is available after 10:00) [Room: Xi'an]
The Next Generation of Neural Networks

9:40 - 11:40	**Session 1A** [Room: Meituan] *Neural IR and Semantic Matching*	**Session 1B** [Room: Amazon] *Knowledge and Explainability*	**Session 1C** [Room: Alibaba] *Graph-based Analysis*	**Industrial Session I** [Room: Microsoft]

14:30-15:30 *Keynote II* (Playback is available after 16:00) [Room: Xi'an]
On Presuppositions of Machine Learning: A Meta Theory

15:40 - 18:00	**Session 2A** [Room: Meituan] *Knowledge for Personalization*	**Session 2B** [Room: Amazon] *User behavior and Experience*	**Session 2C** [Room: Alibaba] *Evaluation*	**Industrial Session II** [Room: Microsoft]

19:00-20:30 *Social Event III* (Women in IR – Session A) [Room: Weiyang Palace]

20:00-22:00 *Short/Demo/TOIS paper session I* [Room: Daming Palace]

22:00 - 24:00	**Session 3A** [Room: Meituan] *Bias and Fairness*	**Session 3B** [Room: Amazon] *Learning to Rank*	**Session 3C** [Room: Alibaba] *Question Answering*	

Tuesday, July 28, 2020

8:30-9:30 *Keynote III* (Playback is available after 10:00) [Room: Xi'an]
Coopetition in IR Research

9:40 - 11:40	**Session 4A** [Room: Meituan] *Query and Representation*	**Session 4B** [Room: Amazon] *Graph-based Recommendation*	**Session 4C** [Room: Alibaba] *Neural Networks and Embedding*	**Industrial Session III** [Room: Microsoft]

14:30-15:30 *Keynote IV* (Playback is available after 16:00) [Room: Xi'an]
Proof by Experimentation? Towards Better IR Research

15:40 - 17:40	**Session 5A** [Room: Meituan] *Domain Specific Applications 1*	**Session 5B** [Room: Amazon] *Learning for Recommendation*	**Session 5C** [Room: Alibaba] *Information Access and Filtering*	**Industrial Session IV** [Room: Microsoft]

20:00-22:00 *Short/Demo/TOIS paper session II* [Room: Daming Palace]**, ** *Social Event IV* (DEI Event) [Room: Weiyang Palace]

22:00 - 24:00	**Session 6A** [Room: Meituan] *Neural Collaborative Filtering 1*	**Session 6B** [Room: Amazon] *Domain Specific Applications 2*	**Session 6C** [Room: Alibaba] *Context-aware Modeling*	

Wednesday, July 29, 2020

0:00-1:30 *Social Event V* (Women in IR – Session B) [Room: Weiyang Palace]

8:30-9:30 *Keynote V* (Playback is available after 10:00) [Room: Xi'an]
From Information to Assistance

9:40 - 11:40	**Session 7A** [Room: Meituan] *Conversation and Interactive IR*	**Session 7B** [Room: Amazon] *Text Classification and Transfer Learning*	**Session 7C** [Room: Alibaba] *Neural Collaborative Filtering 2*	**Industrial Session V** [Room: Microsoft]

14:30-15:30 *Keynote VI* (Playback is available after 16:00) [Room: Xi'an]
How Deep Learning Works for Information Retrieval

15:40 - 17:40	**Session 8A** [Room: Meituan] *Domain Specific Retrieval Tasks*	**Session 8B** [Room: Amazon] *Multi-modal Retrieval and Ranking*	**Session 8C** [Room: Alibaba] *Sequential Recommendation*	**Industrial Session VI** [Room: Microsoft]

21:00-24:00 *Conference Closing and Business Meeting* [Room: Xi'an]

Thursday, July 30, 2020 *Workshops*

Virtual Conference Portal is available at https://sigir-schedule.baai.ac.cn/.

SIGIR'20 Keynote Talks

The Next Generation of Neural Networks

Prof. Geoffrey Hinton
Google Research & Vector Institute
Canada

Time: July 27, 8:30-9:30 (Time Zone: UTC+8)
Room: Xi'an

Abstract

The most important unsolved problem with artificial neural networks is how to do unsupervised learning as effectively as the brain. There are currently two main approaches to unsupervised learning. In the first approach, exemplified by BERT and Variational Autoencoders, a deep neural network is used to reconstruct its input. This is problematic for images because the deepest layers of the network need to encode the fine details of the image. An alternative approach, introduced by Becker and Hinton in 1992, is to train two copies of a deep neural network to produce output vectors that have high mutual information when given two different crops of the same image as their inputs. This approach was designed to allow the representations to be untethered from irrelevant details of the input.

The method of optimizing mutual information used by Becker and Hinton was flawed (for a subtle reason that I will explain) so Pacannaro and Hinton replaced it by a discriminative objective in which one vector representation must select a corresponding vector representation from among many alternatives. With faster hardware, contrastive learning of representations has recently become very popular and is proving to be very effective, but it suffers from a major flaw: To learn pairs of representation vectors that have N bits of mutual information we need to contrast the correct corresponding vector with about 2^N incorrect alternatives. I will describe a novel and effective way of dealing with this limitation. I will also show that this leads to a simple way of implementing perceptual learning in cortex.

Biography

Geoffrey Hinton received his PhD in Artificial Intelligence from Edinburgh in 1978. After five years as a faculty member at Carnegie-Mellon he became a fellow of the Canadian Institute for Advanced Research and moved to the Department of Computer Science at the University of Toronto where he is now an Emeritus Distinguished Professor. He is also a Vice President & Engineering Fellow at Google and Chief Scientific Adviser of the Vector Institute.

He was one of the researchers who introduced the backpropagation algorithm and the first to use backpropagation for learning word embeddings. His other contributions to neural network research include Boltzmann machines, distributed representations, time-delay neural nets, mixtures of experts, variational learning and deep learning. His research group in Torontomademajor breakthroughs in deep learning that revolutionized speech recognition and object classification.

On Presuppositions of Machine Learning: A Meta Theory

Prof. Zongben Xu
Xi'an Jiaotong University & Pazhou Lab
China

Time: July 27, 14:30-15:30 (Time Zone: UTC+8)
Room: Xi'an

Abstract

Machine learning (ML) has been run and applied by premising a series of presuppositions, which contributes both the great success of AI and the bottleneck of further development of ML. These presuppositions include (i) the independence assumption of loss function on dataset (Hypothesis I); (ii) the large capacity assumption on hypothesis space including solution (Hypothesis II); (iii) the completeness assumption of training data with high quality (Hypothesis III); and (iv) the Euclidean assumption on analysis framework and methodology (Hypothesis IV).

We report, in this presentation, the effort and advances made by my group on how to break through these presuppositions of ML and drive ML development. For Hypothesis I, we introduce the noise modeling principle to adaptively design the loss function of ML, according to the distribution of data samples, which provides then a general way to robustlize any ML implementation. For Hypothesis II, we propose the model driven deep learning approach to define the smallest hypothesis space of deep neural networks (DNN), which yields not only the very efficient deep learning, but also a novel way of DNN design, interpretation and connection with the traditional optimization based approach. For Hypothesis III, we develop the axiomatic curriculum learning framework to learn the patterns from an incomplete dataset step by step and from easy to difficult, which then provides feasible ways to tackle very complex incomplete data sets. Finally, For Hypothesis IV, we introduce Banach space geometry in general, and XU-Roach theorem in particular, as a possibly useful tool to conduct non-Euclidean analysis of ML problems. In each case, we present the idea, principles, application examples and literatures.

Biography

Zongben Xu, received his PhD degree in Mathematics in 1987 from Xi'an Jiaotong University, China. In 1988, he was a postdoctoral Research Fellow in the Department of Mathematics, The University of Strathclyde.

He worked as a Research Fellow in the Department of Computer Science and Engineering from 1992 to 1994, and 1996 to 1997, at The Chinese University of Hong Kong; a visiting professor in the University of Essex in 2001, and Napoli University in 2002. He has been with the School of Mathematics and Statistics, Xi'an Jiaotong University since 1982, where he served as a professor of mathematics and computer science, Dean of Sciences (1997-2003), VP of the university (2003-2014) and Chief Scientist of National Basic Research Program of China (973 Project). He is currently the director of Pazhou Lab, Guangzhou

and the National Lab for Big Data Analytics, Xi'an. He is also the Dean of Xi'an Academy of Mathematics and Mathematical Technology.

Professor Xu makes several important services for government and professional societies currently, including Consultant member of National Big Data Development Commission, the New Generation AI Development Commission and the National Natural Science Foundation of China. He is VP of Industrial and Applied Mathematics Society of China (CSIAM), the director of Big Data and AI Committee of CSIAM. He is also the co- Editor-in-chief of Journal of Big Data Analytics and Textbooks Series on Data Science and Big Data Technology (Higher Education Press of China).

Professor Xu has published over 280 academic papers on nonlinear functional analysis, optimization, machine learning and big data research, most of which are in international journals. His current research interests include mathematical theory and fundamental algorithms for big data Analysis, machine learning and data Science. Professor Xu has gotten many academic awards, say, the National Natural Science Award (2007), the National Scientific and Technological Advance Award (2011) of China, CSIAM Su Buchin Applied Mathematics Award (2008) and Tan Kah Kee Science Award (in Information Technology Science, 2018). He delivered a 45 minutes talk at the International Congress of Mathematicians (ICM 2010) upon the invitation of the congress committee. He was elected as a member of Chinese Academy of Science in 2011.

Coopetition in IR Research

Dr. Ellen M. Voorhees
National Institute for Standards and Technology
U.S.A.

Time: July 28, 8:30-9:30 (Time Zone: UTC+8)
Room: Xi'an

Abstract

Coopetitions are activities in which competitors cooperate for a common good. Community evaluations such as the Text REtrieval Conference (TREC) are prototypical examples of coopetitions in information retrieval (IR) and have now been part of the field for almost thirty years. This longevity and the proliferation of shared evaluation tasks suggest that, indeed, the net impact of community evaluations is positive. But what are these benefits, and what are the attendant costs?

This talk will use TREC tracks as case studies to explore the benefits and disadvantages of different evaluation task designs. Coopetitions can improve state-of-the-art effectiveness for a retrieval task by establishing a research cohort and constructing the infrastructure—including problem definition, test collections, scoring metrics, and research methodology—necessary to make progress on the task. They can also facilitate technology transfer and amortize the infrastructure costs. The primary danger of coopetitions is for an entire research community to overfit to some peculiarity of the evaluation task. This risk can be minimized by building multiple test sets and regularly updating the evaluation task.

Biography

Ellen Voorhees is a Senior Research Scientist at the US National Institute of Standards and Technology (NIST). Her primary responsibility at NIST is to manage the Text REtrieval Conference (TREC) project, a project that develops the infrastructure required for largescale evaluation of search engines and other information access technology. Voorhees' research focuses on developing and validating appropriate evaluation schemes to measure system effectiveness for diverse user tasks.

Voorhees received a B.Sc. in computer science from the Pennsylvania State University, and M.Sc. and Ph.D. degrees in computer science from Cornell University. Prior to joining NIST she was a Senior Member of Technical Staff at Siemens Corporate Research in Princeton, NJ where her work on intelligent agents applied to information access resulted in three patents.

Voorhees is a fellowof the ACM, a member of AAAI, and has been elected as a fellow of theWashington Academy of Sciences. She has published numerous articles on information retrieval techniques and evaluation methodologies and serves on the review boards of several journals and conferences.

Proof by Experimentation? Towards Better IR Research

Prof. Norbert Fuhr
University of Duisburg-Essen
Germany

Time: July 28, 14:30-15:30 (Time Zone: UTC+8)
Room: Xi'an

Abstract

The current fight against the COVID-19 pandemic illustrates the importance of proper scientific methods: Besides fake news lacking any factual evidence, reports on clinical trials with various drugs often yield contradicting results; here, only a closer look at the underlying empirical methodology can help in forming a clearer picture.

In IR research, empirical foundation in the form of experiments plays an important role. However, the methods applied often are not at the level of scientific standards that hold in many other disciplines, as IR experiments are frequently flawed in several ways: Measures like MRR or ERR are invalid by definition, and MAP is based on unrealistic assumptions about user behaviour; computing relative improvements of arithmetic means is statistical nonsense; test hypotheses often are formulated after the experiment has been carried out; multiple hypotheses are tested without correction; many experiments are not reproducible results or are compared to weak baselines [1, 6]; frequent reuse of the same test collections yields random results [2]; authors (and reviewers) believe that experiments prove the claims made. Methods for overcoming these problems have been pointed out [5], but are still widely ignored.

However, even when experimental results have been achieved via proper methods, this only solves the issue of internal validity. The problem of external validity has hardly been addressed in IR so far. Just having empirical results for a handful or test collections does not enable us to make any statements on how far we can generalise these observations. So we should put more emphasis on understanding why certain methods work (or don't work) under certain circumstances - instead of looking at improvements at the third or fourth decimal place. This would allow us to make more generally valid statements, and be a first step towards being able to predict performance for new collections

To conclude, better research in IR can only be achieved by
- Enforcing rigorous experimental methodology at our top venues.
- Establishing leaderboards and carrying out metastudies for monitoring the actual scientific progress in our field.
- Understanding should be valued higher than raw performance.
- Ultimately, research should aim more at performance prediction than at performance measurement.

Biography

Norbert Fuhr holds a PhD (Dr.) in Computer Science from the Technical University of Darmstadt, which he received in 1986. He became Associate Professor in the computer science department of the University of Dortmund in 1991 and was appointed Full Professor for computer science at the University of Duisburg-Essen in 2002. His past research dealt with topics such as probabilistic retrieval models, the integration of IR and databases, retrieval in distributed digital libraries and XML documents, and user friendly retrieval interfaces. His current research interests are models for interactive retrieval, social media retrieval, and evaluation methodology Norbert Fuhr has served as PC member and program chair of major conferences in IR and digital libraries, and on the editorial boards of several journals in these areas. In 2012, he received the Gerald Salton Award of ACM-SIGIR.

From Information to Assistance

Dr. Elizabeth F. Churchill
Google
U.S.A.

Time: July 29, 8:30-9:30 (Time Zone: UTC+8)
Room: Xi'an

Abstract

"Knowledge is of two kinds. We know a subject ourselves, or we know where we can find information upon it. When we enquire into any subject, the first thing we have to do is to know what books have treated of it. This leads us to look at catalogues, and at the backs of books in libraries."

– Samuel Johnson (Boswell's Life of Johnson)

When Johnson was writing this, said libraries were very exclusive, inaccessible tomost. When I was growing up the librarywas a favorite place to find informationwith the help of expert assistants, trained librarians. Nowadays, while libraries are still one of my favorite institutions, we have powerful digital information search, retrieval, and assemblage services, bundled into easily accessible tools at our fingertips.

As information proliferates and human information needs remain high, information retrieval will continue to be a central area of investigation. We will also need better and better tools to access, assemble, and represent that information in ways that can be understood and applied-tools that ensure information turns into knowledge that is useful and used.

In this talk, I will focus on how people find information, and how the tools we build aid in that finding. Using case studies, I will outline some that remain challenging, and offer some case studies and edge cases where more work is needed. I will share thoughts on how emerging assistant devices and services are and are not meeting the challenge of becoming expert information assistants.

Biography

Elizabeth Churchill is a Director of UX at Google. She is also the Executive Vice President of the Association of ComputingMachinery (ACM), a member of the ACM's CHI Academy, and an ACM Fellow, Distinguished Scientist, and Distinguished Speaker. With a background in psychology, Artificial Intelligence and Cognitive Science, she draws on social, computer, engineering and data sciences to create innovative digital tools, applications, and services. She has built research teams at Google, eBay, Yahoo, PARC and FujiXerox. She holds a PhD from the University of Cambridge and honorary doctorates from the University of Sussex, and the University of Stockholm. In 2016, she received the Citris-Banatao Institute Athena Award for Executive Leadership.

How Deep Learning Works for Information Retrieval

Prof. Dacheng Tao
The University of Sydney
Australia

Time: July 29, 14:30-15:30 (Time Zone: UTC+8)
Room: Xi'an

Abstract

Information retrieval (IR) is the science of search, the search of user query relevant pieces of information from a collection of unstructured resources. Information in this context includes text, imagery, audio, video, xml, program, and metadata. The journey of an IR process begins with a user query sent to the IR system which encodes the query, compares the query with the available resources, and returns the most relevant pieces of information. Thus, the system is equipped with the ability to store, retrieve and maintain information.

In the early era of IR, the whole process was completed using handcrafted features and ad-hoc relevance measures. Later, principled frameworks for relevance measure were developed with statistical learning as a basis. Recently, deep learning has proven essential to the introduction of more opportunities to IR. This is because data-driven features combined with datadriven relevance measures can effectively eliminate the human bias in either feature or relevance measure design.

Deep learning has shown its significant potential to transform IR evidenced by abundant empirical results. However, we continue to strive to gain a comprehensive understanding of deep learning. This is done by answering questions such as why deep structures are superior to shallow structures, how skip connections affect a model's performance, uncovering the potential relationship between some of the hyper-parameters and a model's performance, and exploring ways to reduce the chance for deep models to be fooled by adversaries. Answering such questions can help design more effective deep models and devise more efficient schemes for model training.

Biography

Dacheng Tao is Professor of Computer Science and ARC Laureate Fellow in the School of Computer Science and the Faculty of Engineering, and the Inaugural Director of the UBTECH Sydney Artificial Intelligence Centre, at The University of Sydney. His research results in artificial intelligence have expounded in one monograph and 200+ publications at learning journals and conferences, such as IEEE TPAMI, AAAI, IJCAI, NeurIPS, ICML, CVPR, ICCV, ECCV, ICDM, and KDD, with several best paper awards. He received the 2018 IEEE ICDM Research Contributions Award and the 2015 Australian Museum Scopus-Eureka prize. He is a Fellow of the IEEE, the ACM and the Australian Academy of Science.

Industry Track Invited Talks

Large-scale Multi-modal Search and QA at Alibaba
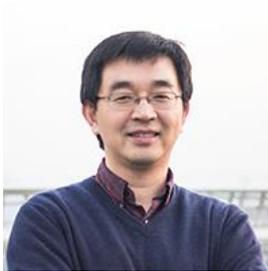
Dr. Rong Jin
DAMO Academy, Alibaba Group
China

Time: July 27, 9:40-10:40 (Time Zone: UTC+8)
Room: Microsoft

Abstract

In this talk, we will present ongoing efforts of Alibaba on large-scale multi-modal search ad question-answering, including image search, video search, cross lingual retrieval, and QA based on machine reading and comprehension (MRC). We will also share in this talk the core technologies that are crucial to the development of the related technologies, including representation learning, data augmentation, and robust learning.

Biography

Rong Jin is currently an associate director of DAMO academy at Alibaba, leading the research and development of state-of-the-art AI technologies. Before joining Alibaba, he was a faculty member of the Computer and Science Engineering Dept. at Michigan State University from 2003 to 2015. His research is focused on statistical machine learning and its application to large-scale data analysis. He published over 300 technique papers, mostly on the top conferences and prestigious journals. He is an associate editor of IEEE Transaction at Pattern Analysis and Machine Intelligence (TPAMI) and ACM Transaction at Knowledge Discovery from Data. Dr. Jin holds Ph.D. in Computer Science from Carnegie Mellon University. He received the NSF career award in 2006, and the best paper award from COLT in 2012.

The New TREC Track on Podcast Search and Summarization

Dr. Rosie Jones
Spotify
U.S.A.

Time: July 28, 9:40-10:40 (Time Zone: UTC+8)
Room: Microsoft

Abstract

Podcasts are exploding in popularity. As this medium grows, it becomes increasingly important to understand the content of podcasts (e.g. what exactly is being covered, by whom, and how?), and how we can use this to connect users to shows that align with their interests. Given the explosion of new material, how do listeners find the needle in the haystack, and connect to those shows or episodes that speak to them? Furthermore, once they are presented with potential podcasts to listen to, how can they decide if this is what they want?

To move the needle forward more rapidly toward this goal, we've introduced the Spotify Podcasts Dataset [1] and TREC shared task [2]. This dataset represents the first large-scale set of podcasts, with transcripts, released to the research community. The accompanying shared task is part of the TREC 2020 Conference, run by the US National Institute of Standards and Technology. The challenge is planned to run for several years, with progressively more demanding tasks: this first year, the challenge involves a search-related task and a task to automatically generate summaries, both based on transcripts of the audio.

In this talk I will describe the task and dataset, outlining how the dataset is orders of magnitude larger than previous spoken document datasets, and how the tasks take us beyond previous shared tasks both in spoken document retrieval and NLP.

Biography

Rosie Jones is a Director of Research at Spotify. Her lab conducts research on language technologies, with applications including podcast search and recommendation, and voice understanding. Prior to joining Spotify, she was a Principal Scientist at Microsoft working on conversational agents. She has also worked as Director of Computational Advertising at Akamai, and as a Principal Scientist at Yahoo working on online advertising and search. She is a senior member of the ACM and is a PC co-chair for SIGIR 2021.

SIGIR'20 Main Conference Program

Monday, July 27, 2020
(Time Zone: UTC+8)

Welcome & Conference Opening (July 27, 8:10-8:30)
Room: Xi'an
Welcome: General Chairs
Program Introduction: PC Chairs

Keynote I (July 27, 8:30-9:30; *playback is available after 10:00***)**
Chair: Jimmy Huang and Yi Chang
Room: Xi'an
Title: The Next Generation of Neural Networks
Speaker: Geoffrey Hinton, *Google Research & Vector Institute*

Session 1A (July 27, 9:40-11:40)
Neural IR and Semantic Matching
Chair: Hamed Zamani (*Microsoft*)
Room: Meituan

- Training Effective Neural CLIR by Bridging the Translation Gap. *Hamed Bonab, Sheikh Muhammad Sarwar, and James Allan*
- A Quantum Interference Inspired Neural Matching Model for Ad-hoc Retrieval. *Yongyu Jiang, Peng Zhang, Hui Gao, and Dawei Song*
- A Deep Recurrent Survival Model for Unbiased Ranking. *Jiarui Jin, Yuchen Fang, Weinan Zhang, Kan Ren, Guorui Zhou, Jian Xu, Yong Yu, Jun Wang, Xiaoqiang Zhu, and Kun Gai*
- ColBERT: Efficient and Effective Passage Search via Contextualized Late Interaction over BERT. *Omar Khattab and Matei Zaharia*
- Efficient Document Re-Ranking for Transformers by Precomputing Term Representations. *Sean MacAvaney, Franco Maria Nardini, Raffaele Perego, Nicola Tonellotto, Nazli Goharian, Ophir Frieder*
- A Reinforcement Learning Framework for Relevance Feedback, *Ali Montazeralghaem, Hamed Zamani, and James Allan*

Session 1B (July 27, 9:40-11:40)
Knowledge and Explainability
Chair: Vanessa Murdock (*Amazon*)
Room: Amazon

- Fairness-Aware Explainable Recommendation over Knowledge Graphs. *Zuohui Fu, Yikun Xian, Ruoyuan Gao, Jieyu Zhao, Qiaoying Huang, Yingqiang Ge, Shuyuan Xu, Shijie Geng, Chirag Shah, Yongfeng Zhang, and Gerard de Melo*
- Attentional Graph Convolutional Networks for Knowledge Concept Recommendation in MOOCs in a Heterogeneous View. *Jibing Gong, Shen Wang, Jinlong Wang, Hao Peng, Wenzheng Feng, Dan Wang, Yi Zhao, Huanhuan Li, Jie Tang, and P. Yu*
- Sequential Recommendation with Self-attentive Multi-adversarial Network. *Ruiyang Ren, Zhaoyang Liu, Yaliang Li, Wayne Xin Zhao, Hui Wang, Bolin Ding, and Ji-Rong Wen*

- MVIN: Learning multiview items for recommendation. *Chang-You Tai, Meng-Ru Wu, Yun-Wei Chu, Shao-Yu Chu, and Lun-Wei Ku*
- Make It a CHORUS: Context- and Knowledge-aware Item Modeling for Recommendation. Chenyang Wang, Min Zhang, Weizhi Ma, Yiqun Liu, and Shaoping Ma
- Evolutionary Product Description Generation: A Dynamic Fine-Tuning Approach Leveraging User Click Behavior. *Yongzhen Wang, Jian Wang, Heng Huang, Hongsong Li, and Xiaozhong Liu*

Session 1C (July 27, 9:40-11:40)
Graph-based Analysis
Chair: Qiaozhu Mei (*University of Michigan*)
Room: Alibaba
- Pairwise View Weighted Graph Network for View-based 3D Model Retrieval. *Zan Gao, Yin-Ming Li, Wei-Li Guan, Wei-Zhi Nie, Zhi-Yong Cheng, and An-An Liu*
- Detecting User Community in Sparse Domain via Cross-Graph Pairwise Learning. *Zheng Gao, Hongsong Li, Zhuoren Jiang, and Xiaozhong Liu*
- BiANE: Bipartite Attributed Network Embedding. *Wentao Huang, Yuchen Li, Yuan Fang, Ju Fan, and Hongxia Yang*
- Hierarchical Fashion Graph Network for Personalised Outfit Recommendation. *Xingchen Li, Xiang Wang, Xiangnan He, Long Chen, Jun Xiao, and Tat-Seng Chua*
- Global Context Enhanced Graph Nerual Networks for Session-based Recommendation. *Ziyang Wang, Wei Wei, Cong Gao, Xiaoli Li, Xianling Mao, and Minghui Qiu*
- Interactive Recommender System via Knowledge Graph-enhanced Reinforcement Learning. *Sijin Zhou, Xinyi Dai, Haokun Chen, Weinan Zhang, Kan Ren, Ruiming Tang, Xiuqiang He, and Yong Yu*

Industrial Session I (July 27, 9:40-11:40)
Chair: Weinan Zhang (*Shanghai Jiao Tong University*)
Room: Microsoft
- **Invited talk**: Large-scale Multi-modal Search and QA at Alibaba. *Rong Jin*
- User Behavior Retrieval for Click-Through Rate Prediction. *Jiarui Qin, Weinan Zhang, Xin Wu, Jiarui Jin, Yuchen Fang, and Yong Yu*
- How Airbnb Tells You Will Enjoy Sunset Sailing in Barcelona? Recommendation in a Two-Sided Travel Marketplace. *Liang Wu and Mihajlo Grbovic*

Break (12:00-14:30)
Virtual discussion rooms available

Keynote II (July 27, 14:30-15:30; *playback is available after 16:00***)**
Chair: Yi Chang and Xueqi Cheng
Room: Xi'an
Title: On Presuppositions of Machine Learning: A Meta Theory
Speaker: Zongben Xu, *Xi'an Jiaotong University & Pazhou Lab*

Session 2A (July 27, 15:40-18:00)
Knowledge for Personalization
Chair: Imed Zitouni (*Google*)
Room: Meituan

- Jointly Non-Sampling Learning for Knowledge Graph Enhanced Recommendation. *Chong Chen, Min Zhang, Weizhi Ma, Yiqun Liu, and Shaoping Ma*
- AutoGroup: Automatic Feature Grouping for Modelling Explicit High-Order Feature Interactions in CTR Prediction. *Bin Liu, Niannan Xue, Huifeng Guo, Ruiming Tang, Stefanos Zafeiriou, Xiuqiang He, and Zhenguo Li*
- KERL: A Knowledge-Guided Reinforcement Learning Model for Sequential Recommendation. *Pengfei Wang, Yu Fan, Long Xia, Wayne Xin Zhao, Shaozhang Niu, and Jimmy Huang*
- CKAN: Collaborative Knowledge-aware Attentive Network for Recommender Systems. *Ze Wang, Lin Guangyan, Huobin Tan, Qinghong Chen, and Xiyang Liu*
- CATN: Cross-Domain Recommendation for Cold-Start Users via Aspect Transfer Network. *Cheng Zhao, Chenliang Li, Rong Xiao, Hongbo Deng, and Aixin Sun*
- Leveraging Demonstrations for Reinforcement Recommendation Reasoning over Knowledge Graphs. *Kangzhi Zhao, Xiting Wang, Yuren Zhang, Li Zhao, Zheng Liu, Chunxiao Xing, and Xing Xie*
- Incorporating Scenario Knowledge into A Unified Fine-tuning Architecture for Event Representation. *Jianming Zheng, Fei Cai, and Honghui Chen*

Session 2B (July 27, 15:40-18:00)
User Behavior and Experience
Chair: Suzan Verberne (*Leiden University*)
Room: Amazon

- Ranking-Incentivized Quality Preserving Content Modification. *Gregory Goren, Oren Kurland, Moshe Tennenholtz, and Fiana Raiber*
- On Understanding Data Worker Interaction Behaviors. *Lei Han, Tianwa Chen, Gianluca Demartini, Marta Indulska, and Shazia Sadiq*
- Creating a Children-Friendly Reading Environment via Joint Learning of Content and Human Attention. *Guoxiu He, Yangyang Kang, Zhuoren Jiang, Jiawei Liu, Changlong Sun, Xiaozhong Liu, and Wei Lu*
- Octopus: Comprehensive and Elastic User Representation for the Generation of Recommendation Candidates. *Zheng Liu, Junhan Yang, Jianxun Lian, Defu Lian, and Xing Xie*
- The Cortical Activity of Graded Relevance. *Zuzana Pinkosova, William McGeown, and Yashar Moshfeghi*
- Asymmetric Tri-training for Debiasing Missing-Not-At-Random Explicit Feedback. *Yuta Saito*
- Beyond User Embedding Matrix: Learning to Hash for Modeling Large-Scale Users in Recommendation. *Shaoyun Shi, Weizhi Ma, Min Zhang, Yongfeng Zhang, Xinxing Yu, Houzhi Shan, Yiqun Liu, and Shaoping Ma*

Session 2C (July 27, 15:40-18:00)
Evaluation
Chair: Mark Sanderson (*RMIT University*)
Room: Alibaba

- Measuring Recommendation Explanation Quality: The Conflicting Goals of Explanations. *Krisztian Balog and Filip Radlinski*
- Bayesian Inferential Risk Evaluation on Multiple IR Systems. *Rodger Benham, Ben Carterette, J. Shane Culpepper, and Alistair Moffat*
- How to Measure the Reproducibility of System-oriented IR Experiments. *Timo Breuer, Nicola Ferro, Norbert Fuhr, Maria Maistro, Tetsuya Sakai, Philipp Schaer, and Ian Soboroff*
- Good Evaluation Measures based on Document Preferences. *Tetsuya Sakai and Zhaohao Zeng*

- Preference-based Evaluation Metrics for Web Image Search. *Xiaohui Xie, Jiaxin Mao, Yiqun Liu, Maarten de Rijke, Haitian Chen, Min Zhang, and Shaoping Ma*
- Models Versus Satisfaction: Towards a Better Understanding of Evaluation Metrics. *Fan Zhang, Jiaxin Mao, Yiqun Liu, Xiaohui Xie, Weizhi Ma, Min Zhang, and Shaoping Ma*
- Cascade or Recency: Constructing Better Evaluation Metrics for Session Search. *Fan Zhang, Jiaxin Mao, Yiqun Liu, Weizhi Ma, Min Zhang, and Shaoping Ma*

Industrial Session II (July 27, 15:40-18:00)
Chair: Mounia Lalmas (*Spotify*)
Room: Microsoft
- Efficient and Effective Query Auto-Completion. *Simon Gog, Giulio Ermanno Pibiri, and Rossano Venturini*
- ATBRG: Adaptive Target-Behavior Relational Graph Network for Effective Recommendation. *Yufei Feng, Binbin Hu, Fuyu Lv, Qingwen Liu, Zhiqiang Zhang, and Wenwu Ou*
- Multiplex Behavioral Relation Learning for Recommendation via Memory Augmented Transformer Network. *Lianghao Xia, Chao Huang, Yong Xu, Peng Dai, Bo Zhang, and Liefeng Bo*
- Entire Space Multi-Task Modeling via Post-Click Behavior Decomposition for Conversion Rate Prediction. *Hong Wen, Jing Zhang, Yuan Wang, Fuyu Lv, Wentian Bao, Quan Lin, and Keping Yang*
- Automated Embedding Size Search in Deep Recommender Systems. *Haochen Liu, Xiangyu Zhao, Chong Wang, Xiaobing Liu, and Jiliang Tang*

Short/Demo/TOIS paper session I (July 27, 20:00-22:00)
Room: Daming Palace
Virtual discussion rooms available

Session 3A (July 27, 22:00-24:00)
Bias and Fairness
Chair: Ricardo Baeza-Yates (*Northeastern University*)
Room: Meituan
- Operationalizing the Legal Principle of Data Minimization for Personalization. *Asia J. Biega, Peter Potash, Hal Daumé III, Fernando Diaz, and Michèle Finck*
- Learning Personalized Risk Preferences for Recommendation. *Yingqiang Ge, Shuyuan Xu, Shuchang Liu, Zuohui Fu, Fei Sun, and Yongfeng Zhang*
- Certifiable Robustness to Discrete Adversarial Perturbations for Factorization Machines. *Yang Liu, Xianzhuo Xia, Liang Chen, Xiangnan He, Carl Yang, and Zibin Zheng*
- Controlling Fairness and Bias in Dynamic Ranking. *Marco Morik, Ashudeep Singh, Jessica Hong, and Thorsten Joachims*
- Can the Crowd Identify Misinformation Objectively? The Effects of Judgments Scale and Assessor's Bias. *Kevin Roitero, Michael Soprano, Shaoyang Fan, Damiano Spina, Stefano Mizzaro, and Gianluca Demartini*
- Measuring and Mitigating Item Under-Recommendation Bias in Personalized Ranking Systems. *Ziwei Zhu, Jianling Wang, and James Caverlee*

Session 3B (July 27, 22:00-24:00)
Learning to Rank
Chair: Hang Li (*Bytedance*)
Room: Amazon

- What Makes a Top-Performing Precision Medicine Search Engine? Tracing Main System Features in a Systematic Way. *Erik Faessler, Michel Oleynik, and Udo Hahn*
- Accelerated Convergence for Counterfactual Learning to Rank. *Rolf Jagerman and Maarten de Rijke*
- DVGAN: A Minimax Game for Search Result Diversification Combining Explicit and Implicit Features. *Jiongnan Liu, Zhicheng Dou, Xiaojie Wang, Shuqi Lu, and Ji-Rong Wen*
- Policy-Aware Unbiased Learning to Rank for Top-k Rankings. *Harrie Oosterhuis and Maarten de Rijke*
- SetRank: Learning a Permutation-Invariant Ranking Model for Information Retrieval. *Liang Pang, Jun Xu, Qingyao Ai, Yanyan Lan, Xueqi Cheng, and Ji-Rong Wen*
- Reinforcement Learning to Rank with Pairwise Policy Gradient. *Jun Xu, Zeng Wei, Long Xia, Yanyan Lan, Dawei Yin, Xueqi Cheng, and Ji-Rong Wen*

Session 3C (July 27, 22:00-24:00)
Question Answering
Chair: Jochen L. Leidner (*Refinitiv Labs/University of Sheffield*)
Room: Alibaba

- Humor Detection in Product Question Answering Systems. *Elad Kravi, David Carmel, and Yftah Ziser*
- Training Curricula for Open Domain Answer Re-Ranking. *Sean MacAvaney, Franco Maria Nardini, Raffaele Perego, Nicola Tonellotto, Nazli Goharian, and Ophir Frieder*
- Open-Retrieval Conversational Question Answering. *Chen Qu, Liu Yang, Cen Chen, Minghui Qiu, W. Bruce Croft, and Mohit Iyyer*
- Learning to Ask Screening Questions for Job Postings. *Baoxu Shi, Shan Li, Jaewon Yang, Mustafa Emre Kazdagli, and Qi He*
- Match^2: A Matching over Matching Model for Similar Question Identification. *Zizhen Wang, Yixing Fan, Jiafeng Guo, Liu Yang, Ruqing Zhang, Yanyan Lan, Xueqi Cheng, Hui Jiang, and Xiaozhao Wang*
- Answer Ranking for Product-Related Questions via Multiple Semantic Relations Modeling. *Wenxuan Zhang, Yang Deng, and Wai Lam*

Tuesday, July 28, 2020
(Time Zone: UTC+8)

Break (July 28, 0:00-6:00)
Virtual discussion rooms available

Keynote III (July 28, 8:30-9:30; *playback is available after 10:00***)**
Chair: Jimmy Huang and Yiqun Liu
Room: Xi'an
Title: Coopetition in IR Research
Speaker: Ellen M. Voorhees, *National Institute for Standards and Technology*

Session 4A (July 28, 9:40-11:40)
Query and Representation
Chair: Rob Capra (*University of North Carolina*)
Room: Meituan
- ESAM: Discriminative Domain Adaptation with Non-Displayed Items to Improve Long-Tail Performance. *Zhihong Chen, Rong Xiao, Chenliang Li, Gangfeng Ye, Haochuan Sun, and Hongbo Deng*
- Table Search Using a Deep Contextualized Language Model. *Zhiyu Chen, Mohamed Trabelsi, Jeff Heflin, Yinan Xu, and Brian Davison*
- Convolutional Embedding for Edit Distance. *Xinyan Dai, Xiao Yan, Kaiwen Zhou, Yuxuan Wang, Han Yang, and James Cheng*
- ASiNE: Adversarial Signed Network Embedding. *Yeon-Chang Lee, Nayoun Seo, Sang-Wook Kim, and Kyungsik Han*
- Efficient Graph Query Processing over Geo-Distributed Datacenters. *Ye Yuan, Delong Ma, Zhenyu Wen, Yuliang Ma, Guoren Wang, and Lei Chen*
- Spatio-Temporal Dual Graph Attention Network for Query-POI Matching. *Zixuan Yuan, Hao Liu, Yanchi Liu, Denghui Zhang, Fei Yi, Nengjun Zhu, and Hui Xiong*

Session 4B (July 28, 9:40-11:40)
Graph-based Recommendation
Chair: Chirag Shah (*University of Washington*)
Room: Amazon
- LightGCN: Simplifying and Powering Graph Convolution Network for Recommendation. *Xiangnan He, Kuan Deng, Xiang Wang, Yan Li, Yongdong Zhang, and Meng Wang*
- GAME: Learning Graphical and Attentive Multi-view Embeddings for Occasional Group Recommendation. *Zhixiang He, Chi-Yin Chow, and Jia-Dong Zhang*
- Multi-behavior Recommendation with Graph Convolution Networks. *Bowen Jin, Chen Gao, Xiangnan He, Yong Li, and Depeng Jin*
- GAG: Global Attributed Graph Neural Network for Streaming Session-based Recommendation. *Ruihong Qiu, Hongzhi Yin, Zi Huang, and Tong Chen*
- Joint Item Recommendation and Attribute Inference: An Adaptive Graph Convolutional Network Approach. *Le Wu, Yonghui Yang, Kun Zhang, Richang Hong, Yanjie Fu, and Meng Wang*
- GCN-Based User Representation Learning for Unifying Robust Recommendation and Fraudster Identification. *Shijie Zhang, Hongzhi Yin, Tong Chen, Nguyen Quoc Viet Hung, Zi Huang, and Lizhen Cui*

Session 4C (July 28, 9:40-11:40)
Neural Networks and Embedding
Chair: Doug Oard (*University of Maryland*)
Room: Alibaba

- Using Phoneme Representations to Build Predictive Models Robust to ASR Errors. *Anjie Fang, Simone Filice, Nut Limsopatham, and Oleg Rokhlenko*
- Knowledge Enhanced Personalized Search. *Shuqi Lu, Zhicheng Dou, Chenyan Xiong, Xiaojie Wang, and Ji-Rong Wen*
- Learning Dynamic Node Representations with Graph Neural Networks. *Yao Ma, Ziyi Guo, Zhaochun Ren, Jiliang Tang, and Dawei Yin*
- An Eye Tracking Study of Web Search by People with and without Dyslexia. *Srishti Palani, Adam Fourney, Shane Williams, Kevin Larson, Irina Spiridonova, and Meredith Ringel Morris*
- DGL-KE: Training knowledge graph embeddings at scale. *Da Zheng, Xiang Song, Chao Ma, Zeyuan Tan, Zihao Ye, Hao Xiong, Zheng Zhang, and George Karypis*
- Neural Interactive Collaborative Filtering. *Lixin Zou, Long Xia, Yulong Gu, Weidong Liu, Dawei Yin, Jimmy Huang, and Xiangyu Zhao*

Industrial Session III (July 28, 9:40-11:40)
Chair: Vanessa Murdock (*Amazon*)
Room: Microsoft

- **Invited talk**: The New TREC Track on Podcast Search and Summarization. *Roise Jones*
- Think Beyond the Word: Understanding the Implied Textual Meaning by Digesting Context, Local, and Noise. *Guoxiu He, Zhe Gao, Zhuoren Jiang, Yangyang Kang, Changlong Sun, Xiaozhong Liu, and Wei Lu*
- Robust Layout-aware IE for Visually Rich Documents with Pre-trained Language Models. *Mengxi Wei, Yifan He, and Qiong Zhang*

Break (12:00-14:30)
Virtual discussion rooms available

Keynote IV (July 28, 14:30-15:30; *playback is available after 16:00***)**
Chair: Jimmy Huang and Xueqi Cheng
Room: Xi'an
Title: Proof by Experimentation? Towards Better IR Research
Speaker: Norbert Fuhr, *University of Duisburg-Essen*

Session 5A (July 28, 15:40-17:40)
Domain Specific Applications 1
Chair: Elad Yom-Tov (*Microsoft Research*)
Room: Meituan

- Fashion Compatibility Modeling through a Multi-modal Try-on-guided Scheme. *Xue Dong, Jianlong Wu, Xuemeng Song, Hongjun Dai, and Liqiang Nie*
- Spatial Object Recommendation with Hints: When Spatial Granularity Matters. *Hui Luo, Jingbo Zhou, Zhifeng Bao, Shuangli Li, J. Shane Culpepper, Haochao Ying, Hao Liu, and Hui Xiong*
- Product Bundle Identification using Semi-Supervised Learning. *Hen Tzaban, Ido Guy, Asnat Greenstein-Messica, Arnon Dagan, Lior Rokach, and Bracha Shapira*

- Coding Electronic Health Records with Adversarial Reinforcement Path Generation. *Shanshan Wang, Pengjie Ren, Zhumin Chen, Zhaochun Ren, Jian-Yun Nie, Jun Ma, and Maarten de Rijke*
- Degree-Aware Alignment for Entities in Tail. *Weixin Zeng, Xiang Zhao, Wei Wang, Jiuyang Tang, and Zhen Tan*
- Regional Relation Modeling for Visual Place Recognition. *Yingying Zhu, Biao Li, Jiong Wang, and Zhou Zhao*

Session 5B (July 28, 15:40-17:40)
Learning for Recommendation
Chair: Nicola Ferro (*University of Padua*)
Room: Amazon

- A General Knowledge Distillation Framework for Counterfactual Recommendation via Uniform Data. *Dugang Liu, Pengxiang Cheng, Zhenhua Dong, Xiuqiang He, Weike Pan, and Zhong Ming*
- Agreement and Disagreement between True and False-Positive Metrics in Recommender Systems Evaluation. *Elisa Mena-Maldonado, Rocío Cañamares, Pablo Castells, Yongli Ren, and Mark Sanderson*
- Leveraging Social Media for Medical Text Simplification. *Nikhil Pattisapu, Nishant Prabhu, Smriti Bhati, and Vasudeva Varma*
- Sampler Design for Implicit Feedback Data by Noisy-label Robust Learning. *Wenhui Yu and Zheng Qin*
- MaHRL: Multi-goals Abstraction based Deep Hierarchical Reinforcement Learning for Recommendations. *Dongyang Zhao, Liang Zhang, Bo Zhang, Lizhou Zheng, Yongjun Bao, and Weipeng Yan*
- Towards Question-based Recommender Systems. *Jie Zou, Yifan Chen, and Evangelos Kanoulas*

Session 5C (July 28, 15:40-17:40)
Information Access and Filtering
Chair: Djoerd Hiemstra (*Radboud University*)
Room: Alibaba

- Try This Instead: Personalized and Interpretable Substitute Recommendation. *Tong Chen, Hongzhi Yin, Guanhua Ye, Zi Huang, Yang Wang, and Meng Wang*
- Towards Linking Camouflaged Descriptions to Implicit Products in E-commerce. *Longtao Huang, Bo Yuan, Rong Zhang, and Quan Lu*
- Distributed Equivalent Substitution Training for Large-Scale Recommender Systems. *Haidong Rong, Yangzihao Wang, Feihu Zhou, Junjie Zhai, Haiyang Wu, Rui Lan, Fan Li, Han Zhang, Yuekui Yang, Zhenyu Guo, and Di Wang*
- Query Resolution for Conversational Search with Limited Supervision. *Nikos Voskarides, Dan Li, Pengjie Ren, Evangelos Kanoulas, and Maarten de Rijke*
- Self-Supervised Reinforcement Learning for Recommender Systems. *Xin Xin, Alexandros Karatzoglou, Ioannis Arapakis, and Joemon Jose*
- Generative Attribute Manipulation Scheme for Flexible Fashion Search. *Xin Yang, Xuemeng Song, Xianjing Han, Haokun Wen, Jie Nie, and Liqiang Nie*

Industrial Session IV (July 28, 15:40-17:40)
Chair: Rui Wang (*Alibaba Group*)
Room: Microsoft

- Understanding Echo Chambers in E-commerce Recommender Systems. *Yingqiang Ge, Shuya Zhao, Honglu Zhou, Changhua Pei, Fei Sun, Wenwu Ou, and Yongfeng Zhang*

- Towards Personalized and Semantic Retrieval: An End-to-End Solution for E-commerce Search via Embedding Learning. *Han Zhang, Songlin Wang, Kang Zhang, Zhiling Tang, Yunjiang Jiang, Yun Xiao, Paul Yan, and Wen-Yun Yang*
- GMCM: Graph-based Micro-behavior Conversion Model for Post-click Conversion Rate Estimation. *Wentian Bao, Hong Wen, Sha Li, Xiao-Yang Liu, Quan Lin, and Keping Yang*
- A Heterogeneous Information Network based Cross Domain Insurance Recommendation System for Cold Start Users. *Ye Bi, Liqiang Song, Mengqiu Yao, Zhenyu Wu, Jianming Wang, and Jing Xiao*
- Item Tagging for Information Retrieval: A Tripartite Graph Neural Network based Approach. *Kelong Mao, Xi Xiao, Jieming Zhu, Biao Lu, Ruiming Tang, and Xiuqiang He*

Short/Demo/TOIS Paper Session II (July 28, 20:00-22:00)
Room: Daming Palace
Virtual discussion rooms available

Session 6A (July 28, 22:00-24:00)
Neural Collaborative Filtering 1
Chair: Min Zhang (*Tsinghua University*)
Room: Meituan
- How Dataset Characteristics Affect the Robustness of Collaborative Recommendation Models. *Yashar Deldjoo, Tommaso Di Noia, Felice Antonio Merra, Eugenio Di Sciascio*
- DPLCF: Differentially Private Local Collaborative Filtering. *Chen Gao, Chao Huang, Dongsheng Lin, Yong Li, and Depeng Jin*
- Content-aware Neural Hashing for Cold-start Recommendation. *Casper Hansen, Christian Hansen, Jakob Grue Simonsen Stephen Alstrup, and Christina Lioma*
- Meta Matrix Factorization for Federated Rating Predictions. *Yujie Lin, Pengjie Ren, Zhumin Chen, Zhaochun Ren, Dongxiao Yu, Jun Ma, Maarten de Rijke, and Xiuzhen Cheng*
- The Impact of More Transparent Interfaces on Behavior in Personalized Recommendation. *Tobias Schnabel, Paul Bennett, Saleema Amershi, Peter Bailey, and Thorsten Joachims*
- Disentangled Representations for Graph-based Collaborative Filtering. *Xiang Wang, Hongye Jin, An Zhang, Xiangnan He, Tong Xu, and Tat-Seng Chua*

Session 6B (July 28, 22:00-24:00)
Domain Specific Applications 2
Chair: Krisztian Balog (*University of Stavanger*)
Room: Amazon
- Domain-Adaptive Neural Automated Essay Scoring. *Yue Cao, Hanqi Jin, Xiaojun Wan, and Zhiwei Yu*
- ADORE: Aspect Dependent Online REview Labeling for Review Generation. *Parisa Kaghazgaran, Jianling Wang, Ruihong Huang, and James Caverlee*
- Finding the Best of Both Worlds: Faster and More Robust Top-k Document Retrieval. *Omar Khattab, Mohammad Hammoud, and Tamer Elsayed*
- Recommending Podcasts for Cold-Start Users Based on Music Listening and Taste. *Zahra Nazari, Christophe Charbuillet, Johan Pages, Martin Laurent, Denis Charrier, Briana Vecchione, and Benjamin Carterette*
- Learning with Weak Supervision for Email Intent Detection. *Kai Shu, Subhabrata Mukherjee, Guoqing Zheng, Ahmed Hassan Awadallah, Milad Shokouhi, and Susan Dumais*
- 3D Self-Attention for Unsupervised Video Quantization. *Jingkuan Song, Ruimin Lang, Xiaosu Zhu, Xing Xu, Lianli Gao, and Heng Tao Shen*

Session 6C (July 28, 22:00-24:00)
Context-aware Modeling
Chair: Carsten Eickhoff (*Brown University*)
Room: Alibaba

- Modeling Personalized Item Frequency Information for Next-basket Recommendation. *Haoji Hu, Xiangnan He, Jinyang Gao, and Zhi-Li Zhang*
- Transfer Learning via Contextual Invariants for One-to-Many Cross-Domain Recommendation. *Adit Krishnan, Mahashweta Das, Mangesh Bendre, Hao Yang, and Hari Sundaram*
- Incorporating User Micro-behaviors and Item Knowledge into Multi-task Learning for Session-based Recommendation. *Wenjing Meng, Deqing Yang, and Yanghua Xiao*
- Next-item Recommendation with Sequential Hypergraphs. *Jianling Wang, Kaize Ding, Liangjie Hong, Huan Liu, and James Caverlee*
- Encoding History with Context-aware Representation Learning for Personalized Search. *Yujia Zhou, Zhicheng Dou, and Ji-Rong Wen*
- Recommendation for New Users and New Items via Randomized Training and Mixture-of-Experts Transformation. *Ziwei Zhu, Shahin Sefati, Parsa Saadatpanah, and James Caverlee*

Wednesday, July 29, 2020
(Time Zone: UTC+8)

Break (0:00-6:00)
Virtual discussion rooms available

Keynote V (July 29, 8:30-9:30; *playback is available after 10:00***)**
Chair: Yi Chang and Yiqun Liu
Room: Xi'an
Title: From Information to Assistance
Speaker: Elizabeth F. Churchill, *Google*

Session 7A (July 29, 9:40-11:40)
Conversation and Interactive IR
Chair: Jeff Dalton (*University of Glasgow*)
Room: Meituan

- Neural Representation Learning for Clarification in Conversational Search. *Helia Hashemi, Hamed Zamani, and Bruce Croft*
- Investigating Reference Dependence Effects on User Search Interaction and Satisfaction. *Jiqun Liu and Fangyuan Han*
- DukeNet: A Dual Knowledge Interaction Network for Knowledge-Grounded Conversation. *Chuan Meng, Pengjie Ren, Zhumin Chen, Weiwei Sun, Zhaochun Ren, Zhaopeng Tu, and Maarten de Rijke*
- What If Bots Feel Moods? Towards Controllable Retrieval-based Dialogue Systems with Emotion-Aware Transition Networks. *Lisong Qiu, Ying Wai Shiu, Pingping Lin, Ruihua Song, Yue Liu, Dongyan Zhao, and Rui Yan*
- Expressions of Style in Information Seeking Conversation with an Agent. *Paul Thomas, Daniel Mcduff, Mary Czerwinski, and Nick Craswell*
- Analyzing and Learning from User Interactions for Search Clarification. *Hamed Zamani, Bhaskar Mitra, Everest Chen, Gord Lueck, Fernando Diaz, Paul Bennett, Nick Craswell, and Susan Dumais*

Session 7B (July 29, 9:40-11:40)
Text Classification and Transfer Learning
Chair: Rosie Jones (*Spotify*)
Room: Amazon

- A Unified Dual-view Model for Review Summarization and Sentiment Classification with Inconsistency Loss. *Hou Pong Chan, Wang Chen, and Irwin King*
- Enhancing Text Classification via Discovering Additional Semantic Clues from Logograms. *Chen Qian, Fuli Feng, Lijie Wen, Li Lin, and Tat-Seng Chua*
- Learning to Transfer Graph Embeddings for Inductive Graph based Recommendation. *Le Wu, Yonghui Yang, Lei Chen, Defu Lian, Richang Hong, and Meng Wang*
- Web-to-Voice Transfer for Product Recommendation on Voice. Rongting Zhang and Jie Yang
- Minimally Supervised Categorization of Text with Metadata. *Yu Zhang, Yu Meng, Jiaxin Huang, Frank F. Xu, Xuan Wang, and Jiawei Han*
- Joint Aspect-Sentiment Analysis with Minimal User Guidance. *Honglei Zhuang, Fang Guo, Chao Zhang, Liyuan Liu, and Jiawei Han*

Session 7C (July 29, 9:40-11:40)
Neural Collaborative Filtering 2
Chair: Yi Fang (*Santa Clara University*)
Room: Alibaba

- AR-CF: Augmenting Virtual Users and Items in Collaborative Filtering for Addressing Cold-Start Problems. *Dong-Kyu Chae, Jihoo Kim, Sang-Wook Kim, and Duen Horng Chau*
- Studying Product Competition Using Representation Learning. *Fanglin Chen, Xiao Liu, Davide Proserpio, Isamar Troncoso, and Feiyu Xiong*
- Deep Critiquing for VAE-based Recommender Systems. *Kai Luo, Hojin Yang, Ga Wu, and Scott Sanner*
- GroupIM: A Mutual Information Maximizing Framework for Neural Group Recommendation. *Aravind Sankar, Yanhong Wu, Yuhang Wu, Wei Zhang, Hao Yang, and Hari Sundaram*
- Neighbor Interaction Aware Graph Convolution Networks for Recommendation. *Jianing Sun, Yingxue Zhang, Wei Guo, Huifeng Guo, Ruiming Tang, Xiuqiang He, Chen Ma, and Mark Coates*
- A General Network Compression Framework for Sequential Recommender Systems. *Yang Sun, Fajie Yuan, Min Yang, Guoao Wei, Zhou Zhao, and Duo Liu*

Industrial Session V (July 29, 9:40-11:40)
Chair: Imed Zitouni (*Google*)
Room: Microsoft

- A Counterfactual Framework for Seller-Side A/B Testing on Marketplaces. *Viet Ha-Thuc, Avishek Dutta, Ren Mao, Matthew Wood, and Yunli Liu*
- Knowledge Graph-based Event Embedding Framework for Financial Quantitative Investments. *Dawei Cheng, Fangzhou Yang, Xiaoyang Wang, Ying Zhang, and Liqing Zhang*
- FashionBERT: Text and Image Matching with Adaptive Loss for Cross-modal Retrieval. *Dehong Gao, Linbo Jin, Ben Chen, Minghui Qiu, Yi Wei, Yi Hu, and Hao Wang*
- Large Scale Abstractive Multi-Review Summarization (LSARS) via Aspect Alignment. *Haojie Pan, Rongqin Yang, Xin Zhou, Rui Wang, Deng Cai, and Xiaozhong Liu*
- Be Aware of the Hot Zone: A Warning System of Hazard Area Prediction to Intervene Novel Coronavirus COVID-19 Outbreak. *Zhenxin Fu, Yu Wu, Hailei Zhang, Yichuan Hu, Dongyan Zhao, and Rui Yan*

Break (12:00-14:30)
Virtual discussion rooms available

Keynote VI (July 29, 14:30-15:30; *playback is available after 16:00***)**
Chair: Xueqi Cheng and Yiqun Liu
Room: Xi'an
Title: How Deep Learning Works for Information Retrieval
Speaker: Dacheng Tao, *The University of Sydney*

Session 8A (July 29, 15:40-17:40)
Domain Specific Retrieval Tasks
Chair: David Carmel (*Amazon*)
Room: Meituan

- Learning Efficient Representations of Mouse Movements toPredict User Attention in Sponsored Search. *Ioannis Arapakis and Luis A. Leiva*

- Query Reformulation in E-Commerce Search. *Sharon Hirsch, Ido Guy, Alexander Nus, Arnon Dagan, and Oren Kurland*
- Generating Images Instead of Retrieving them: Relevance feedback on Generative Adversarial Networks. *Antti Ukkonen, Pyry Joona, and Tuukka Ruotsalo*
- Tree-augmented Cross-Modal Encoding for Complex-Query Video Retrieval. *Xun Yang, Jianfeng Dong, Yixin Cao, Xun Wang, Meng Wang, and Tat-Seng Chua*
- Nonlinear Robust Discrete Hashing for Cross-Modal Retrieval. *Zhan Yang, Jun Long, Lei Zhu, and Wenti Huang*
- Employing Personal Word Embeddings for Personalized Search. *Jing Yao, Zhicheng Dou, and Ji-Rong Wen*

Session 8B (July 29, 15:40-17:40)
Multi-modal Retrieval and Ranking
Chair: Benjamin Piwowarski (*CNRS*)
Room: Amazon

- Query Rewriting for Voice Shopping Null Queries. *Iftah Gamzu, Marina Haikin, and Nissim Halabi*
- Joint-modal Distribution-based Similarity Hashing for Large-scale Unsupervised Deep Cross-modal Retrieval. *Song Liu, Shengsheng Qian, Yang Guan, Jiawei Zhan, and Long Ying*
- Learning Colour Representations of Search Queries. *Paridhi Maheshwari, Manoj Ghuhan A, and Vishwa Vinay*
- Web Table Retrieval using Multimodal Deep Learning. *Roee Shraga, Haggai Roitman, Guy Feigenblat, and Mustafa Canim*
- Online Collective Matrix Factorization Hashing for Large-Scale Cross-Media Retrieval. *Di Wang, Quan Wang, Yaqiang An, Xinbo Gao, and Yumin Tian*
- Correlated Features Synthesis and Alignment for Zero-shot Cross-modal Retrieval. *Xing Xu, Kaiyi Lin, Huimin Lu, Lianli Gao, and Heng Tao Shen*

Session 8C (July 29, 15:40-17:40)
Sequential Recommendation
Chair: Josiane Mothe (*University of Toulouse*)
Room: Alibaba

- HME: A Hyperbolic Metric Embedding Approach for Next-POI Recommendation. *Shanshan Feng, Lucas Vinh Tran, Gao Cong, Lisi Chen, Jing Li, and Fan Li*
- Dual Sequential Network for Temporal Sets Prediction. *Leilei Sun, Yansong Bai, Bowen Du, Chuanren Liu, Hui Xiong, and Weifeng Lv*
- Group-Aware Long- and Short-Term Graph Representation Learning for Sequential Group Recommendation. *Wen Wang, Wei Zhang, Jun Rao, Zhijie Qiu, Bo Zhang, Leyu Lin, and Hongyuan Zha*
- Time Matters: Sequential Recommendation with Complex Temporal Information. *Wenwen Ye, Shuaiqiang Wang, Xu Chen, Xuepeng Wang, Zheng Qin, and Dawei Yin*
- Parameter-Efficient Transfer from Sequential Behaviors for User Modeling and Recommendation. *Fajie Yuan, Xiangnan He, Alexandros Karatzoglou, and Liguang Zhang*
- How to Retrain a Recommender System? *Yang Zhang, Xiangnan He, Fuli Feng, Chenxu Wang, Meng Wang, Yan Li, and Yongdong Zhang*

Industrial Session VI (July 29, 15:40-17:40)
Chair: Elad Yom-Tov (*Microsoft Research*)

Room: Microsoft
- Network on Network for Tabular Data Classification in Real-world Applications, *Yuanfei Luo, Hao Zhou, Weiwei Tu, Yuqiang Chen, Wenyuan Dai, and Qiang Yang*
- Identifying Tasks from Mobile App Usage Patterns. *Yuan Tian, Ke Zhou, Mounia Lalmas, and Dan Pelleg*
- Efficient Image Gallery Representations at Scale through Multi-task Learning. *Benjamin Gutelman and Pavel Levin*

Conference Closing and Business Meeting (July 29, 21:00-24:00)
Room: Xi'an

SIGIR'20 Short/Demo/TOIS Paper Session I

July 27, 20:00 – 22:00 (Time Zone: UTC+8)
Room: Daming Palace

Short Paper Session I

SP1	Dynamic Clustering with Discrete Time Event Prediction	*Karan Aggarwal, Georgios Theocharous, and Anup Rao*
SP2	Leveraging Transitions of Emotions for Sarcasm Detection	*Ameeta Agrawal, Aijun An, and Manos Papagelis*
SP3	JointMap: Joint Query Intent Understanding for Modeling Intent Hierarchies in E-commerce Search	*Ali Ahmadvand, Surya Kallumadi, Faizan Javed, and Eugene Agichtein*
SP4	Choppy: Cut Transformers for Ranked List Truncation	*Dara Bahri, Yi Tay, Che Zheng, Don Metzler, and Andrew Tomkins*
SP5	Studying Ransomware Attacks Using Web Search Logs	*Chetan Bansal, Pantazis Deligiannis, Chandra Sekhar Maddila, and Nikitha Rao*
SP6	A Transformer-based Embedding Model for Personalized Product Search	*Keping Bi, Qingyao Ai, and W. Bruce Croft*
SP7	Balancing Reinforcement Learning Training Experiences in Interactive Information Retrieval	*Limin Chen, Zhiwen Tang, and Grace Hui Yang*
SP8	Metadata Matters in User Engagement Prediction	*Xiang Chen, Saayan Mitra, and Viswanathan Swaminathan*
SP9	Context-Aware Term Weighting for First-Stage Passage Retrieval	*Zhuyun Dai and Jamie Callan*
SP10	Summarizing and Exploring Tabular Data in Conversational Search	*Zhuyun Dai, Shuo Zhang, Krisztian Balog, and Jamie Callan*
SP11	Leveraging Adversarial Training in Self-Learning for Cross-Lingual Text Classification	*Xin Dong, Yaxin Zhu, Yupeng Zhang, Zuohui Fu, Dongkuan Xu, Sen Yang, and Gerard de Melo*
SP12	Response Quality in Human-Chatbot Collaborative Systems	*Jiepu Jiang and Naman Ahuja*
SP13	High-Precision Extraction of Emerging Concepts from Scientific Literature	*Daniel King, Doug Downey, and Daniel S. Weld*
SP14	Video Recommendation with Multi-gate Mixture of Experts Soft Actor Critic	*Dingcheng Li, Xu Li, Jun Wang, and Ping Li*
SH15	Auto-annotation for Voice-enabled Entertainment Systems	*Wenyan Li and Ferhan Ture*
SP16	Domain Adaptation with Reconstruction for Disaster Tweet Classification	*Xukun Li and Doina Carage*
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SP19	Expansion via Prediction of Importance with Contextualization	*Sean MacAvaney, Franco Maria Nardini, Raffaele Perego, Nicola Tonellotto, Nazli Goharian, and Ophir Frieder*
SP20	Reranking for Efficient Transformer-based	*Yoshitomo Matsubara, Thuy Vu, and Alessandro*

	Answer Selection	*Moschitti*
SP21	Combining contextualized and non-contextualized query translations to improve CLIR	*Suraj Nair, Petra Galuščáková, and Douglas Oard*
SP22	Proactive Suggestion Generation: Data and Methods for Stepwise Task Assistance	*Elnaz Nouri, Ryen White, Robert Sim, and Adam Fourney*
SP23	Contextual Re-Ranking with Behavior Aware Transformers	*Chen Qu, Chenyan Xiong, Yizhe Zhang, Corby Rosset, W. Bruce Croft, and Paul Bennett*
SP24	Towards Explainable Retrieval Models for Precision Medicine Literature Search	*Jiaming Qu, Jaime Arguello, and Yue Wang*
SP25	Search Result Explanations Improve Efficiency and Trust	*Jerome Ramos and Carsten Eickhoff*
SP26	Query by Example for Cross-Lingual Event Retrieval	*Sheikh Muhammad Sarwar and James Allan*
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SP28	A Study of Methods for the Generation of Domain-Aware Word Embeddings	*Dominic Seyler and Chengxiang Zhai*
SP29	Predicting Entity Popularity to Improve Spoken Entity Recognition by Virtual Assistants	*Christophe Van Gysel, Manos Tsagkias, Ernest Pusateri, and Ilya Oparin*
SP30	Data Poisoning Attacks against Differentially Private Recommender Systems	*Soumya Wadhwa, Saurabh Agrawal, Harsh Chaudhari, Deepthi Sharma, and Kannan Achan*
SP31	Immersive Search: Using Virtual Reality to Examine How a Third Dimension Impacts the Searching Process	*Austin Ward and Rob Capra*
SP32	Having Your Cake and Eating it Too: Training Neural Retrieval for Language Inference without Losing Lexical Match	*Vikas Yadav, Steven Bethard, and Mihai Surdeanu*
SP33	Neural Concept Map Generation for Effective Document Classification with Interpretable Structured Summarization	*Carl Yang, Jieyu Zhang, Haonan Wang, Bangzheng Li, and Jiawei Han*
SP34	A Case Study of Multi-class Classification with Diversified Precision Recall Requirements for Query Disambiguation	*Yingrui Yang, Christopher Miller, Peng Jiang, and Azadeh Moghtaderi*
SP35	A Study of Neural Matching Models for Cross-lingual IR	*Puxuan Yu and James Allan*
SP36	Social Media User Geolocation via Hybrid Attention	*Cheng Zheng, Jyun-Yu Jiang, Yichao Zhou, Sean Young, and Wei Wang*
SP37	Personalized Query Suggestions	*Jianling Zhong, Weiwei Guo, Huiji Gao, and Bo Long*
SP38	Feature Transformation for Neural Ranking Models	*Honglei Zhuang, Xuanhui Wang, Michael Bendersky, and Marc Najork*
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SP40	Hier-SPCNet: A Legal Statute Hierarchy-based Heterogeneous Network for Computing Legal Document Similarity	*Paheli Bhattacharya, Kripabandhu Ghosh, Arindam Pal, and Saptarshi Ghosh*

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SP43	Adversarial Attack and Detection on Reinforcement Learning based Recommendation System	*Yuanjiang Cao, Xiaocong Chen, Lina Yao, Xianzhi Wang, and Wei Emma Zhang*
SP44	Bundle Recommendation with Graph Convolutional Networks	*Jianxin Chang, Chen Gao, Xiangnan He, Yong Li, and Depeng Jin*
SP45	Re-ranking Answer Selection with Similarity Aggregation	*Dong Chen, Shaoliang Peng, Kenli Li, Ying Xu, and Jinglin Zhang*
SP46	JIT^2R: A Joint Framework for Item Tagging and Tag-based Recommendation	*Xu Chen, Changying Du, Xiuqiang He, and Jun Wang*
SP47	Attending to Inter-sentential Features in Neural Text Classification	*Billy Chiu, Sunil Sahu, Neha Sengupta, Derek Thomas, and Mohammady Mahdy*
SP48	Retrieving Potential Causes from a Query Event	*Suchana Datta, Debasis Ganguly, Dwaipayan Roy, Francesca Bonin, Charles Jochim, and Mandar Mitra*
SP49	Bridging Hierarchical and Sequential Context Modeling for Question-driven Extractive Answer Summarization	*Yang Deng, Wenxuan Zhang, Yaliang Li, Min Yang, Wai Lam, and Ying Shen*
SP50	MGNN: A Multimodal Graph Neural Network for Predicting the Survival of Cancer Patients	*Jianliang Gao, Tengfei Lyu, Fan Xiong, Jianxin Wang, and Zhao Li*
SP51	On A Unified Neural Mechanism to Search Over A Corpus of Graphs	*Kunal Goyal, Utkarsh Gupta, Abir De, and Soumen Chakrabarti*
SP52	Session-based Recommendation with Hierarchical Leaping Networks	*Cheng Guo, Mengfei Zhang, Jinyun Fang, Jiaqi Jin, and Mao Pan*
SP53	Multi-Branch Convolutional Network for Context-Aware Recommendation	*Wei Guo, Can Zhang, Huifeng Guo, Ruiming Tang, and Xiuqiang He*
SP54	Predicting Session Length for Product Search on E-commerce Platform	*Shashank Gupta and Subhadeep Maji*
SP55	Dynamic Link Prediction by Integrating Node Vector Evolution and Local Neighborhood Representation	*Xiaorong Hao, Tao Lian, and Li Wang*
SP56	Nonintrusive-Sensing and Reinforcement-Learning Based Adaptive Personalized Music Recommendation	*D Hong, L Miao, and Y Li*
SP57	Residual-Duet Network with Tree Dependency Representation for Chinese Question-Answering Sentiment Analysis	*Guangyi Hu, Chongyang Shi, Shufeng Hao, and Yu Bai*
SP58	Neural Mathematical Solver with Enhanced Formula Structure	*Zhenya Huang, Qi Liu, Weibo Gao, Jinze Wu, Yu Yin, Hao Wang, and Enhong Chen*
SP59	Detecting Concept Drift in Medical Triage	*Hamish Huggard, Yun Sing Koh, Gillian Dobbie, and Edmond Zhang*
SP60	Evidence Weighted Tree Ensembles for Text Classification	*Md Zahidul Islam, Jixue Liu, Jiuyong Li, Lin Liu, and Wei Kang*

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SP62	Multi-Modal Summary Generation using Multi-objective Optimization	*Anubhav Jangra, Sriparna Saha, Adam Jatowt, and Mohammed Hasanuzzaman*
SP63	A Re-visit of Popularity Baseline in Recommender Systems	*Yitong Ji, Aixin Sun, Jie Zhang, and Chenliang Li*
SP64	Training Mixed-Objective Pointing Decoders for Block-Level Optimization in Search Recommendation	*Harsh Kohli*
SP65	Reinforcement Learning based Recommendation with Graph Convolutional Q-network	*Yu Lei, Hongbin Pei, Hanqi Yan, and Wenjie Li*
SP66	Crowdsourced Text Sequence Aggregation based on Hybrid Reliability and Representation	*Jiyi Li*
SP67	MRIF: Multi-resolution Interest Fusion for Recommendation	*Shihao Li, Dekun Yang, and Bufeng Zhang*
SP68	Joint Training Capsule Network for Cold Start Recommendation	*Tingting Liang, Congying Xia, Yuyu Yin, and Philip Yu*
SP69	Copula Guided Neural Topic Modelling for Short Texts	*Lihui Lin, Hongyu Jiang, and Yanghui Rao*
SP70	Soft Kernel-based Ranking on a Statistical Manifold	*Xinshi Lin and Wai Lam*
SP71	Multi-Level Multimodal Transformer Network for Multimodal Recipe Comprehension	*Ao Liu, Shuai Yuan, Chenbin Zhang, Congjian Luo, Yaqing Liao, Kun Bai, and Zenglin Xu*
SP72	Chinese document classification with bi-directional convolutional language model	*Bin Liu and Guosheng Yin*
SP73	Neural Unified Review Recommendation with Cross Attention	*Hongtao Liu, Wenjun Wang, Hongyan Xu, Qiyao Peng, and Pengfei Jiao*
SP74	Goal-oriented Chatbots with Hierarchical Reinforcement Learning	*Jianfeng Liu, Feiyang Pan, and Ling Luo*
SP75	CapableOf reasoning: A step towards commonsense oracle	*Jingping Liu, Yanghua Xiao, Ao Wang, Liang He, and Bin Shao*
SP76	Interactive Entity Linking Using Entity-Word Representations	*Pei-Chi Lo and Ee-Peng Lim*
SP77	Improving Contextual Language Models for Response Retrieval in Multi-Turn Conversation	*Junyu Lu, Xiancong Ren, Yazhou Ren, Ao Liu, and Zenglin Xu*

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DE1	A Lightweight Environment for Learning Experimental IR Research Practices	*Zeynep Akkalyoncu Yilmaz, Charles Clarke, and Jimmy Lin*
DE2	BRENDA: Browser Extension for Fake News Detection	*Bjarte Botnevik, Eirik Sakariassen, and Vinay Setty*
DE3	Agent Dialogue: A Platform for Conversational Information Seeking Experimentation	*Adam Czyzewski, Jeffrey Dalton, and Anton Leuski*
DE4	DataMirror: Reflecting on One's Data Self (A Tool for Social Media Users to explore their Digital	*Amal Htait, Leif Azzopardi, Emma Nicol, and Wendy Moncur*

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DE5	Conversational Question Answering over Passages by Leveraging Word Proximity Networks	*Magdalena Kaiser, Rishiraj Saha Roy, and Gerhard Weikum*
DE6	FigExplorer: A System for Retrieval and Exploration of Figures from Collections of Research Articles	*Saar Kuzi, Chengxiang Zhai, Yin Tian, and Haichuan Tang*
DE7	APS: An Active PubMed Search System for Technology Assisted Review	*Dan Li, Panagiotis Zafeiriadis, and Evangelos Kanoulas*
DE8	Systematic Review Automation Tools for End-to-End Query Formulation	*Hang Li, Harrisen Scells, and Guido Zuccon*
DE9	Deep Job Understanding at LinkedIn	*Shan Li, Baoxu Shi, Jaewon Yang, Yan Ji, Shuai Wang, Fei Chen, and Qi He*
DE10	Supporting Interoperability Between Open-Source Search Engines with the Common Index File Format	*Jimmy Lin, Joel Mackenzie, Chris Kamphuis, Craig Macdonald, Antonio Mallia, Michal Siedlaczek, Andrew Trotman, and Arjen de Vries*
DE11	Web of Scholars: A Scholar Knowledge Graph	*Jiaying Liu, Jing Ren, Wenqing Zheng, Lianhua Chi, Ivan Lee, and Feng Xia*

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TO1	Binary Sketches for Secondary Filtering	*Vladimir Mic, David Novak, and Pavel Zezula*
TO2	Efficient Learning-Based Recommendation Algorithms for Top-N Tasks and Top-N Workers in Large-Scale Crowdsourcing Systems	*Mejdl Safran and Dunren Che*
TO3	A Deep Bayesian Tensor-Based System for Video Recommendation	*Wei Lu, Fu-Lai Chung, Wenhao Jiang, Martin Ester, and Wei Liu*
TO4	Transfer to Rank for Heterogeneous One-Class Collaborative Filtering	*Weike Pan, Qiang Yang, Wanling Cai, Yaofeng Chen, Qing Zhang, Xiaogang Peng, Zhong Ming*
TO5	Adversarial Distillation for Efficient Recommendation with External Knowledge	*Xu Chen, Yongfeng Zhang, Hongteng Xu, Zheng Qin, and Hongyuan Zha*
TO6	Personalised Reranking of Paper Recommendations Using Paper Content and User Behavior	*Xinyi Li, Yifan Chen, Benjamin Pettit, and Maarten de Rijke*
TO7	Deep Item-based Collaborative Filtering for Top-N Recommendation	*Feng Xue, Xiangnan He, Xiang Wang, Jiandong Xu, Kai Liu, and Richang Hong*
TO8	Joint Neural Collaborative Filtering for Recommender Systems	*Wanyu Chen, Fei Cai, Honghui Chen, and Maarten de Rijke*
TO9	Enhancing Personalized Recommendation by Implicit Preference Communities Modeling	*Xiao Lin, Min Zhang, Yiqun Liu, and Shaoping Ma*
TO10	Geographic Diversification of Recommended POIs in Frequently Visited Areas	*Jungkyu Han and Hayato Yamana*
TO11	A Multi-Label Classification Method Using a Hierarchical and Transparent Representation for Paper-Reviewer Recommendation	*Dong Zhang, Shu Zhao, Zhen Duan, Jie Chen, Yanping Zhang, and Jie Tang*
TO12	Next-Item Recommendation via Collaborative Filtering with Bidirectional Item Similarity	*Zijie Zeng, Jing Lin, Lin Li, Weike Pan, and Zhong Ming*

TO13	Improving Implicit Recommender Systems with Auxiliary Data	*Jingtao Ding, Guanghui Yu, Yong Li, Xiangnan He, and Depeng Jin*
TO14	Local Variational Feature-Based Similarity Models for Recommending Top-N New Items	*Yifan Chen, Yang Wang, Xiang Zhao, Hongzhi Yin, Ilya Markov, Maarten de Rijke*
TO15	Efficient Neural Matrix Factorization without Sampling for Recommendation	*Chong Chen, Min Zhang, Yongfeng Zhang, Yiqun Liu, Shaoping Ma*
TO16	An Enhanced Neural Network Approach to Person-Job Fit in Talent Recruitment	*Chuan Qin, Hengshu Zhu, Tong Xu, Chen Zhu, Chao Ma, Enhong Chen, and Hui Xiong*
TO17	From Question to Text: Question-Oriented Feature Attention for Answer Selection	*Heyan Huang, Xiaochi Wei, Liqiang Nie, Xianling Mao, and Xin-Shun Xu*
TO18	Jointly Minimizing the Expected Costs of Review for Responsiveness and Privilege in E-Discovery	*Douglas W. Oard, Fabrizio Sebastiani, and Jyothi K. Vinjumur*
TO19	Fine-grained Geolocation of Tweets in Temporal Proximity	*Wen-Haw Chong and Ee-Peng Lim*
TO20	Learning from Multi-annotator Data: A Noise-aware Classification Framework	*Xueying Zhan, Yaowei Wang, Yanghui Rao, and Qing Li*
TO21	A Deep Learning Architecture for Psychometric Natural Language Processing	*Faizan Ahmad, Ahmed Abbasi, Jingjing Li, David G. Dobolyi, Richard G. Netemeyer, Gari D. Clifford, and Hsinchun Chen*
TO22	Jointly Learning Representations of Nodes and Attributes for Attributed Networks	*Zaiqiao Meng, Shangsong Liang, Xiangliang Zhang, Richard McCreadie, and Iadh Ounis*
TO23	Learning Semantic Representations from Directed Social Links to Tag Microblog Users at Scale	*Wayne Xin Zhao, Yupeng Hou, Junhua Chen, Jonathan J. H. Zhu, Eddy Jing Yin, Hanting Su, and Ji-Rong Wen*
TO24	OutdoorSent: Sentiment Analysis of Urban Outdoor Images by Using Semantic and Deep Features	*Wyverson Bonasoli de Oliveira, Leyza Baldo Dorini, Rodrigo Minetto, Thiago H. Silva*

SIGIR'20 Short/Demo/TOIS Paper Session II

July 28, 20:00 – 22:00 (Time Zone: UTC+8)
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Short Paper Session II

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SP79	Towards Differentially Private Text Representations	*Lingjuan Lyu, Yitong Li, Xuanli He, and Tong Xiao*
SP80	Large-scale Image Retrieval with Sparse Binary Projections	*Changyi Ma, Chonglin Gu, Wenye Li, and Shuguang Cui*
SP81	Efficiency Implications of Term Re-Weighting for Passage Retrieval	*Joel Mackenzie, Zhuyun Dai, Luke Gallagher, and Jamie Callan*
SP82	Read what you need: Controllable Aspect-based Opinion Summarization of Tourist Reviews	*Rajdeep Mukherjee, Hari Chandana Peruri, Uppada Vishnu, Pawan Goyal, Sourangshu Bhattacharya, and Niloy Ganguly*
SP83	DC-BERT: Decoupling Question and Document for Efficient Contextual Encoding	*Ping Nie, Yuyu Zhang, Xiubo Geng, Ramamurthy Arun, Le Song, and Daxin Jiang*
SP84	An Intent-guided Collaborative Machine for Session-based Recommendation	*Zhiqiang Pan, Fei Cai, Yanxiang Ling, and Maarten de Rijke*
SP85	Rethinking Item Importance in Session-based Recommendation	*Zhiqiang Pan, Fei Cai, Yanxiang Ling, and Maarten de Rijke*
SP86	MHM: Multi-modal Clinical Data based Hierarchical Multi-label Diagnosis Prediction	*Zhi Qiao, Zhen Zhang, Xian Wu, Shen Ge, and Wei Fan*
SP87	How Useful are Reviews for Recommendation? A Critical Review and Potential Improvements	*Noveen Sachdeva and Julian McAuley*
SP88	Dual Learning Algorithm for Delayed Conversions	*Yuta Saito, Gota Morishita, and Shota Yasui*
SP89	Evaluation of Cross Domain Text Summarization	*Liam Scanlon, Shiwei Zhang, Xiuzhen Jenny Zhang, and Mark Sanderson*
SP90	Convolutional Knowledge Tracing: Modeling Individualization in Student Learning Process	*Shuanghong Shen, Qi Liu, Enhong Chen, Han Wu, Zhenya Huang, Weihao Zhao, Yu Su, Haiping Ma, and Shijin Wang*
SP91	G2T: Generating Fluent Descriptions for Knowledge Graph	*Yunzhou Shi, Zhiling Luo, Pengcheng Zhu, Feng Ji, Wei Zhou, Haiqing Chen, and Yujiu Yang*
SP92	Improving Matching Models with Hierarchical Contextualized Representations for Multi-turn Response Selection	*Chongyang Tao, Wei Wu, Yansong Feng, Dongyan Zhao, and Rui Yan*
SP93	Visual Intents vs. Clicks, Likes, and Purchases in E-commerce	*Riku Togashi and Tetsuya Sakai*
SP94	MVL: Multi-View Learning for News Recommendation	*Santosh Tokala Yaswanth Sri Sai, Avirup Saha, and Niloy Ganguly*
SP95	Query/Task Satisfaction and Grid-based Evaluation Metrics Under Different Image Search Intents	*Kosetsu Tsukuda and Masataka Goto*
SP96	Learning Discriminative Joint Embeddings for	*Rui Wang, Xin Liu, Yiu-Ming Cheung, Shu-Juan*

	Efficient Face and Voice Association	*Peng, Nannan Wang, and Wentao Fan*
SP97	TFNet: Multi-Semantic Feature Interaction for CTR Prediction	*Shu Wu, Feng Yu, Xueli Yu, Qiang Liu, Liang Wang, Tieniu Tan, Jie Shao, and Fan Huang*
SP98	Investigating reading behavior in Fine-grained Relevance Judgment	*Zhijing Wu, Jiaxin Mao, Yiqun Liu, Min Zhang, and Shaoping Ma*
SP99	Neural Hierarchical Factorization Machines for User's Event Sequence Analysis	*Dongbo Xi, Fuzhen Zhuang, Bowen Song, Yongchun Zhu, Shuai Chen, Dan Hong, Tao Chen, Xi Gu, and Qing He*
SP100	Label-Consistency based Graph Neural Networks for Semi-supervised Node Classification	*Bingbing Xu, Junjie Huang, Liang Hou, Huawei Shen, Jinhua Gao, and Xueqi Cheng*
SP101	Symmetric Regularization based BERT for Pair-wise Semantic Reasoning	*Weidi Xu, Kunlong Chen, Xingyi Cheng, and Taifeng Wang*
SP102	Deep Interest with Hierarchical Attention Network for Click-Through Rate Prediction	*Weinan Xu, Hengxu He, Minshi Tan, Yunming Li, Jun Lang, and Dongbai Guo*
SP103	A Knowledge-Enhanced Recommendation Model with Attribute-Level Co-Attention	*Deqing Yang, Zengchun Song, Lvxin Xue, and Yanghua Xiao*
SP104	Multi-source Domain Adaptation for Sentiment Classification with Granger Causal Inference	*Min Yang, Ying Shen, Xiaojun Chen, and Chengming Li*
SP105	TADS: Learning Time-Aware Scheduling Policy with Dyna-Style Planning for Spaced Repetition	*Zhengyu Yang, Jian Shen, Yunfei Liu, Yang Yang, Weinan Zhang, and Yong Yu*
SP106	TAGNN: Target Attentive Graph Neural Networks for Session-based Recommendation	*Feng Yu, Yanqiao Zhu, Qiang Liu, Shu Wu, Liang Wang, and Tieniu Tan*
SP107	Query Classification with Multi-objective Backoff Optimization	*Hang Yu and Lester Litchfield*
SP108	Influence Function for Unbiased Recommendation	*Jiangxing Yu, Hong Zhu, Chihyao Chang, Xinhua Feng, Bo-Wen Yuan, Xiuqiang He, and Zhenhua Dong*
SP109	Few-Shot Generative Conversational Query Rewriting	*Shi Yu, Jiahua Liu, Jingqin Yang, Chenyan Xiong, Paul Bennett, Jianfeng Gao, and Zhiyuan Liu*
SP110	User-Inspired Posterior Network for Recommendation Reason Generation	*Haolan Zhan, Hainan Zhang, Hongshen Chen, Lei Shen, Yanyan Lan, Zhuoye Ding, and Dawei Yin*
SP111	An analysis of BERT in document ranking	*Jingtao Zhan, Jiaxin Mao, Yiqun Liu, Min Zhang, and Shaoping Ma*
SP112	Read, Attend, and Exclude: Multi-Choice Reading Comprehension by Mimicking Human Reasoning Process	*Chebin Zhang, Congjian Luo, Junyu Lu, Ao Liu, Bing Bai, and Zenglin Xu*
SP113	Unsupervised Text Summarization with Sentence Graph Compression	*Jinming Zhao, Ming Liu, Yuan Jin, He Zhao, Lan Du, He Zhang, Longxiang Gao, and Gholamreza Haffari*
SP114	Improving Neural Chinese Word Segmentation with Lexicon-enhanced Adaptive Attention	*Xiaoyan Zhao, Min Yang, Qiang Qu, and Yang Sun*
SP115	Sentiment-guided Sequential Recommendation	*Lin Zheng, Naicheng Guo, Weihao Chen, Jin Yu, and Dazhi Jiang*
SP116	L2R2: Leveraging Ranking for Abductive Reasoning	*Yunchang Zhu, Liang Pang, Yanyan Lan, and Xueqi Cheng*
SP117	Automatic Generation of Topic Labels	*Areej Alokaili, Nikolaos Aletras, and Mark Stevenson*

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SP119	Proposal and comparison of health specific features for the automatic assessment of readability	*Hélder Antunes and Carla Teixeira Lopes*
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SP121	Relevance Models for Multi-Contextual Appropriateness in Points-Of-Interest Recommendation	*Anirban Chakraborty, Debasis Ganguly, and Owen Conlan*
SP122	CAsT-19: A Dataset for Research on Conversational Information Seeking	*Jeffrey Dalton, Chenyan Xiong, Vaibhav Kumar, and Jamie Callan*
SP123	Predicting Perceptual Speed from Search Behaviour	*Olivia Foulds, Alessandro Suglia, Leif Azzopardi, and Martin Halvey*
SP124	Learning Term Discrimination	*Jibril Frej, Didier Schwab, Philippe Mulhem, and Jean-Pierre Chevallet*
SP125	Sampling Bias Due to Near-Duplicates in Learning to Rank	*Maik Fröbe, Janek Bevendorff, Jan Heinrich Reimer, Martin Potthast, and Matthias Hagen*
SP126	Enhancing Recommendation Diversity using Determinantal Point Processes on Knowledge Graphs	*Lu Gan, Diana Nurbakova, Léa Laporte, and Sylvie Calabretto*
SP127	Relevance Transformer: Generating Concise Code Snippets with Relevance Feedback	*Carlos Gemmell, Jeffrey Dalton, and Federico Rossetto*
SP128	Unsupervised Semantic Hashing with Pairwise Reconstruction	*Casper Hansen, Christian Hansen, Jakob Grue Simonsen, Stephen Alstrup, and Christina Lioma*
SP129	Factuality Checking in News Headlines with Eye Tracking	*Christian Hansen, Casper Hansen, Jakob Grue Simonsen, Birger Larsen, Stephen Alstrup, and Christina Lioma*
SP130	ArTest: The First Test Collection for Arabic Web Search with Relevance Rationales	*Maram Hasanain, Yassmine Barkallah, Reem Suwaileh, Mucahid Kutlu, and Tamer Elsayed*
SP131	Improving Document-Level Text Retrieval using Local Attention in the Transformer-Kernel Pooling Model	*Sebastian Hofstätter, Hamed Zamani, Bhaskar Mitra, Nick Craswell, and Allan Hanbury*
SP132	Using Exploration to Alleviate Closed-Loop Effects in Recommender Systems	*Amir H. Jadidinejad, Craig Macdonald, and Iadh Ounis*
SP133	A Heterogeneous Graph Neural Model for Cold-Start Recommendation	*Siwei Liu, Iadh Ounis, Craig Macdonald, and Zaiqiao Meng*
SP134	Query-level Early Exit for Additive Learning-to-Rank Ensembles	*Claudio Lucchese, Franco Maria Nardini, Salvatore Orlando, Raffaele Perego, and Salvatore Trani*
SP135	Segmenting search query logs by learning to detect search task boundaries	*Luis Lugo, Jose Moreno, and Gilles Hubert*
SP136	A multilingual approach for unsupervised search task identification	*Luis Lugo, Jose Moreno, and Gilles Hubert*
SP137	Sequential-based Adversarial Optimisation for Personalised Top-N Item Recommendation	*Jarana Manotumruksa and Emine Yilmaz*

SP138	CrossBERT with Triplet Neural Architecture for Entity Property Ranking	*Jarana Manotumruksa, Jeff Dalton, Edgar Meij, and Emine Yilmaz*
SP139	Active Learning Stopping Strategies for Technology-Assisted Sensitivity Review	*Graham McDonald, Craig Macdonald, and Iadh Ounis*
SP140	Topic Propagation in Conversational Search	*Ida Mele, Cristina Ioana Muntean, Franco Maria Nardini, Raffaele Perego, Nicola Tonellotto, and Ophir Frieder*
SP141	Reputation (In)dependence in Ranking Systems: Demographics Influence Over Output Disparities	*Guilherme Ramos and Ludovico Boratto*
SP142	Do Neural Ranking Models Intensify Gender Bias?	*Navid Rekabsaz and Markus Schedl*
SP143	The Curious Case of IR Explainability: Explaining Document Scores within and across Ranking Models	*Procheta Sen, Manisha Verma, Debasis Ganguly, and Gareth Jones*
SP144	Fair Classification with Counterfactual Learning	*Maryam Tavakol*
SP145	Multi-grouping Robust Fair Ranking	*Thibaut Thonet and Renders Jean-Michel*
SP146	Distilling Knowledge for fast retrieval-based chat-bots	*Amir Vakili Tahami, Kamyar Ghajar, and Azadeh Shakery*
SP147	An Analysis of Mixed Initiative and Collaboration in Information-Seeking Dialogues	*Svitlana Vakulenko, Evangelos Kanoulas, and Maarten de Rijke*
SP148	Cascade Model-based Propensity Estimation for Counterfactual Learning to Rank	*Ali Vardasbi, Maarten de Rijke, and Ilya Markov*
SP149	Studying Ranking-Incentivized Web Dynamics	*Ziv Vasilisky, Moshe Tennenholtz, and Oren Kurland*
SP150	How UMass-FSD Inadvertently Leverages Temporal Bias	*Dominik Wurzer and Yumeng Qin*
SP151	On the Reliability of Test Collections to Evaluating Systems of Different Types	*Emine Yilmaz, Nick Craswell, Bhaskar Mitra, and Daniel Campos*
SP152	KLOOS: KL Divergence-based Out-of-Scope Intent Detection in Human-to-Machine Conversations	*Eyup Halit Yilmaz and Cagri Toraman*
SP153	DEXA: Supporting Non-Expert Annotators with Dynamic Examples from Experts	*Markus Zlabinger, Marta Sabou, Sebastian Hofstätter, Mete Sertkan, and Allan Hanbury*

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DE13	Receptor: A Platform for Exploring Latent Relations in Sensitive Documents	*Hitarth Narvala, Graham McDonald, and Iadh Ounis*
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