

2020 WI-IAT Virtual Conference

The 2020 IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology
(WI-IAT'20)

14–17 December 2020 – A Fully Virtual Conference

Welcome Message from the Conference Organizers

The 2020 IEEE/WIC/ACM International Joint Conference On Web Intelligence And Intelligent Agent Technology

(WI-IAT '20), 14–17 December 2020, Melbourne, Australia

The 2020 IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT '20) provides a premier international forum to bring together researchers and practitioners from diverse fields for presentation of original research results, as well as exchange and dissemination of innovative and practical development experiences on Web intelligence and intelligent agent technology research and applications.

The first international joint conference of Web Intelligence and Intelligent Agent Technology (WI-IAT '01) was held in Maebashi, Japan, 2001. Then, it followed by WI-IAT '03 in Halifax, Canada, WI-IAT '04 in Beijing, China, WI-IAT '05 in Compiegne, France, WI-IAT '06 in Hong Kong, WI-IAT '07 in Silicon Valley, USA, WI-IAT '08 in Sydney, Australia, WI-IAT '09 in Milano, Italy, WI-IAT '10 in Toronto, Canada, WI-IAT '11 in Lyon, France, WI-IAT '12 in Macau, China, WI-IAT '13 in Atlanta, USA, WI-IAT '14 in Warsaw, Poland, and WI-IAT '15 in Singapore. The goal of WI-IAT conferences is to provide a global forum for scientists, engineers and educators to present the latest WI-IAT technologies, discuss how to develop future intelligent systems for complex applications. After these years, in 2016, WI-IAT conferences have been merged as one brand (WI '16 in Omaha, USA, WI '17 in Leipzig, Germany, WI '18 in Santiago de Chile, and WI '19 in Thessaloniki, Greece) by redefining and vitalizing the WI aims and topics. In 2020, the classic brand of WI-IAT will be resumed, in recognition of the strong connection of Web Intelligence and Intelligent Agent Technology. The conference is thus, rebranded as WI-IAT '20.

Web has evolved as an omnipresent system which highly impacts science, education, industry and everyday life. Web is now a vast data production and consumption platform at which threads of data evolve from multiple devices, by different human interactions, over worldwide locations under divergent distributed settings. Such a dynamic complex system demands adaptive intelligent solutions, which will advance knowledge, human interactions and innovation. Web intelligence is now a cutting edge area which must address all open issues towards deepening the understanding of all Web's entities, phenomena, and developments.

Web Intelligence and Intelligent Agent Technology (WI-IAT) aims to achieve a multi-disciplinary balance between research advances in theories and methods usually associated with collective intelligence, data science, human-centric computing, knowledge management, network science, autonomous agents and multi-agent systems. It is committed to addressing research that both deepen the understanding of computational, logical, cognitive, physical, and social foundations of the future Web, and enable the development and application of intelligent technologies. WI-IAT '20 provides a premier forum and features high-quality, original research papers and real-world applications in all theoretical and technology areas that make up the field of Web Intelligence and Intelligent Agent Technology. WI-IAT '20 welcomes research, application as well as Industry/Demo-Track paper submissions. Tutorial, Workshop and Special-Session proposals and papers are also welcome. WI-IAT '20 in Melbourne is officially sponsored by IEEE Computer Society Technical Committee on Intelligent Informatics (TCII), Web Intelligence Consortium

(WIC), ACM-SIGAI, Swinburne University of Technology, Deakin University, and technically sponsored by University of Melbourne.

WI-IAT '20 will provide a broad forum that academia, professionals and industry people can exchange their ideas, findings and strategies in utilizing the power of human brains and man-made networks to create a better world. More specifically, the fields of how intelligence is impacting the Web of People, the Web of Data, the Web of Things, the Web of Trust, the Web of Agents, and emerging Web in health and smart living in the 5G Era. Therefore, The theme for the WI-IAT '20 is "Web Intelligence = AI in the Connected World"

General Chairs

Yuefeng Li, Queensland University of Technology, Australia

Rainer Unland, University of Duisburg–Essen, Germany

Eugene Santos Jr., Dartmouth College, USA

Program Committee Chairs

Jing He, Swinburne University of Technology, Australia

Hemant Purohit, George Mason University, USA

Willem-Jan van den Heuvel, JADS Research, Netherlands

John Yearwood, Deakin University, Australia

MAIN Conference Theme

The theme for the WI-IAT '20 is "Web Intelligence = AI in the Connected World"

MAIN TOPICS AND AREAS

- Track 1: Web of People
- Track 2: Web of Trust
- Track 3: Web of Things
- Track 4: Web of Data
- Track 5: Web of Agents
- Special Track: Emerging Web in Health and Smart Living

Keynote Speeches



Uwe Aickelin

Head of School of Computing and Information Systems

Melbourne School of Engineering

Title: Artificial Intelligence for Medical Datamining and Decision Support

Abstract: The talk will start with a brief general introduction to Artificial Intelligence, in particular the areas and methods that are relevant to medical datamining and decisions support.

Using some work published in highly regarded journals, I will then highlight some of the specific difficulties when undertaking datamining work in the medical area, such as imbalanced data sets, imprecise expert opinions, the need to form cohorts and control for confounding and the difficulty to validate results. Finally, I will then show some current research that addresses these difficulties using state-of-the-art algorithms and methodologies.



Phoebe Chen

Professor and Chair, Department of Computer Science and Information
Technology

La Trobe University

Title: Artificial intelligence for patterns discovery in bioinformatics

Abstract: Solving modern biomedical problems, especially those involving genome data, requires advanced computational and analytical methods. The huge quantities of data and escalating demands of modern biomedical research increasingly require the sophistication and power of computational techniques for their pattern discovery. In this talk, I will demonstrate to use artificial intelligence techniques for pattern mining in bioinformatics applications.



Xinghuo Yu

Associate Deputy Vice Chancellor

RMIT University

Title: Synergetic Interplay between Artificial Intelligence and Complex Networks

Abstract: Artificial Intelligence (AI) as an enabling intelligent systems technology is playing a more and more important role in today's industry and society. Complex Networks, on the other hand, represent characteristics of many large-scale real-world network systems. The recent advances in AI have provided a powerful platform technology to solve complex problems, while CN presents an alternative way to make problem-solving simpler and faster. In this talk, we will first discuss recent developments in both AI and CN, and then examine emerging issues associated with synergetic interplay between them to bring out the best of both fields. We will also touch on potential new thinking paradigms beyond AI to deal with complex problems arising from these systems, speculating innovative methodologies inspired by the Nature for the future. Particular attention will be given to the modelling, control and optimisation issues in large-scale industrial engineering systems such as smart grids. Several real-world industrial problems including some of our own research work will be used as case studies.



Boi Faltings

Full Professor, Artificial Intelligence Laboratory

Ecole Polytechnique Fédérale de Lausanne (EPFL)

Title: The Quest for Privacy–Preserving AI

Abstract: As AI is increasingly called upon for decisions with significant impact on our lives, it needs to access information that we would like to keep private. While this is often a source of privacy leaks, careful design also allows privacy guarantees that were not available before using AI. I will talk about the state of the art and the possibilities they offer to improve our privacy, both in problem-solving and machine learning.



Andre Van Zundert

Professor & Chairman Discipline of Anesthesiology

The University of Queensland

Title: COVID-19 – Lessons learnt from COVID-19 and the new normal as I see it

Abstract: Indeed, pandemics are silent killers. As one author described it, these viruses are the tiniest and primitive creatures, invisible to the naked eye form of life, which have the world under his control. Humans no longer are the masters of the world. The virus has the world in his grip and we all struggle to survive.

However, plagues, major outbreaks and pandemics are of all times and probably have killed more people than all previous wars together. We often remember wars, not pandemics. Hence, we have forgotten to be prepared for pandemics; governments lack to have a plan ready to be prepared for the next epidemic. We now see that the US, India, Brazil, Russia and Argentina have topped the 1 million mark of positive cases, with many other countries following soon in their steps. And these figures are for sure an underreporting of the reality, with second waves showing we're far from controlling the virus.



Xiaojun Chen

Chair Professor, Co-Director of CAS AMSS-PolyU joint Laboratory in Applied Mathematics, Director of University Research Facility in Big Data Analytics

The Hong Kong Polytechnic University

Title: Nonsmooth nonconvex optimization in deep learning

Abstract: This talk will discuss new algorithms and theory for nonsmooth nonconvex optimization in deep learning with applications in optical coherence tomography (OCT) image analysis. We will consider the computation of generalized gradients of nonsmooth nonconvex functions in stochastic gradient algorithms and conditions for solution consistency between problems with capped folded concave penalties and cardinality penalties. We will review some worse-case complexity results for nonsmooth nonconvex non-Lipschitz sparse optimization. We will show some examples of automatic retinal and choroid layer segmentation from OCT images using deep learning.



Philip S. Yu

Professor and the Wexler Chair in Information Technology at the Department of
Computer Science

University of Illinois at Chicago

Title: Broad Learning: A New Perspective on Mining Big Data

Abstract: In the era of big data, there are abundant of data available across many different data sources in various formats. “Broad Learning” is a new type of learning task, which focuses on fusing multiple large-scale information sources of diverse varieties together and carrying out synergistic data mining tasks across these fused sources in one unified analytic. Great challenges exist on “Broad Learning” for the effective fusion of relevant knowledge across different data sources, which depend upon not only the relatedness of these data sources, but also the target application problem. In this talk we examine how to fuse heterogeneous information to improve mining effectiveness over various applications, including social network, recommendation, malware detection, etc.



Hans-Arno Jacobsen

Professor of Computer Engineering and and Computer Science

University of Toronto

Title: Deconstructing Blockchains: Concepts, Applications and Systems

Abstract: Popularly known for powering cryptocurrencies such as Bitcoin and Ethereum, blockchains are seen as a disruptive technology capable of impacting a wide variety of domains, ranging from finance to governance, by offering superior security, reliability, and transparency in a decentralized manner. In this talk, we take a comprehensive look at all aspects related to blockchains by deconstructing blockchain systems into six layers: Application, Modeling, Contract, System, Data, and Network. We review potential applications which can benefit from blockchains, and we describe the associated research challenges. Finally, we conclude by reviewing potential research directions.

Program At A Glance

Timezone: Melbourne time Australian Eastern Daylight Time

Time zone in Melbourne VIC (GMT+11)

	14 th , Dec., 2020	15 th , Dec., 2020	16 th , Dec., 2020	17 th , Dec., 2020
Morning (8:45 am-12:00 am)	Workshops and Special Session (Room 2-8)	8:45 am–9:00 am Opening ceremony 9:00 am-9:50 am Keynote speech Philip S. Yu Session chair: CHEUNG, Yiu Ming (Room1)	9:00 am-9:50 am Keynote speech Boi Faltings Session chair: Hemant Purohit (Room1)	9:00 am-9:50 am Keynote speech Andre Van Zundert Session chair: Guangyan Huang (Room1)
	Workshops and Special Session (Room 2-8)	10:00 am- 10:50 am Keynote speech Hans-Arno Jacobsen Session chair: Yuefeng Li (Room1)	10:00 am-10:50 am Keynote speech Xinghuo Yu Session chair: Hemant Purohi (Room1)	10:00 am-10:50 am Keynote speech Uwe Aickelin Session chair: Guangyan Huang (Room1)
	Workshops and Special Session (Room 2-8)	11:00 am – 11:50 am Keynote speech Phoebe Chen Session chair: Xiaohui Tao (Room1)	11:00 am-11:50 am Keynote speech Xiaojun Chen Session chair: Hemant Purohi (Room1)	Regular Paper and Short Paper (Session 7, 8, 9)
Afternoon (13:00 pm-17:00 pm)	Workshops and Special Session (Room 2-8)	Regular Paper and Short Paper (Session 1, 2, 3)	Regular Paper and Short Paper (Session 4, 5, 6)	Regular Paper and Short Paper (Session 10, 11, 12)
17 th , December, 17:00pm-17:30pm				Closing session Session chair: Ning Zhong (Room1)

Workshop and Special Track Sessions

NLPOE'20: Workshop on 13th Natural Language Processing and Ontology Engineering

14th December 9:00–10:20

Room 8, Chair: Yi Huang

9:00–9:20 Guanlin Li, Bowen Zhao, and Jingsong Yu,

S01201 – Potentially Valuable Papers Using Paper Metadata Detecting Research Fronts and

9:20–9:40 Xinyu Cao, Liangwen Hou, Haitao Wang, and Lei Liu,

S01202 – Microblog-oriented Multi-scale CNN Multi-label Sentiment Classification Model

9:40–10:00 Haitao Wang, Xinyu Cao, Liangliang Liu, and DeZhi Gu,

S01203 – Chinese Real-word Error Automatic Detection and Correction Based on Confusion Set and Generalization Model

10:00–10:20 Yang Zhou, Zhuo Zhang, Yao Liu, and Xingliang Qi,

S01207 – Research on Term Extraction in The Analysis of Classical Prescriptions

Room 2, Chair: Hiroki Takikawa

11:00–11:20, Yusuke Naritomi and Takanori Adachi,

S02201 – Data Augmentation of High Frequency Financial Data Using Generative Adversarial Network

11:20–11:40, Samriddhi Sarkar, Mariana Curado Malta, and Animesh Dutta

WI317 – A Coalition Formation Framework for Platform Cooperatives of Smallholder Farmers

11:40–12:00, Rachael Kei Kawasaki and Yuichi Ikeda

S02205 – Cross-national Features: Network Analysis of Attitudes Towards Immigrants

12:00–13:00 Lunch break

Room 2, Chair: Isamu Okada

13:00–13:20 Taiga Abe, Daisuke Higashi, Daiki Nishiyama, Fujio Toriumi, Serge Galam, and Akira Ishii

S02203 – The toilet paper issue during the COVID-19 crisis

13:20–13:40 Makoto Fujii and Akira Ishii

S02202 – Sociophysics approach of simulation of diffusion of innovations using new opinion dynamics

13:40–14:00 Akira Ishii and Nozomi Okano

S02204 – Social simulation of a divided society using opinion dynamics

CMDWM: The 7th Workshop on Complex Methods for Data and Web Mining

14th December, 13:00–15:00

Room 3, Chair: Lengkeng Niu

13:00–13:20 Shichao Guo, Yang Xiao, and Lengkeng Niu,

S03201 –GGTAN: Graph Gated Talking–Heads Attention Networks for Traveling Salesman Problem

13:20–13:40 Ruiyang Shi and Lengkeng Niu,

S03202 –A brief survey on Capsule Network

13:40–14:00 Akihiro Nishimura, Yoshinori Hijikata, and Kosuke Sato,

WI268 – Recommender Performance on Collaborative Filtering using Latent Topics under Several Sparsity Levels

14:00–14:20 Mei Zhao and Yain–Whar Si,

WI288 – Trend Following with Contrarian Strategy and Firefly Optimization Algorithm

14:20–14:40 Xueqing GENG and Kun GUO,

WI329 – Has the extreme risk spillover among the currencies along Belt and Road increased since COVID–19?

14:40–15:00 Carson Leung and Fan Jiang,

WI362 – Mining interesting patterns from sparse social web

SMA4H – Social Media Analytics for Health intelligence: how artificial intelligence transforms healthcare
14th December, 9:00 –11:20

Room 4, Session 1 – Chair: Carmela Comito

9:00–9:20 Syed Saad Naseem, Dhruv Kumar, Mohammad S. Parsa, and Lukasz Golab

S04201 – Text Mining of COVID–19 Discussions on Reddit

9:20–9:40 Carmela Comito, Deborah Falcone, and Agostino Forestiero

S04202 – Integrating IoT and Social Media for Smart Health Monitoring

9:40–10:00 Eugenio Vocaturo and Ester Zumpano

S04203 – Smart apps for risk assessment of skin cancer

10:00–10:20 Afsara Benazir and Dr Sadia Sharmin

WI253 – Credibility Assessment of User Generated health information of the Bengali language in microblogging sites employing NLP techniques

Room 4, Session 2 – Chair: Agostino Forestiero

10:20–10:40 Sabrina Jesmin, M Shamim Kaiser, and Mufti Mahmud

WI266 – Towards Artificial Intelligence Driven Stress monitoring for mental wellbeing tracking During COVID–19

10:40–11:00 Md Parwez, Muhammad Abulaish, and Jahiruddin Jahiruddin

WI324 – A Social Media Time–Series Data Analytics Approach for Digital Epidemiology

11:00–11:20 Muhammad Nazrul Islam, Shahriar Rahman Khan, Noor Nafiz Islam, Md. Rezwan A Rownok, Syed Rohit Zaman, and Samiha Raisa Zaman

WI370 – A Mobile Application for Mental Health Care during COVID–19 Pandemic: Development and Usability Evaluation with System

DASM'20: International Workshop on Data Analytics on Social Media

14 December 10:00–11:40

Room 5, Chair: Yue Xu

10:00–10:20, Kosisochukwu Judith Madukwe, Xiaoying Gao, and Bing Xue,

WI212 – Dependency-Based Embedding for Distinguishing Between Hate Speech and Offensive Language

10:20–10:40, Aisha Albqmi, Yuefeng Li, and Yue Xu,

WI228 – A Multiple SVMs classifier in three way decision framework for text classification

10:40–11:00, Cristina Luna Jiménez, Ricardo Kleinlein, Fernando Fernández-Martínez, José Manuel Moya, Zoraida Callejas, and José Manuel Pardo Muñoz,

WI352 – Spotting celebrities among peers in a TV show: how to exploit web querying for weakly supervised visual diarization

11:00–11:20, Xiaonan Jing and Julia Rayz,

WI360 – Graph-of-Tweets: A Graph Merging Approach to Sub-event Identification

11:20–11:40, Himani Saini, Viral Thakar, Riddhi Dasani, and Jia Yuan Yu,

WI325 – Detecting Fashion Apparels and their Landmarks

Room 6, Session 1, Chair: Haolan Zhang

09:00 – 09:20 WEI WANG,

S06201 – The study on online learning frequency, learning engagement and mental health of college students during COVID-19

09:20 – 09:40 Chao Meng,

S06202 – Study on the Influencing Factors of Chinese College Students' Online Learning Effect During the COVID-19 Epidemic.

09:40 – 10:00 Chen Danqi,

S06203 – All-round and Accurate Online Education Model amid COVID19.

10:00 – 10:20 Haolan Zhang, Xuejun Chen, Tangyun Leng, Yijie Li, Junwei Wang, and Xiaomei Hu,

S06204 – A Hybrid Data Mining Method for EEG Analysis in Online Education Enhanced by Background Music.

10:20 – 10:40 Kaijing Zhao and Chen Ou,

S06205 – An Analysis of Interpersonal Function in TED Educational Speeches.

10:40 – 11:00 Tang-yun Leng and Shuo Yang,

S06206 – Exploring #E-Learning and #E-Tests during the COVID-19 on Weibo

11:00 – 11:20 Yajuan LIU, Baohong YANG, and Zitong QIU,

S06207 – The Emotional Tendency Analysis of Social Network Evaluation on Online Education during the COVID-19 Pandemic.

11:20 – 11:40 Zhengke Fu,

S06208 – Opinion Mining about Online Education Basing on GDELT and Twitter Data.

11:40 – 12:00 Xiaomei Hu and Gang Dong,

S06209 – Study-related Burnout of College Students in China During Online Education Period.

12:00 – 13:00 Lunch break

Room 6, Session II, Chair: Paolo Mengoni

13:00 – 13:20 Yijie Li, Dawei Zhuge, and Junwei Wang,

S06210 – Passive Adaptation or Active Learning: A Survey on the Subjective Feelings of University Teachers in Mainland China in the Online Education Environment during the COVID-19 Pandemic.

13:20 – 13:40 Paolo Mengoni and Junjie Zhou,

S06211 – Spot Gold Price Prediction Using Financial News Sentiment Analysis.

13:40 – 14:00 Minghao Wang,

S06212 – How Pandemic Spread in News: Text Analysis Using Topic Model.

14:00 – 14:20 QIHANG YANG and ZHENBIAO HE,

S06213 – Data Analysis on the Communication Traits of NBA Predictive News.

14:20 – 14:40 Minghao Wang, Keyu Xu, Xiaohui Wang, and Paolo Mengoni,

S06214 – How Information Diffuse in a Nomination Network?.

14:40–15:00 Peng Shao and Rong Tan,

S06215 – Spatio-temporal transformation and Knowledge Dissemination: A Comparative Study based on the communication effect of Online courses.

15:00–15:20 Xiaoyun Li, Tongliang Li, Huanyu Zhao, Hao Lan Zhang, Ruiqin Fan, and Chaoyi Pang,

S06216 – Similarity and Ranking Preserving Deep Hashing for image Retrieval.

15:20–15:40 Wei Liu,

S06217 – Research on Teaching Quality Evaluation of Online Education Courses Based on Multiple Intelligence.

DSWI: Special Session on Data Science and Web Intelligence

14th December 9:00–10:20

Room 7, Chair: Hui Zheng

9:00–9:20 Yunwei Zhao, Can Wang, Han Han, Min Shu, and Wenlei Wang,

WI376 – An Impact Evaluation Framework of Personalized News Aggregation and Recommendation Systems.

9:20–9:40 Shao Peng, and Tan Rong,

S06215 – Spatio-temporal transformation and Knowledge Dissemination: A Comparative Study based on the communication effect of Online courses

9:40–10:00 Thoudam Doren Singh, Divyansha, Apoorva Vikram Singh, Anubhav Sachan, and Abdullah Faiz Ur Rahman
Khilji

WI375 – Debunking Fake News by Leveraging Speaker Credibility and BERT Based Model

10:00–10:20 Hasan Shahid Ferdous, and Kazi Abir Adnan,

WI293 – Context in Social Media Question Asking: A Practice Approach

Parallel oral presentations

Session 1 (15th, December, afternoon, 13:00-17:05)

Room 8 Chair: Guangyan Huang, Yihua Ding, James Wang, and Pradip Srimani

13:00-15:05 (20 Mins Talk + 5 Mins Q&A for one paper, 5 talks)

13:00-13:25 Jiyun Li, Weiming Lu, and Chen Qian

WI205 - A Multiple stage Discriminative Event Based Model for Alzheimer's Disease Progression Timeline Estimation

13:25-13:50 Guang-Li HUANG, Jing He, and Rui Wang

WI215 - An Inclined Bounding Box Method for Detecting Parking Spaces in Open Parking Lots using Aerial Images

13:50-14:15 Valerio Lorini, Carlos Castillo, Domenico Nappo, Francesco Dottori, and Peter Salamon

WI216 - Social Media Alerts can Improve, but not Replace Hydrological Models for Forecasting Floods

14:15-14:40 Mahdi Abdollahi, Xiaoying Gao, Yi Mei, Shameek Ghosh, and Jinyan Li

WI217 - A Dictionary-based Oversampling Approach to Clinical Document Classification on Small and Imbalanced Dataset

14:40-15:05 Evgeniy Faerman, Felix Borutta, Julian Busch, and Matthias Schubert

WI218 - Ada-LLD: Adaptive Node Similarity Using Multi-Scale Local Label Distributions

15:05-15:25 Break

Chair: Benyun Shi

15:25-17:05 (20 Mins Talk + 5 Mins Q&A, 4 talks)

15:25-15:50 Ons Nefla, Imène Brigui, Meltem Ozturk, Paolo Viappiani, and Oussama Raboun

WI227 - Agent-based ordinal classification for group decision making

15:50-16:15 Pranita Shrestha, Min Zhang, Yiqun Liu, and Shaoping Ma

WI231 - Curiosity-inspired Personalized Recommendation

16:15-16:40 Julian Risch, Victor Künstler, and Ralf Krestel

WI234 - HyCoNN: Hybrid Cooperative Neural Networks for Personalized News Discussion Recommendation

16:40-17:05 Yihua Ding, James Wang, and Pradip Srimani

WI235 - An $O(n^2)$ Self-Stabilizing Algorithm for Minimal Total Dominating Set in Arbitrary Graphs

Session 2 (15th, December, afternoon, 13:00-17:05)

Room 2 Chair: Yue Xu, Heba Mohamed, Said Fathalla, Jens Lehmann, and Hajira Jabeen
13:00-15:05 (20 Mins Talk + 5 Mins Q&A, 5 talks)

13:00-13:25 Zine el abidine Kherroubi, Samir Aknine, and Rebiha Bacha
WI236 - Novel Off-board Solution for Predicting Drivers' Intentions using Probabilistic Classifiers

13:25-13:50 SANGEETA SEN, Mariana Curado Malta, Devashish Katoriya, Biswanath Dutta, and Animesh Dutta
WI239 - Labeled k-partite Graph for Statement Annotation in the Web of Data

13:50-14:15 Max Berrendorf, Evgeniy Faerman, Laurent Vermue, and Volker Tresp
WI240 - Interpretable and Fair Comparison of Link Prediction or Entity Alignment Methods

14:15-14:40 Dejan Spanovic and Chen Ding
WI241 - A Streamlined News Recommender System Using Variable Markov Model

14:40-15:05 John Joy Kurian, Deborah Menezes, Avinash Ronanki, Gaurang Sharma, Sandeep Krishna Prasad, Ashish Chouhan, and Ajinkya Prabhune
WI243 - EnFVe: An Ensemble Fact Verification Pipeline

15:05-15:25 Break

Chair: Patrick Delaney

15:25-17:05 (20 Mins Talk + 5 Mins Q&A, 4 talks)

15:25-15:50 Kai Deng, Jiajin Huang, and Jin Qin
WI248 - GCN-ICF: Graph Convolution Networks for Item-based Recommendation

15:50-16:15 Athanasios Salamanis, Grigorios Christainas, Dionysios Kehagias, and Dimitrios Tzovaras
WI249 - A Graph-Based Reputation Assessment System for Online Review Communities

16:15-16:40 Heba Mohamed, Said Fathalla, Jens Lehmann, and Hajira Jabeen
WI250 - OWLStats: Distributed Computation of OWL Dataset Statistics

16:40-17:05 Francesco Bonchi, Lorenzo Severini, and Mauro Sozio
WI254 - Better Fewer but Better: Community Search with Outliers

Session 3 (15th, December, afternoon, 13:00-17:05)

Room 3 Chair: Xiaohui Tao, Lucie Cadorel and Andrea G. B. Tettamanzi

13:00-15:05 (20 Mins Talk + 5 Mins Q&A, 5 talks)

13:00-13:25 Sandra Obermeier, Max Berrendorf, and Peer Kröger

WI255 - Memory-Efficient RkNN Retrieval by Nonlinear k-Distance Approximation

13:25-13:50 Shima Ibrahim, Said Fathalla, Jens Lehmann, and Hajira Jabeen

WI256 - Multilingual Ontology Merging Using Cross-lingual Matching

13:50-14:15 Yasufumi Takama, Yoshiyuki Mori, and Hiroki Shibata

WI257 - Generation of Word Vectors for Unknown Words without Additional Corpus

14:15-14:40 Raj Gaurav Kumar, Preeti Bhardwaj, Samik Basu, and A Pavan

WI259 - Disrupting Diffusion: Critical Nodes in Network

14:40-15:05 Samaneh Saadat and Gita Sukthankar

WI261 - Explaining Differences in Classes of Discrete Sequences

15:05-15:25 Break

Chair: Jing He

15:25-17:05 (20 Mins Talk + 5 Mins Q&A, 4 talks)

15:25-15:50 Vera Kazakova and Gita Sukthankar

WI264 - Comparing Decentralized Ongoing Task Allocation

15:50-16:15 Munan Li, Kenji Tei, and Yoshiaki Fukazawa

WI265 - Heterogeneous Information Network based Adaptive Social Influence Learning for recommendation and explanation

16:15-16:40 Valentin Siegert, Mahda Noura, and Martin Gaedke

WI269 - aTLAS: a Testbed to Examine Trust for a Redecentralized Web

16:40-17:05 Lucie Cadorel and Andrea G. B. Tettamanzi

WI270 - Mining RDF Data of COVID-19 Scientific Literature for Interesting Association Rules

Session 4 (16th, December, afternoon, 13:00-17:05)

Room 8 Chair: Ke Deng, Dima El Zein

13:00-15:05 (20 Mins Talk + 5 Mins Q&A, 5 talks)

13:00-13:25 Michael Cormier, Robin Cohen, Karyn Moffatt, and Anthony Chan

WI271 - Improving viewing of webpages for users with assistive needs: insights into offline testing

13:25-13:50 Linying Yao, Jingbin Zhong, Xiaofeng Zhang, and Linhao Luo

WI274 - Correlated Wasserstein Autoencoder for Implicit Data Recommendation

13:50-14:15 Priyam Tyagi, Mariana Curado Malta, and Animesh Dutta

WI277 - Hashing for cleaner reverse engineered queries for the Entity Comparison Problem in RDF Graphs

14:15-14:40 Yasas Senarath, Saideep Nannapaneni, Hemant Purohit, and Abhishek Dubey

WI279 - Emergency Incident Detection from Crowdsourced Waze Data using Bayesian Information Fusion

14:40-15:05 Edgar Ceh-Varela and Huiping Cao

WI281 - Recommending novel and relevant reviews to expand users' knowledge about a product

15:05-15:25 Break

Chair: Yang Gao

15:25-17:05 (20 Mins Talk + 5 Mins Q&A, 4 talks)

15:25-15:50 Molka Tounsi Dhouib, Catherine Faron, and Andrea G. B. Tettamanzi

WI283 - Injection of Knowledge in a Sourcing Recommender System

15:50-16:15 Maik Paixão, Rinaldo Lima, and Bernard Espinasse

WI284 - Fake News Classification and Topic Modeling in Brazilian Portuguese

16:15-16:40 Régis Ebeling, Carlos Abel Córdova, Jeferson Nobre, and Karin Becker

WI285 - Quarenteners vs. Chloroquiners: A framework to analyze how political polarization affects the behavior of groups

16:40-17:05 Dima El Zein and Celia da Costa Pereira

WI286 - Graded Belief Revision for Jason: A Rule-Based Approach

Session 5 (16th, December, afternoon, 13:00-17:05)

Room 2 Chair: Li Tao, Nirmal Sivaraman, Sakthi Muthiah, Pushkal Agarwal, and Lokesh Todwal
13:00-15:05 (20 Mins Talk + 5 Mins Q&A, 5 talks)

13:00-13:25 Ryosuke Homma, Yoshifumi Seki, Mitsuo Yoshida, and Kyoji Umemura
WI287 - Analysis of Short Dwell Time in Relation to User Interest in a News Application

13:25-13:50 Qi-Qiao He, Patrick Cheong-lao Pang, and Yain-Whar Si
WI289 - Multi-source Transfer Learning with Ensemble for Financial Time Series Forecasting

13:50-14:15 Krishnendu Kundu and Animesh Dutta
WI292 - Multi-agent Based Distributed MIS selection for Dynamic Job Scheduling

14:15-14:40 Yashodhya Wijesinghe, Yue Xu, Yuefeng Li, and Qing Zhang
WI295 - Pattern-based Fall Prediction using Hospital Clinical Notes

14:40-15:05 Albert Weichselbraun, Adrian M.P. Brasoveanu, Roger Waldwogel, and Fabian Odoni
WI296 - Harvest - An Open Source Toolkit for Extracting Posts and Post Metadata from Web Forums

15:05-15:25 Break

Chair: Li Tao

15:25-17:05 (20 Mins Talk + 5 Mins Q&A, 4 talks)

15:25-15:50 Julie Bu Daher and Armelle Brun
WI297 - Handling Item Similarity in Behavioral Patterns through General Pattern Mining

15:50-16:15 Andres Giordano and Gabriel Tolosa
WI298 - Improved Landmark-based Shortest Path Estimation in Large Graphs with Distance Correction

16:15-16:40 Zongxi Li, Xinhong Chen, Haoran Xie, Qing Li, and Xiaohui Tao
WI299 - EmoChannelAttn: Exploring Emotional Construction Towards Multi-Class Emotion Classification

16:40-17:05 Nirmal Sivaraman, Sakthi Muthiah, Pushkal Agarwal, and Lokesh Todwal
WI301 - Social Synchrony in Online Social Networks and its Application in Event Detection from Twitter Data

Session 6 (16th, December, afternoon, 13:00-17:05)

Room 3 Chair: Juan D. Velasquez Silva, Huaze Xie, Yuanyuan Wang, and Yukiko Kawai
13:00-15:05 (20 Mins Talk + 5 Mins Q&A, 5 talks)

13:00-13:25 Kwun-Ping Lai, Jackie Chun-Sing Ho, and Wai Lam

WI307 - Ensemble Model for Multi-Source Cross-Domain Sentiment Classification with Little Labeled Data

13:25-13:50 Mahamadou toure, Kaladzavi Guidedi, Fabien Gandon, Moussa Lo, and Christophe Gueret

WI308 - MoRAI: Geographic and Semantic Overlay Network for Linked Data Access with Intermittent Internet Connectivity

13:50-14:15 Michal Habani, Priel Levy, and David Sarne

WI309 - Simple Contest Enhancers

14:15-14:40 Selvarajah Thuseethan, Sivasubramaniam Janarthan, Sutharshan Rajasegarar, Priya Kumari, and John Yearwood

WI310 - Multimodal Deep Learning Framework for Sentiment Analysis from Text-Image Web Data

14:40-15:05 Thu Huong NGUYEN and Andrea G.B. TETTAMANZI

WI312 - A Multi-Objective Evolutionary Approach to Class Disjointness Axiom Discovery

15:05-15:25 Break

Chair: Jian Cao

15:25-17:05 (20 Mins Talk + 5 Mins Q&A, 4 talks)

15:25-15:50 Francisca Del Rocio Gonzalez Cohens

WI313 - Kefuri: A novel technological tool for increasing organ donation in Chile

15:50-16:15 Chiao-Chen Chen, Hsin-Yu Tsai, Hen-Hsen Huang, and Hsin-Hsi Chen

WI314 - Stance Identification by Sentiment and Target detection

16:15-16:40 Fouad Komeiha, Nasreddine Cheniki, Yacine Sam, Ali Jaber, Nizar Messai, and Thomas Devogele

WI315 - LDS: Java Library for Linked Open Data Based Similarity Measures

16:40-17:05 Huaze Xie, Yuanyuan Wang, and Yukiko Kawai

WI316 - Analyzing Diabetics for Food Access Training on the Map with CBAM

Session 7 (17th, December, Morning, 11:00- 11:50)

Room 8 Chair: Xiaohui Tao, Himani Saini, Viral Thakar, Riddhi Dasani, and Jia Yuan Yu
11:00-11:50 (20 Mins Talk + 5 Mins Q&A, 2 talks)

11:00-11:25 Lucas Machado de Oliveira and Olga Goussevskaia
WI319 - Influencer marketing: topic trends and user engagement on Instagram

11:25-11:50 Himani Saini, Viral Thakar, Riddhi Dasani, and Jia Yuan Yu
WI325 - Detecting Fashion Apparels and their Landmarks

Session 8 (17th, December, Morning, 11:00- 11:50)

Room 2 Chair: Jing He, Shiyao Ding and Donghui Lin
11:00-11:50 (20 Mins Talk + 5 Mins Q&A, 2 talks)

11:00-11:25 Marlene Goncalves, David Chaves-Fraga, and Oscar Corcho
WI331 - Morph-Skyline: Virtual Ontology-Based Data Access for Skyline Queries

11:25-11:50 Shiyao Ding and Donghui Lin
WI333 - Coalitional Markov Games for Dynamic Coalition Formation among Agents

Session 9 (17th, December, morning, 11:00- 11:50)

Room 3 Chair: Yang Liu, Najmeh Samadiani
11:00-11:50 (20 Mins Talk + 5 Mins Q&A, 2 talks)

11:00-11:25 Ristu Saptono and Tsunenori Mine
WI336 - Time-based Sampling Methods for Detecting Helpful Reviews

11:25-11:50 Najmeh Samadiani and Guangyan Huang
WI338 - Happy Emotion Recognition in the Videos Via Apex Spotting and Temporal Models

Session 10 (17th, December, afternoon, 13:00-16:55)

Room 8 Chair: Xujuan Zhou, Mehrdad Mirzaei, Shaghayegh Sahebi, and Peter Brusilovsky
13:00-15:05 (20 Mins Talk + 5 Mins Q&A, 10 talks)

13:00-13:25 Nodoka Fujimoto and Taketoshi Ushima

WI339 - Situational Estimation of Sports Broadcasting using a Character Level Auto-Encoder for Live Tweets

13:25-13:50 Atsuro Konishi and Hiroshi Hosobe

WI340 - Clustering Nico Nico Douga Videos by Using the Distribution of Time-Synchronized Comments

13:50-14:15 Bowen Wei, Donghui Lin, and Shiyao Ding

WI344 - A Constraint-based Approach to Edge Resource Allocation for Complex Event Processing

14:15-14:40 Milene Santos Teixeira, Celia da Costa Pereira, and Mauro Dragoni

WI345 - Information Usefulness as a Strategy for Action Selection in Health Dialogues

14:40-15:05 Yaping Zheng, Junda Wu, Xiaofeng Zhang, and Xiaowen Chu

WI347 - Graph-DPP: Sampling Diverse Neighboring Nodes via Determinantal Point Process

15:05-15:30 Kenshin Sekimoto, Yoshifumi Seki, Mitsuo Yoshida, and Kyoji Umemura

WI356 - The metrics of keywords to understand the difference between Retweet and Like in each category

15:30-15:55 Mehrdad Mirzaei, Shaghayegh Sahebi, and Peter Brusilovsky

WI318 - SB-DNMF: A Structure Based Discriminative Non-negative Matrix Factorization Model for Detecting Inefficient Learning Behaviors

15:55-16:20 Wenbo Wang, Shreya Khurana, Raina Tian, and Navraj Pannu

WI359 - Exploring Convolutional Neural Networks for Top-Level Domain Name Recommendation

16:20-16:45 Samaneh Saadat, Olivia Newton, Gita Sukthankar, and Steve Fiore

WI275 - Analyzing the Productivity of GitHub Teams based on Formation Phase Activity

16:45-16:55 Qiwei Kong, Jing He, Peizhuang Wang

WI366 - Factor space--a new idea for artificial intelligence based on causal reasoning

Session 11 (17th, December, afternoon, 13:00-16:20)

Room 2 Chair: Yutong Wu, Alison R. Panisson

13:00-15:05 (20 Mins Talk + 5 Mins Q&A, 8 talks)

13:00-13:25 Alison R. Panisson and Rafael H. Bordini

WI210 - Towards a Computational Model of Argumentation Schemes in Agent-Oriented Programming Languages

13:25-13:50 Sehaj Pal Singh, Carson Leung, and Joshua Hamilton

WI364 - Identifying the right person from social web via the analytics of similar-sounding names with phonetic codes

13:50-14:15 Maciej Adamczyk, Sinh Hoa Nguyen, and Marcin Sydow

WI367 - Combining Feature Selection with Neural Networks for Polish Sign Alphabet Recognition

14:15-14:40 Tatsuya Iwase, Aurélie Beynier, Nicolas Bredeche, and Nicolas Maudet

WI247 - A game theoretical approach to self-assembly in swarm robotics

14:40-15:05 Alison R. Panisson

WI272 - M-arguments

15:05-15:30 Yuki Otsuka, Makoto P. Kato, Sumio Fujita, and Masatoshi Yoshikawa

WI327 - Cross-Domain Rating Prediction for Market Development

15:30-15:55 Ashlee Milton, Oghenemaro Anuyah, Lawrence Spear, Katherine Landau Wright, and Maria Soledad Pera

WI260 - A Ranking Strategy to Promote Resources Supporting the Classroom Environment

15:55-16:20 Jeong-Woo Son, Alex Lee, Chang-Uk Kwak, and Sun-Joong Kim

WI306 - Supervised Scene Boundary Detection with Relational and Sequential Information

Session 12 (17th, December, afternoon, 13:00- 16:20)

Room 3 Chair: Xiaoying Gao, Geetanjali Bihani and Julia Rayz

13:00-16:20 (20 Mins Talk + 5 Mins Q&A, 8 talks)

13:00-13:25 Razieh Nokhbeh Zaeem, Safa Anya, Alex Issa, Jake Nimergood, Isabelle Rogers, Vinay Shah, Ayush Srivastava, and K. Suzanne Barber

WI320 - PrivacyCheck's Machine Learning to Digest Privacy Policies: Competitor Analysis and Usage Patterns

13:25-13:50 yifan zhang, Fan Yang, Marjan Hosseinia, and Arjun Mukherjee

WI346 - Multi-Aspect Sentiment Analysis with Latent Sentiment Aspect Attribution"

13:50-14:15 Jian Lou and Yiu-ming Cheung

WI209 - Projection-free Online Empirical Risk Minimization with Privacy-preserving and Privacy Expiration"

14:15-14:40 Eugene Santos, Hien Nguyen, Keum Joo Kim, Gregory Hyde, and Clement Nyanhongo

WI365 - Validation of Double Transition Model by Analyzing Reward Distributions

14:40-15:05 Yihong Zhang, Shirakawa Masumi, and Takahiro Hara

WI214 - A Probabilistic Model for Predicting E-commerce Purchases from Emerging Local and Social Interests

15:05-15:30 Diego Sánchez-Moreno, María N. Moreno-García, Nasim Sonboli, Bamshad Mobasher, and Robin Burke

WI332 - Using Social Tag Embedding in a Collaborative Filtering Approach for Recommender Systems

15:30-15:55 Geetanjali Bihani and Julia Rayz

WI357 - Model Choices Influence Attributive Word Associations: A Semi-supervised Analysis of Static Word Embeddings

15:55-16:20 Jawad Haqbeen, Takayuki Ito, Sofia Sahab, Takumi Sato, Shun Okuhara, and Murtaza Hofiani

WI349 - Insights from a Large-Scale Discussion on COVID-19 in Collective Intelligence

Conference Closing

Chair: Prof. Ning Zhong

17:00-17:30, 17th, Dec., 2020. (Room1)

Agenda of the Closing Session:

1. Conference Award Ceremony;
2. Steering Chair Remarks;
3. Next Year Conference Information;
4. Open Discussion.

Chairs

Date	Time	Zoom	Session	Chair	Affiliation	Email
15/12, Tue	13:00-15:05	Room 8	Session 1A	Guangyan Huang	Deakin University	guangyan.huang@deakin.edu.au
	15:25-17:05	Room 8	Session 1B	Benyun Shi	Nanjing Tech University	benyunshi@outlook.com
	13:00-15:05	Room 2	Session 2A	Yue Xu	Queensland University of Technology	yue.xu@qut.edu.au
	15:25-17:05	Room 2	Session 2B	Patrick Delaney	University of Southern Queensland	Patrick.Delaney@usq.edu.au
	13:00-15:05	Room 3	Session 3A	Xiaohui Tao	University of Southern Queensland	xiaohui.tao@usq.edu.au
	15:25-17:05	Room 3	Session 3B	Jing He	Swinburne University of Technology	jinghe@swin.edu.au
16/12, Wed	13:00-15:05	Room 8	Session 4A	Ke Deng	RMIT University	ke.deng@rmit.edu.au
	15:25-17:05	Room 8	Session 4B	Yang Gao	Beijing Institute of Technology	gyang@bit.edu.cn
	13:00-15:05	Room 2	Session 5A	Li Tao	Southwest University	tli@swu.edu.cn
	15:25-17:05	Room 2	Session 5B	Li Tao	Southwest University	tli@swu.edu.cn
	13:00-15:05	Room 3	Session 6A	Juan D. Velasquez Silva	University of Chile, Chile	jvelasqu@wic.uchile.cl
	15:25-17:05	Room 3	Session 6B	Jian Cao	Shanghai Jiaotong University	cao-jian@sjtu.edu.cn
17/12 Thu	11:00-11:50	Room 8	Session 7	Xiaohui Tao	University of Southern Queensland	xiaohui.tao@usq.edu.au
	11:00-11:50	Room 2	Session 8	Jing He	Swinburne University of Technology	jinghe@swin.edu.au
	11:00-11:50	Room 3	Session 9	Yang Liu	Hong Kong Baptist University	csygliu@comp.hkbu.edu.hk
	13:00-15:55	Room 8	Session 10	Xujuan Zhou	University of Southern Queensland	xujuan.zhou@usq.edu.au
	13:00-15:55	Room 2	Session 11	Yutong Wu	Queensland University of Technology	y203.wu@qut.edu.au
	13:00-16:20	Room 3	Session 12	Xiaoying Gao	Victoria University of Wellington	Xiaoying.Gao@vuw.ac.nz

Zoom Meeting Room

Room	Zoom ID	Password	Technician Email
Room 1	533 781 6805	123456	eve.wu10889@gmail.com
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Room 3	533 781 6805	123456	eve.wu10889@gmail.com
Room 4	559 326 8361	WI20RM4	vincent.wen.xu@gmail.com
Room 5	344 647 9612	WI2020R5	kevin.zhang0522@gmail.com
Room 6	819 052 0425	WI6122880	mengjiaoguo0702@gmail.com
Room 7	910 928 7030	008436	wujunfeng@vip.163.com
Room 8	974 366 3655	6666	lotusjing@gmail.com

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Please use the following links to join the online meeting (Live-stream Keynotes)

YouTube link(Australian Eastern Daylight Time (GMT+11)):

15/12/2020 8:20: <https://youtu.be/vtXqCrtUQjc>

16/12/2020 8:45: <https://youtu.be/WSOpMl8yjaY>

17/12/2020 8:45: <https://youtu.be/YH9-OPWqpZs>

17/12/2020 17:00: <https://youtu.be/bed55t7Go-Y>

Tencent Meeting (China Standard Time):

2020/12/15 05:30-09:30, <https://meeting.tencent.com/l/zAhjh6N2rOkL>

2020/12/16 05:30-09:30, <https://meeting.tencent.com/l/uinfFUmbR0PJ>

2020/12/17 05:30-09:30, <https://meeting.tencent.com/l/odFlpzAq63ax>

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