

The 2nd International Conference on Industrial IoT, Big Data and Supply Chain

Conference Date: **October 15-17, 2021**

(IIoTBDSC 2021)

Home

Organizing Committee

Keynote & Invited Speakers

Conference History

Call for Papers

Programs

Registration

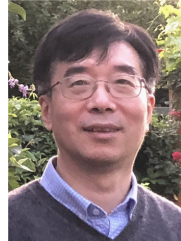
Submission

Publication

Important Dates

Keynote & Invited Speakers

Keynote Speaker



Prof. Zidong Wang

Brunel University London , United Kingdom

Dr. Zidong Wang is currently Professor of Dynamical Systems and Computing in the Department of Computer Science, Brunel University London, U.K. From 1990 to 2002, he held teaching and research appointments in universities in China, Germany and the UK. Prof. Wang's research interests include dynamical systems, signal processing, bioinformatics, control theory and applications. He has published over 600 papers in top journals with an H-index of 122. He is a holder of the Alexander von Humboldt Research Fellowship of Germany, the JSPS Research Fellowship of Japan, William Mong Visiting Research Fellowship of Hong Kong.

Prof. Wang serves (or has served) as the Editor-in-Chief for Neurocomputing, the Editor-in-Chief for International Journal of Systems Science, and an Associate Editor for 12 international journals including IEEE Transactions on Automatic Control, IEEE Transactions on Control Systems Technology, IEEE Transactions on Neural Networks, IEEE Transactions on Signal Processing, and IEEE Transactions on Systems, Man, and Cybernetics-Part C.

[Venue Information](#)
[Contact us](#)

Important Dates

Date of Conference: October 15-17, 2021

Submission Due: September 30, 2021

Notification of Acceptance: October 5, 2021

Downloads

[CFP](#)
[Invitation](#)
[Template Description](#)

Contact Us

Conference Secretary: Sunny Zhang

Submission Email:

iiotbdscconference@126.com

QQ: 3374931065

M/P: +86-13297998135

We Chat

Prof. Wang is a Member of the Academia Europaea, a Fellow of the IEEE, a Fellow of the Royal Statistical Society and a member of program committee for many international conferences.

Title: Handling bad data for big data analysis

Abstract

In this talk, we discuss another side of big data analysis, bad data analysis, where the badness means the complexities resulting in the reproducibility issues. Some background knowledge is first introduced on the volatility of the big data analysis, which shows 1) "big" does not necessarily mean "better" and 2) the so-called multi-objective data analysis (against badness) is vitally important in advancing the state-of-the-art. Two examples are used for demonstration of the big data analysis, one for big data from complex networks and the other for big data from gene expression image processing. Finally, conclusions are drawn and some future directions are pointed out.



Prof. Shadi A. Aljawarneh

Jordan University of Science and Technology, Jordan

Shadi A. Aljawarneh is a full professor in Software Engineering Department and Software Engineering/Data Science in Jordan University of Science and Technology(JUST). He is an Associate Editor of Computers & Electrical Engineering Journal, Elsevier and IEEE ACCESS Journal, IEEE. He holds several international professional memberships including Internet Society, ACM, IEA, ICS, IEEE, etc. He received his Ph.D. degree in Software Engineering from Northumbria University, Master degree in IT from University of Western Sydney and Bachelor's degree in Computer Science from Jordan Yarmouk University. He was honored several awards including full membership as ACM senior member from ACM in 2014. He presided over and participated in at least 9 Research Grant (Fund). He has published 99 articles on international journals and conferences proceedings. His interests of research cover Machine Learning, IoT, Information Security, Project Proposal Evaluation/Writing/Examination, Software Engineering, E-learning, Big Data and Machine Learning, etc.



Prof. Francisco Herrera

University of Granada, Spain



Key Review Policy

At least 3 independent reviewers review the manuscript.

The repetition rate can not exceed 20%.

All submissions must be original, unpublished, and not be under consideration for publication elsewhere. We take plagiarism case very seriously, which include self-plagiarism of authors' own published papers.

Francisco Herrera (SM'15) received his M.Sc. in Mathematics in 1988 and Ph.D. in Mathematics in 1991, both from the University of Granada, Spain. He is currently a Professor in the Department of Computer Science and Artificial Intelligence at the University of Granada. He has been the supervisor of 42 Ph.D. students. He has published more than 400 journal papers that have received more than 62000 citations (Scholar Google, H-index 125). He is coauthor of the books "Genetic Fuzzy Systems" (World Scientific, 2001) and "Data Preprocessing in Data Mining" (Springer, 2015), "The 2-tuple Linguistic Model. Computing with Words in Decision Making" (Springer, 2015), "Multilabel Classification. Problem analysis, metrics and techniques" (Springer, 2016), "Multiple Instance Learning. Foundations and Algorithms" (Springer, 2016). He currently acts as Editor in Chief of the international journals "Information Fusion" (Elsevier) and "Progress in Artificial Intelligence" (Springer). He acts as editorial member of a dozen of journals. He received the following honors and awards: ECCAI Fellow 2009, IFSA Fellow 2013, 2010 Spanish National Award on Computer Science ARITMEL to the "Spanish Engineer on Computer Science", International Cajastur "Mamdani" Prize for Soft Computing (Fourth Edition, 2010), IEEE Transactions on Fuzzy System Outstanding 2008 and 2012 Paper Award (bestowed in 2011 and 2015 respectively), 2011 Lotfi A. Zadeh Prize Best paper Award of the International Fuzzy Systems Association, 2013 AEPIA Award to a scientific career in Artificial Intelligence, and 2014 XV Andalucía Research Prize Maimónides (by the regional government of Andalucía), 2017 Security Forum I+D+I Prize, and 2017 Andalucía Medal (by the regional government of Andalucía). He has been selected as a Highly Cited Researcher <http://highlycited.com/> (in the fields of Computer Science and Engineering, respectively, 2014 to present, Clarivate Analytics). His current research interests include among others, soft computing (including fuzzy modeling, evolutionary algorithms and deep learning), computing with words, information fusion and decision making, and data science (including data preprocessing, prediction and big data).

Invited Speakers



Prof. Zhili Sun

University of Surrey

Prof. Zhili Sun is a Chair Professor of Communication Networking and PGR Director with the 5G&6G Innovation Centre and Institute for Communication Systems (ICS), University of Surrey; he received BSc in Mathematics, Nanjing University, and PhD in Computer Science from Lancaster University. He worked before as an Assistant Professor in Southeast University and Queen Mary University of London (QMUL) before joined Surrey.

He was technical co-ordinator in many European projects in the areas of evaluation of broadband traffic over satellite, Trans-European Network on Quality of Service (QoS) studies, EU Framework Programme on satellites Multicast Multimedia Conference over Satellite, IP over DVB-S/RCS, IPv6 over satellite, next generation Internet, EU-China Grid Internetworking.

He also worked as principal investigator for multicast security over hybrid satellite networks funded by UK Research Council, and LKH over satellite funded by European Space Agency (ESA) and industries. He was a principal investigator in projects to study integration of MANET and satellite, new space payload technology, and UK-China Science Bridge, multi-layer security and DTN.

He has supervised 40+ PhDs and 20+ Postdoctoral Research Fellows; have published over 243 papers in International journals and

conferences and 3 books as author or co-author. He has also contributed to standardisation activities to ITU-T and ETSI in QoS and IP multicast over satellite. I have also served as TPC committee members in many international conferences including the IEEE ICC and Globecom, and been ERSRC College Member, UK Fellow of High Education Academy, Reviewer and Panel member, and EU Technical Expert Reviewer.

He has research interests including satellite communications and networking, mobile ad hoc networks, IoT & IIoT, Internet and teletraffic engineering, network security, mobile communications and mobile operating systems.

He is a member of Editorial Board of the following journals including International Journal of Satellite Communications and Networking, Journal of Information Security and Applications, and China Communications.

Title: Satellite Communications and Networks for IoT Global Services and Applications

Outline:

Birth of satellite communications

Development of satellite communications

Satellites in the IMT-2020 (5G)

The ITU-R IMT-2020 (5G) Vision

IMT-2020 (5G) applications

Opportunities of Challenges towards Network 2030

ITU-T Network 2030 development and vision

Satellite global coverage for IoT services and applications



Prof. Víctor Méndez Muñoz

Universitat Oberta de Catalunya (UOC), Spain

Prof. Víctor Méndez Muñoz is a consultant professor at UOC, Spain. He has a background in several fields of Big Data, Cloud Computing, and IoT, both in academia and in the industry. Currently, he is contributing to the IoT ecosystem for microbiological control at IUL, which is an innovative company in the biotechnology. We are building new models and architectures taking full advantage of the state of the art opportunities in IoT microcomputers, microservices, and Edge Computing, to ensure genuine progress. Furthermore, he fosters bridging the gap between theory and practice, as a collaborating editor in scientific journals and conferences, training postgraduates at UOC and partaking in innovation programs with Universities.

Title: The IoT revolution and the next cybersecurity challenges

Abstract

Behind the IoT software frameworks, there are security assumptions and architecture principles that help the software designers to be aligned with certain standards. Beyond these baselines tools, there is a risk analysis that is recommendable to face from a generalist point of view. Today, security threats are in rapid evolution, the IoT attack surface is increasing exponentially and the connectivity to critical infrastructures will change the problem dimensions to one of the most challenging in the following years. In this talk, we present an IoT software architecture design procedure matching main standards to the security key elements and the latest reported IoT vulnerabilities. According to this analysis and from our experience in IUL building IoT instruments, we describe a sensible architecture design checklist. Finally, we show our research lines in the Master of Cybersecurity and Privacy at UOC, focused on IoT build-in IDS capabilities, the first one based in ELK Edge Computing aggregation to SOC and the second is a deep learning light technique to proactive detection of IoT malware.



Dr. Mohamed Abdel-Basset

Zagazig University, Egypt

Mohamed Abdel-Basset received his B.Sc. and M.Sc from Faculty of Computers and Informatics, Zagazig University, Egypt. Received his Ph.D from Faculty of Computers and Informatics, Menoufia University, Egypt. Currently, Mohamed is Associate Professor at Faculty of Computers and Informatics, Zagazig University, Egypt. His current research interests are Optimization, Operations Research, Data Mining, Computational Intelligence, Applied Statistics, Decision support systems, Robust Optimization, Engineering Optimization, Multi-objective Optimization, Swarm Intelligence, Evolutionary Algorithms, and Artificial Neural Networks. He is working on the application of multi objective and robust meta-heuristic optimization techniques. He is also an/a Editor/reviewer in different international journals and conferences. He is an editor-in-chief of Neutrosophic Sets and Systems: An International Journal in Information Science and Engineering. He holds the program chair in many conferences in the fields of decision making analysis, big data, optimization, complexity and internet of things, as well as editorial collaboration in some journals of high impact.

Title: Explainable Intelligence for Dependable and Trustworthy Industrial Internet of Things

Abstract:

The Industrial Internet of Things (IIoT) denotes the digitization of physical industrial processes utilizing a set of internet sensors and actuators to enable automated control and effective resource exploitation. Being a key enabler for Industry 4.0 revolution, the IIoT is projected to give rise to extraordinary opportunities for improving the business value especially with the integration of advanced cellular technologies, such as 5G, B5G, 6G, and computing paradigms, such as cloud computing, fog computing, mobile edge computing, etc. However, the inclusion of the recent embedded technologies and advanced communications in the management and automation processes multiplies the operational complexities of the industrial control system, while broadening the surface of security and privacy threats and attacks. Therefore, security and privacy turned to be of supreme importance for realizing the dependability and trustworthiness of the IIoT applications. To this end, Artificial Intelligence (AI) has revealed notable achievements over the traditional security solutions in IIoT. However, it also exhibits more complexity and interoperability challenges leading to severe issues concerning

verifiability, validity, deployability. Besides, the current AI solutions hard to interpret the way they work completely or the idea behind their behavior and decisions hence named black boxes. This is because AI models are often devised by emphasizing only the performance aspect while ignoring some critical aspects like translucence, interpretability, privacy awareness, trustworthiness, accountability. This behavior is regarded as one of the major challenges in AI-based security solutions in IIoT as the decisions are unintelligible and often inconceivable even for the developers and security experts themselves. As a promising remedy, Explainable AI (XAI) is emerging to enable AI techniques to provide an explanation and justifications for model decisions and outcomes. Thus, XAI can bridge the gap between the complexity of underlying AI solutions and the intellectual abilities of the IIoT stakeholders for which explainability is wanted. Consequently, AI-based models must be designed to create white-box security solutions instead of black-box ones to assure the dependability and trustworthiness of business problems in IIoT networks.

Copyright IIoTBDSC All rights reserved You are 34037th the visitor.

International Conference on Industrial IoT, Big Data and Supply Chain (IIoTBDSC)