The 6th Zhejiang University Graduate International Workshop on Intelligent Signal Processing

Date:
2021-09-06 -- 2021-09-20

Time:
19:00-21:00, 21:00-23:00 (Beijing)
13:00-15:00, 15:00-17:00 (Berlin)
7:00-9:00, 9:00-11:00 (New York)

Chair:
Zhiguo Shi, Zhejiang University, China; Martin Haardt, Ilmenau University of Technology, Germany
Local Chair:
Chengwei Zhou, Zhejiang University, China; Qianqian Yang, Zhejiang University, China

Program:

Date	Beijing Time	Speaker	Affiliation	Title	Zoom ID
9.6	18:40 -21:00	Hing Cheung So	City University of Hong Kong	Robust Matrix Recovery	ID: 818 838 86321 Password: 270430
	21:00 -23:00	Xiaodong Wang	Columbia University	Signal Processing for Radar Communication Coexistence	
9.8	21:00 -23:00	Yuejie Chi	Carnegie Mellon University	Scalable and Robust Nonconvex Approaches for Low-rank Structure Estimation	ID: 894 124 54183 Password: 628660
9.11	21:00 -23:00	Xiang-Gen Xia	University of Delaware	Robust Remaindering for Real Numbers and Its Applications in Mod Sampling	ID: 850 784 33872 Password: 709776
9.14	19:00 -21:00	Antonio De Maio	University of Naples Federico II	Phased Array Radar Adaptive Beamforming	ID: 829 882 34901 Password: 115197
9.15	19:00 -21:00	André de Almeida	Federal University of Ceará	Introduction to Tensor Algebra (Part 1)	ID: 847 701 26252 Password: 134394
	21:00 -23:00	Z. Jane Wang	University of British	Adversarial Deep Learning in Digital	

			Columbia	Media Security & Forensics	
9.16	21:00 -23:00	André L. F. de Almeida	Federal University of Ceará	Introduction to Tensor Algebra (Part 2)	ID: 849 516 50656 Password: 114981
9.17	19:00 -21:00	Wei Liu	University of Sheffield	Basic Concepts and Techniques for Wideband Beamforming	ID: 852 497 90611 Password: 170792
	21:00 -23:00	Nuria Gonzalez Prelcic	North Carolina State University	Integrated MIMO Communication and Sensing: The Killer Technology for Future Wireless Networks	
9.18	21:00 -23:00	Waheed U. Bajwa	Rutgers University	High-dimensional Regression and Dictionary Learning: Some Recent Advances for Tensor Data	ID: 874 518 88236 Password: 942144
9.19	19:00 -21:00	Elias Aboutanios	University of New South Wales	Dual Function Radar Communications: A Sibling Rivalry	ID: 839 186 53247 Password: 595801
	21:00 -23:00	Yao Xie	Georgia Institute of Technology	Learning Point Process Network using Discrete Events Data	
9.20	19:00 -21:00	Xiao-Ping (Steven) Zhang	Ryerson University	Foundations in Graph Signal Processing	ID: 844 240 10065 Password: 440404
	21:00 -23:00	Pierluigi Salvo Rossi	Norwegian University of Science and Technology	Signal Processing for IoT: Decision Fusion in Sensor Networks	
		Domenico Ciuonzo	University of Naples Federico II		

Sponsorship:

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Organizer:

Graduate School of Zhejiang University

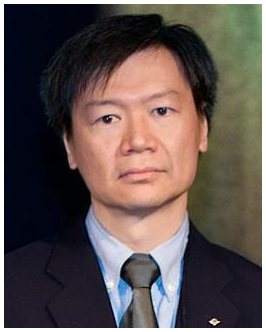
State Key Laboratory of Industrial Control Technology

Free registration:

Please click this link https://jinshuju.net/f/yBIj07 or scan the QR code below to sign up for the international workshop.

Please contact luninglin@zju.edu.cn if you have any questions.

P.S. Detailed information for the invited speakers:



Hing Cheung So

City University of Hong Kong, China

Title of the talk:

Robust Matrix Recovery

Hing Cheung So (Fellow, IEEE) was born in Hong Kong. He received the B.Eng. degree in electronic engineering from the City University of Hong Kong, Hong Kong, in 1990, and the Ph.D. degree in electronic engineering from The Chinese University of Hong Kong, Hong Kong, in 1995.

From 1990 to 1991, he was an Electronic Engineer with the Research and Development Division, Everex Systems Engineering Ltd., Hong Kong. From 1995 to 1996, he was a Post-Doctoral Fellow with The Chinese University of Hong Kong. From 1996 to 1999, he was a Research Assistant Professor with the Department of Electronic Engineering, City University of Hong Kong, where he is a professor. His research interests include detection and estimation, fast and adaptive algorithms, multidimensional harmonic retrieval, robust signal processing, source localization, and sparse approximation.

Dr. So was an Elected Member of the Signal Processing Theory and Methods Technical Committee of the IEEE Signal Processing Society, from 2011 to 2016, where he was the Chair of the Awards Subcommittee from 2015 to 2016. He has been on the editorial boards of IEEE Signal Processing Magazine from 2014 to 2017, the IEEE Transactions on Signal Processing from 2010 to 2014, Signal Processing since 2010, and Digital Signal Processing since 2011. He was also the Lead Guest Editor of the IEEE Journal of Selected Topics in Signal Processing, special issue on Advances in Time/Frequency Modulated Array Signal Processing in 2017.

Xiaodong Wang

Columbia University, USA

Title of the talk:

Signal Processing for Radar Communication Coexistence

Xiaodong Wang received the Ph.D. degree in Electrical Engineering from Princeton University. He is a Professor of Electrical Engineering at Columbia University in New York.

Dr. Wang's research interests fall in the general areas of signal processing and communications, and has published extensively in these areas. Among his publications is a book entitled "Wireless Communication Systems: Advanced Techniques for Signal Reception", published by Prentice Hall in 2003. His current research interests include wireless communications, statistical signal processing, and genomic signal processing. Dr. Wang received the 1999 NSF CAREER Award, the 2001 IEEE Communications Society and Information Theory Society Joint Paper Award, and the 2011 IEEE Communication Society Award for Outstanding Paper on New Communication Topics. He has served as an Associate Editor for the IEEE Transactions on Communications, the IEEE Transactions on Wireless Communications, the IEEE Transactions on Signal Processing, and the IEEE Transactions on Information Theory. He is a Fellow of the IEEE and listed as an ISI Highly-cited Author.

Yuejie Chi

Carnegie Mellon University, USA

Title of the talk:

Scalable and robust nonconvex approaches for low-rank structure estimation

Yuejie Chi received the B.E. degree (Hons.) in electrical engineering from Tsinghua University, Beijing, China, in 2007, and the M.A. and Ph.D. degrees in electrical engineering from Princeton University, in 2009 and 2012, respectively. She was with The Ohio State University from 2012 to 2017. Since 2018, she has been an Associate Professor with the Department of Electrical and Computer Engineering, Carnegie Mellon University, where she held the Robert E. Doherty Early Career Development Professorship, from 2018 to 2020. Her research interests lie in the theoretical and algorithmic foundations of data science, signal processing, machine learning, and inverse problems, with applications in sensing systems, broadly defined. Among others, she was a recipient of the Presidential Early Career Award for Scientists and Engineers (PECASE), the inaugural IEEE Signal Processing Society Early Career Technical Achievement Award for contributions to high-dimensional structured signal processing, and named the 2021 Goldsmith Lecturer by the IEEE Information Theory Society. She currently serves as an Associate Editor for IEEE Transactions on Information Theory, IEEE Transactions on Signal Processing, and IEEE Transactions on Pattern Recognition and Machine Intelligence.

Xiang-Gen Xia

University of Delaware, USA

Title of the talk:

Robust Remaindering for Real Numbers and Its Applications in Mod Sampling

Xiang-Gen Xia (Fellow, IEEE) received the B.S. degree in mathematics from Nanjing Normal University, Nanjing, China, in 1983, the M.S. degree in mathematics from Nankai University, Tianjin, China, in 1986, and the Ph.D. degree in electrical engineering from the University of Southern California, Los Angeles, CA, USA, in 1992. He was a Senior/Research Staff Member with Hughes Research Laboratories, Malibu, CA, US, from 1995 to 1996. In September 1996, he joined the Department of Electrical and Computer Engineering, University of Delaware, Newark, DE, USA, where he is currently the Charles Black Evans Professor. He is also the author of the book Modulated Coding for Inter Symbol Interference Channels (New York, NY, USA: Marcel Dekker, 2000). His research interests include space–time coding, MIMO and OFDM systems, digital signal processing, and synthetic aperture radar (SAR) and ISAR imaging. Dr. Xia received the National Science Foundation (NSF) Faculty Early Career Development (CAREER) Program Award in 1997, the Office of Naval Research (ONR) Young Investigator Award in 1998, and the Outstanding Overseas Young Investigator Award from the National Nature Science Foundation of China in 2001. He also received the 2019 Information Theory Outstanding Overseas Chinese Scientist Award, The Information Theory Society of Chinese Institute of Electronics. He is also the Technical Program Chair of the Signal Processing Symposium, Globecom 2007, in Washington, DC, USA, and the General Co-Chair of ICASSP 2005 in Philadelphia. He has served as an Associate Editor for numerous international journals, including IEEE Transactions on Signal Processing, IEEE Transactions on Wireless Communications, IEEE Transactions on Mobile Computing, and IEEE Transactions on Vehicular Technology.

Antonio De Maio

University of Naples Federico II, Italy

Title of the talk:

Phased Array Radar Adaptive Beamforming

Antonio De Maio received the Dr. Eng. (Hons.) and Ph.D. degrees in information engineering from the University of Naples Federico II, Naples, Italy, in 1998 and 2002, respectively. From October to December 2004, he was a Visiting Researcher with the U.S. Air Force Research Laboratory, Rome, NY, USA. From November to December 2007, he was a Visiting Researcher with the Chinese University of Hong Kong, Hong Kong. He is currently a Professor with the University of Naples Federico II. His research interest lies in the field of statistical signal processing, with emphasis on radar detection, optimization theory applied to radar signal processing, and multiple-access communications. He is the recipient of the 2010 IEEE Fred Nathanson Memorial Award as the young (less than 40 years of age) AESS Radar Engineer 2010 whose performance is particularly noteworthy as evidenced by contributions to the radar art over a period of several years, with the following citation for “robust CFAR detection, knowledge-based radar signal processing, and waveform design and diversity”. He is the corecipient of the 2013 best paper award (entitled to B. Carlton) of the IEEE Transactions on Aerospace and Electronic Systems with the contribution “Knowledge-Aided (Potentially Cognitive) Transmit Signal and Receive Filter Design in Signal-Dependent Clutter”.

André de Almeida

Federal University of Ceará, Brazil

Title of the talk:

Introduction to Tensor Algebra (Part 1)

Introduction to Tensor Algebra (Part 2)

André Lima Férrer de Almeida received a double Ph.D. degree in Sciences and Teleinformatics Engineering from the University of Nice, Sophia Antipolis, France, and the Federal University of Ceará, Fortaleza, Brazil, in 2007. From 2007 to 2008, he held a one-year teaching position at the University of Nice Sophia Antipolis, France. In 2010, he joined the Teleinformatics Engineering Department of the Federal University of Ceará, where he holds the Signal Processing chair and currently is an Associate Professor. He was awarded multiple times visiting professor positions at the University of Nice Sophia Antipolis, France (2012, 2013, 2015, 2018, 2019). He served as an Associate Editor for several journals, such as the IEEE Transactions on Signal Processing (2012-2014 and 2014-2016), the IEEE Signal Processing Letters (2016-2018 and 2018-2020). He has served as Guest Editor for the EURASIP Journal on Advances in Signal Processing (2014), and the Wireless Communications and Mobile Computing (2018). He currently serves as a Senior Area Editor for the IEEE Signal Processing Letters and as an Associate Editor for the IEEE Transactions on Vehicular Technology. He also served in the Editorial Board of other journals, including Circuits, Systems & Signal Processing (2012-2018), Wireless Communications and Mobile Computing (2018-2020), the KSII Transactions on Internet and Information Systems (2012-2014), and the French journal Traitement du Signal (2016-2018).

Z. Jane Wang

University of British Columbia, Canada

Title of the talk:

Adversarial Deep Learning in Digital Media Security & Forensics

Z. Jane Wang received the B.Sc. degree in electrical engineering from Tsinghua University, China, in 1996, and the M.Sc. and Ph.D. degrees in electrical engineering from the University of Connecticut, in 2000 and 2002, respectively. She has been a Research Associate with the Electrical and Computer Engineering Department, University of Maryland, College Park. Since 2004, she has been with the Department Electrical and Computer Engineering, The University of British Columbia, Canada, where she is currently a professor. Her research interests include statistical signal processing theory and applications, with focus on multimedia security and biomedical signal processing and modeling. While at the University of Connecticut, she received the Outstanding Engineering Doctoral Student Award. She co-received the EURASIP Journal on Applied Signal Processing (JASP) Best Paper Award in 2004, and the IEEE Signal Processing Society Best Paper Award in 2005. She is the Chair and Founder of the IEEE Signal Processing Chapter at Vancouver. She is serving as an Associate Editor for the IEEE Transactions on Signal Processing, the IEEE Transactions on Information Forensics and Security, and the IEEE Transactions on Biomedical Engineering.

Wei Liu

University of Sheffield, UK

Title of the talk:

Basic Concepts and Techniques for Wideband Beamforming

Wei Liu received the B.Sc. degree in Space Physics (minor in Electronics) in 1996 and LLB in Intellectual Property Law in1997 from Peking University, China (passed the Lawyer Qualification Examination of China in 1997 and practised as a trainee lawyer and then received his full lawyer's licence in 1999), MPhil from the Department of Electrical and Electronic Engineering, University of Hong Kong, in 2001, PhD in 2003 from the School of Electronics and Computer Science, University of Southampton, U.K. He then worked as a postdoc first in Southampton and later in the Department of Electrical and Electronic Engineering, Imperial College London. In September 2005, He joined the Communications Research Group, Department of Electronic and Electrical Engineering, University of Sheffield as a lecturer, and then promoted to senior lecturer in January 2015.

His research interests cover a wide range of topics in signal processing, with a focus on sensor (antenna, hydrophone, microphone, seismometer, etc.) array signal processing (beamforming and source separation/extraction, direction of arrival estimation, target tracking and localization, etc.), and its various applications, such as robotics and autonomous vehicles, remote sensing, human computer interface, data analysis, radar, sonar, and wireless communications.

Nuria Gonzalez Prelcic

North Carolina State University, USA

Title of the talk:

Integrated MIMO communication and sensing: the killer technology for future wireless networks

Nuria González Prelcic is currently an Associate Professor with the Electrical and Computer Engineering Department, North Carolina State University. Her main research interests include signal processing theory and signal processing and machine learning for wireless communications and sensing: filter banks, compressive sampling and estimation, multicarrier modulation, massive MIMO, MIMO processing for millimeter-wave communication and sensing, including vehicle-to-everything (V2X), air-to-everything (A2X), satellite MIMO communication, positioning, and joint radar and communication. She has published more than 80 articles in the topic of signal processing for millimeter-wave communications. She is a member of the IEEE Sensor Array and Multichannel Signal Processing Technical Committee. She was the founder Director of the Atlantic Research Center for Information and Communication Technologies (atlanTTic) at the University of Vigo, from July 2008 to January 2017. She is an Editor of the IEEE Transactions on Wireless Communications and an Area Editor of the IEEE Signal Processing Magazine.

Waheed U. Bajwa

Rutgers University, USA

Title of the talk:

High-dimensional Regression and Dictionary Learning: Some Recent Advances for Tensor Data

Waheed U. Bajwa has been with Rutgers since 2011, where he is currently an associate professor in the Dept. of ECE and an associate member of the graduate faculty of the Dept. of Statistics and Biostatistics. His research interests include statistical signal processing, highdimensional statistics, machine learning, harmonic analysis, inverse problems, and networked systems. He has received a number of awards including the Army Research Office Young Investigator Award (2014), the National Science Foundation CAREER Award (2015), Rutgers Presidential Merit Award (2016), Rutgers Presidential Fellowship for Teaching Excellence (2017), and Rutgers Engineering Governing Council ECE Professor of the Year Award (2016, 2017, 2019). He is a co-investigator on a work that received the Cancer Institute of New Jersey's Gallo Award for Scientific Excellence in 2017, a co-author on papers that received Best Student Paper Awards at IEEE IVMSP 2016 and IEEE CAMSAP 2017 workshops, and a Member of the Class of 2015 National Academy of Engineering Frontiers of Engineering Education Symposium. Dr. Bajwa is currently serving as the Lead Guest Editor for a special issue of IEEE Signal Processing Magazine on "Distributed, Streaming Machine Learning," a Guest Editor for a special issue of Proceedings of the IEEE on "Optimization for Data-driven Learning and Control," a Senior Area Editor for IEEE Signal Processing Letters, an Associate Editor for IEEE Transactions on Signal and Information Processing over Networks, and an elected member of the Big Data Special Interest Group and Sensor Array and Multichannel (SAM) and Signal Processing for Communications and Networking (SPCOM) Technical Committees of the IEEE Signal Processing Society.

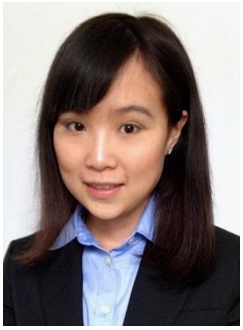
Elias Aboutanios

University of New South Wales, AU

Title of the talk:

Dual Function Radar Communications: A Sibling Rivalry

Elias Aboutanios received the bachelor's degree in engineering from the University of New South Wales (UNSW), Kensington, NSW, Australia, in 1997, and the Ph.D. degree from the University of Technology Sydney, Ultimo, NSW, Australia, in 2003. From 2003 to 2007, he was a Research Fellow with the Institute for Digital Communications, University of Edinburgh, where he conducted research on space time adaptive processing for radar target detection. He is currently an Associate Professor with the School of Electrical Engineering and Telecommunications, University of New South Wales, Kensington, NSW, Australia. His research interests are in statistical signal processing, in particular signal detection and parameter estimation, for various applications such as radar, GNSS, smart grids, and nuclear magnetic resonance spectroscopy. He is the recipient of the Best Oral Presentation Award (CISPBMEI10), Teaching Excellence Award in 2011, Excellence in Research Supervision Award in 2014, the Australian Postgraduate Scholarship in 1998, Sydney Electricity Scholarship in 1994, and UNSW Co-Op Scholarship in 1993. He is a member of the IEEE SAM Technical Committee and is currently serving as an Associate Editor for the IEEE Transactions on Signal Processing and IET Signal Processing. He also runs various space activities and projects and has established and led the UNSW-EC0 CubeSat Project, which culminated in the launch of the satellite in 2017.



Yao Xie

Georgia Institute of Technology, USA

Title of the talk:

Learning point process network using discrete events data

Yao Xie received the Ph.D. degree in electrical engineering from Stanford University, with a focus on mathematics. She is currently an Associate Professor and the Harold R. and Mary Anne Nash Early Career Professor with the H. Milton Stewart School of Industrial and Systems Engineering, Georgia Institute of Technology and also an Associate Director of the Machine Learning Center. Her research areas are statistics, sequential analysis and sequential change-point detection, machine learning, and signal processing. She received the National Science Foundation (NSF) CAREER Award in 2017. She is also an Associate Editor for IEEE Transactions on Signal Processing.

Xiao-Ping (Steven) Zhang

Ryerson University, Canada

Title of the talk:

Foundations in Graph Signal Processing

Xiao-Ping (Steven) Zhang (xzhang@ryerson.ca) received the B.S. and Ph.D. degrees from Tsinghua University, Beijing, China, in electronic engineering and the M.B.A. degree in finance, economics, and entrepreneurship from the University of Chicago, Illinois. He is a professor of electrical and computer engineering and is cross appointed to the Finance Department at the Ted Rogers School of Management at Ryerson University, Toronto, Canada. His research interests include signal processing, electronic systems, machine learning, big data, finance, and marketing. He is the cofounder and chief executive officer for EidoSearch, an Ontario-based company offering a content-based search and analysis engine for financial big data.

Pierluigi Salvo Rossi

Norwegian University of Science and Technology, Norway

Title of the talk:

Signal Processing for IoT: Decision Fusion in Sensor Networks

P. Salvo Rossi was born in Naples, Italy, in April 1977. He received the Dr.Eng. degree in telecommunications engineering (summa cum laude) and the Ph.D. degree in computer engineering from the University of Naples "Federico II", Italy, in 2002 and 2005, respectively. From 2005 to 2008, he has worked as a Post-Doctoral Researcher with the Department of Computer Science and Systems, University of Naples "Federico II", the Department of Information Engineering, Second University of Naples, Italy, and the Department of Electronics and Telecommunications, Norwegian University of Science and Technology (NTNU), Norway. From 2008 to 2014, he was an Assistant Professor (tenured in 2011) in telecommunications with the Department of Industrial and Information Engineering, Second University of Naples. From 2014 to 2016, he was an Associate Professor in signal processing with the Department of Electronics and Telecommunications, NTNU. From 2016 to 2017, he was a Full Professor in signal processing with the Department of Electronic Systems, NTNU. From 2017 to 2019, he was a Principal Engineer with the Department of Advanced Analytics and Machine Learning, Kongsberg Digital AS, Norway. He held visiting appointments at the Department of Electrical and Computer Engineering, Drexel University, USA, the Department of Electrical and Information Technology, Lund University, Sweden, the Department of Electronics and Telecommunications, NTNU, and the Excellence Center for Wireless Sensor Networks, Uppsala University, Sweden. Since 2019, he has been a Full Professor in statistical machine learning with the Department of Electronic Systems, NTNU, where he is also the Director of IoT@NTNU. His research interests fall within the areas of communication theory, data fusion, machine learning, and signal processing. He was awarded as an Exemplary Senior Editor for IEEE Communications letters in 2018. He was an Associate Editor and a Senior Editor for IEEE Communication letters from 2012 to 2016 and 2016 to 2019, respectively. He has been serving as an Executive Editor for IEEE Communication Letters since 2019, an Area Editor for IEEE Open Journal of The Communications Society since 2019, an Associate Editor for IEEE Transactions on Signal and Information Processing Over Networks since 2019, and an Associate Editor for IEEE Transactions on Wireless Communication since 2015.

Domenico Ciuonzo

University of Naples Federico II, Italy

Title of the talk:

Signal Processing for IoT: Decision Fusion in Sensor Networks

D. Ciuonzo received the Ph.D. degree in electronic engineering from the University of Campania “L. Vanvitelli,” Italy. Since 2011, he has been holding several visiting researcher appointments. He is currently an Assistant Professor with the University of Naples “Federico II,” Italy. His research interests include data fusion, statistical signal processing, wireless sensor networks, the Internet of Things, traffic analysis, and machine learning. Since 2014, he has been an Editor of several IEEE, IET, and ELSEVIER journals.