



General Chairs

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Technical Program Chairs

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Sponsored by: IEEE Industrial Electronics Society
Shanghai Jiao Tong University, China

Technical co-sponsor: Shanghai Association of Automation

The purpose of the IEEE ICIT international conference is to provide a forum for presentation and discussion of emerging industrial technology. Also, it serves as a conduit for channeling advanced technology to industry. It brings together researchers, from industry and academia, active in industrial technological fields to discuss current developments and future perspectives.

This is the 23rd edition of the conference, with most recent previous editions being hosted as follows: Toronto, Canada (2017), Lyon, France (2018), Melbourne, Australia (2019), Buenos Aires, Argentina (2020) and Valencia, Spain (2021). IEEE ICIT 2022 will be held in Shanghai, a global center for economics, research, manufacturing, science and technology.

Technical Tracks

Track 1: Control Systems, Robotics and Mechatronics

Co-Chairs: Marina Indri, Tomoyuki Shimono, Seiichiro Katsura

Advanced control techniques, nonlinear and adaptive control, optimal and robust control, estimation and identification techniques, intelligent control, complex systems control, networked control, industrial control applications, mechatronics systems, robotics, autonomous mobile robots, telerobotics and teleoperation, humanoid robots, multirobot systems, intelligent transportation, distributed collaborative systems, security & safety applications, human-robot interface, vision - based robots

Track 2: Electrical Machines, Drives, Sensors and Actuators

Co-Chairs: Gabor Sziebig, Peter Xu, Hiroaki Nishi

Special machines and actuators, multiphase motors, AC motor drives control and applications, observers and sensorless methods, electrical machine design and modeling, thermal, noise and vibration issues in electrical machines, reliability, testing and diagnostics, fault detection in machines and drives, motion control, special application of machines and drives, HVAC, advanced traction control of electric vehicles and electric trains, electrical drives for ships and for aerospace. Advanced techniques in real and off line simulation of industrial drives power system and electromechanical devices

Track 3: Power Electronics and Renewable Energy

Co-Chairs: Giampaolo Buticchi, Federico Baronti, Sertac Bayhan

Power converters, power electronic devices, SiC Mosfet & SiC JFET technologies, modulation techniques, integrated power electronics, modeling, simulation and control of power electronics, DC - DC, DC - AC, AC - DC conversion, AC/AC matrix converters, multilevel converters, fault tolerant converters, high frequency links, soft switching techniques, active rectifiers, inverters, UPS, energy efficiency and storage, power electronics for smart grid, EMI and EMC issues. Wind, solar, and wave energy converters, nano, pico and micro - hydro power generators, integrated renewable systems, hybrid electric vehicles, fuel cells, advanced batteries, energy storage devices and systems, offshore underwater converters, electric transportation, energy harvesting



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Track 4: Power Systems and Smart Grids

Co-Chairs: Chen-Wei Yang, Andrea Benigni, Fei Gao

Large and small hydro generators, energy transmission and distribution, static VAR and harmonic compensations, FACTS, active and hybrid filtering, power quality devices, power management, modeling, simulation and control of power system, grid interconnection, distributed power generation, diagnostics, smart grid technologies, intelligent control systems, multi-agent systems, global and constrained optimization, electricity market liberalization

Track 5: ICT enabled Healthcare

Co-Chairs: Hao Wang, Zhibo Pang, Geng Yang

Smart Sensing and analysis for Healthcare, Industrial Wireless Sensor Networks, 5G, and other communications for Healthcare, Industrial Internet-of-Things for Healthcare, Industrial Cloud and Edge/Fog Computing for Healthcare, Industrial Machine Learning and Artificial Intelligence for Healthcare, Robotics, Robotic Systems and Robotic Informatics for Healthcare, Human-Robot Interfaces, Interactions, and Symbiosis for Healthcare, Modelling, Scheduling and Optimization of Healthcare Processes for Healthcare, Digitization of Healthcare Enterprises and Systems for Healthcare, Industrial Cyber Physical Systems and Digital Twins for Healthcare, New Design Paradigms, Methodologies, and Service Models of Healthcare, Interoperability and Standardization for Heterogeneous Devices and Systems of Healthcare

Track 6: Cloud Computing, Big Data and Software Engineering

Co-Chairs: Kang-Hyun Jo, Marco Porta, Yang Shi

Cloud computing, big data, data analysis and extraction, computer networking, communication protocols, telecommunication, algorithms, distributed systems, industrial database applications, service-oriented architecture, service integration, communication standards, internetworking, mobile communication, information security and trust

Track 7: Electronic Systems on Chip, Embedded Control and Nanotechnology

Co-Chairs: Alin-Sasa Tisan, Yunjia Li, Kevin Wang

System on Chip (SoC) architectures, SoC testing, DSP and FPGA technologies, Microprocessors and FPGAs based control, Heterogenous compute platforms for AI applications, HDL and HLS accelerated hardware, Application Specific Integrated Circuits (ASIC) design and testing, Real time simulation algorithms, Real time implementation and control, Real-time distributed embedded systems, Technologies for system design, Design methodologies and Electronic Design Automation (EDA) tools, Sensor interfaces, Sensor algorithm and systems, Nanoelectronic devices

Track 8: Computational Intelligence and Signal and Image Processing

Co-Chairs: Luis Ribeiro, Andrei Lobov, Hao Luo

Knowledge-based engineering; Theory, design, application and development of biologically and linguistically motivated computational paradigms; Smart manufacturing

Track 9: Industrial Automation, Communication and Networking

Co-Chairs: Jan Haase, Stamatis Karnouskos, Bilal Ahmad

Building automation, factory automation and communications, flexible manufacturing systems, industrial vision, autonomous mobile robots, electrical vehicles, intelligent transportation, industrial agents, integrated systems and processes, distributed collaborative systems, human-machine interfaces, security & safety applications, infrastructures for industrial informatics portable electronics, automation systems for power distribution, industrial applications of internet technologies, multimedia, wired and wireless communications, power line communication and Industry 4.0

Track 10: AI and Industrial Informatics

Co-Chairs: Daswin De Silva, Alessia Saggese, Lei Shu

Machine Learning. Learning and Generalisation in Industrial Informatics. Automated Machine Learning, Deep Learning in Industrial Technology, Online Learning from Data Streams, Unsupervised and Representational Learning, Machine learning on Edge Devices, Embedded Vision in Industrial Informatics, Scalable Machine Learning for Big Data, Multimodal Information Fusion, Interpretability and Explainable Machine Learning, Computer Vision in Industrial Informatics, Text, Image, Audio, Video and Social Media Applications in Industrial Informatics, Semantic Reasoning and Digital Twins, Intelligent Digital Twins in Industrial Technology, Semantic Models for Industrial Informatics, Reasoning on Internet of Things, Combined Reasoning and Learning in Digital Twins, Optimization and Control, Metaheuristics in Industrial Technology, Reinforcement Learning in Industrial Informatics, Model-Predictive Control, Fuzzy-based control Applications

Track 11: Industrial Electronics and Education

Co-Chairs: Larisa Dunai, Kazuhiro Umetami

Educational Tools, Continuous Learning, Distance Learning (E-learning), Remote e-learning (remote laboratories), Internet applications, Online courses, Educational Materials and Methods, Information and Communication Technologies in Laboratories, Education and smart devices, Education and social networks, University-Industry Collaboration, Educational mitigation solutions in global crisis scenario

Important Dates

Deadline for submission of special sessions proposals ----- Dec. 15, 2021

Deadline for submission of tutorials proposals ---- Jan 15, 2022

Deadline for submission of papers (regular, special sessions) ----- Dec 30, 2021

Notification of acceptance ----- Jan 30, 2022

Deadline for submission of final manuscripts----- Feb 15, 2022

