

Annual Conference of the IEEE Industrial Electronics Society (IECON 2021)

Special Session on

“Assistive Robots and Their Ethical and Societal Implications”

Organized by

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Organizer 2: Jinhua She (she@stf.teu.ac.jp)
Affiliation: Tokyo University of Technology, Japan

Organizer 3: Jan Haase (janhaase@ieee.org)
Affiliation: Helmut-Schmidt-University of the Federal Armed Forces Hamburg,
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Organizer 4: Sho Yokota (s-yokota@toyo.jp)
Affiliation: Toyo University, Japan

Call for Papers

Theme:

Assistive robots are widely recognized by our society. Some those kinds of robots are commercially available now. They are designed to restore, improve, and maintain people's daily functions. While they are expected to make people happy, they may have some adverse effect on the world that developers never expect. In recent years, the development of human-assistive technologies has been focusing also on psychological impact on users, social roles played by a robot, ethical issues related to the design and use of the technologies, and other issues. Therefore, we organize a special session to discuss engineering aspects, societal impact, robot ethics and case studies with a special focus on the above mentioned issues of robotics, intelligent systems, and human-support systems and technologies considering its users' true happiness, code of ethics and impact in society.

Topics of interest include, but are not limited to:

- Ambient intelligence

- Engineering machine ethics in assistive robotics
- Ethically driven Robotics and Automation Systems
- Ethical questions in sensing and recognition
- Explainability, Transparency and Bias in AI-driven Robotic Systems
- Health-care system
- Human-support system
- Human understanding
- Human performance and modelling
- Industrial Cyber-Physical Systems and Societal Implications
- Engineering Trust and Ethics in assistive robotics
- User-centered design
- Societal impact of assistive robotics

Principal Organizer: Prof. Dasisuke Chugo, IEEE IES member



Daisuke Chugo, Vice Chair of Technical Committee on Human Factors, received his Ph.D. degrees in engineering from Saitama University, Japan in 2005. He is currently a professor of the School of Science and Technology, Kwansai Gakuin University, Japan, and is a steering committee member of CLAWAR conference. Dr Chugo served as Local General Chair of The IEEE 24th International Symposium on Robot and Human Interactive Communication (RO-MAN 2015), and has experiences of organizers and SS proposers in the conferences of ICIT 2016/2018, ISIE 2017/2018/2019, HSI 2018, etc.

Organizer 1: Stamatis Karnouskos, IEEE IES member



Stamatis Karnouskos is with SAP in Germany, dealing with technology foresight, especially in the scope of industrial technologies and enterprise systems. He has extensive experience in industrial research and technology management. For more than twenty years, Stamatis has led efforts in several European Commission and industry-funded innovation projects related to industrial automation, smart cities, cloud-based services and architectures, software agents, security, and mobility.

Stamatis has coauthored/edited several books relevant to the Industrial Internet of Things and Industrial Cyber-Physical Systems. He is the chair of IEEE IES Technical Committee on Technology Ethics and Society and the chair of the IES Industrial Activities Committee.

Organizer 2: Prof. Jinhua She, IEEE IES member

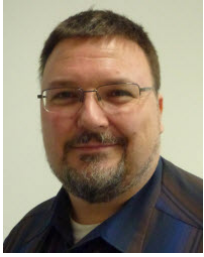


Jinhua She received his Ph.D. degree in engineering from Tokyo Institute of Technology, Tokyo, Japan in 1993. Then, he joined the School of Engineering, Tokyo University of Technology, Tokyo, where he is currently a professor at the Department of Mechanical Engineering. His research interests include the application of control theory, repetitive control, process control, Internet-based engineering education, and assistive robotics. He is the delegate of Cluster 4 and the chair of Technical Committee of Human Factors, IES, IEEE, and Associate Editors of IEEE TIE, IEEE/ASME TMech, JESTIE, etc. Dr. She is one of the founding chairs of the Japan-

China International Workshop on Information Technology and Control Applications (ITCA), and has been served as a member of program, publishing, and other committees of IEEE conferences.

Organizer 3: Prof. Jan Haase, IEEE IES member

Jan Haase received his PhD at University of Frankfurt, Germany, and his habilitation from University of the Armed Forces Hamburg, Germany and is now a professor for Computer Engineering at



Nordakademie, Germany. His main interests include embedded systems, building automation, automatic parallelization, and new computer architectures. Within IEEE he serves as current IEEE Germany Section Chair. Furthermore he is member of the IEEE's Conference Finance Committee and is a Past Region8 Conference Coordinator. He constantly acts as a mentor in IEEE's VoLT program since the very beginning. In IES, he chairs the TC on Building Automation, Control, and Management and is an associate editor for the IEEE TII as well as a member of the Adcom.

Organizer 4: Prof. Sho Yokota, IEEE IES member



Sho Yokota is the Vice Chair of Technical Committee on Human Factors. He received "Docteur en Robotique" from Université de Versailles Saint-Quentin-en-Yvelines, Versailles, France, in 2009. He has experiences of organizers and SS proposers in the conferences of IECON, ICIT, ISIE, INDIN, HSI, etc. He is currently an associate professor of the Department of Mechanical Engineering, Toyo University, Japan.

Submissions Procedure: All the instructions for paper submission are included in the conference website: <https://attend.ieee.org/iecon-2021/>

Deadlines:

Full paper submission:	June 25, 2021
Paper acceptance notification:	July 30, 2021
Camera-ready paper submission:	Aug. 27, 2021

Reviewers

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IEEE IES Technical Committee Sponsoring the Special Session (if any):

Technology Ethics and Society
Human Factors