

PANEL5:

Ethical Assurance of Autonomous Algorithmic Systems

Topics to be addressed

This panel session will cover the current focus within the Engineering Institutions, private and public enterprises on the ethical consideration in technology and development of a process for ethical assurance in product, systems and services embodying autonomous algorithmic systems. The work of the UK Royal Academy of Engineering, the IEEE SA 7000 standard and the Ethics Certification Programme “CertifAIED” will be discussed as a basis for raising awareness and providing a systematic framework for the innovators, researchers and technologists as well as small and large enterprises involved in technology innovation and development.

Moderator

Dr Clara Neppel



Dr. Clara Neppel is responsible for the growth of IEEE’s operations and presence in Europe, focusing on the needs of industry, academia, and government. As the European head of the world’s largest technical professional organization, Dr. Neppel is dedicated, under a scientific and technological prism, to supporting and advancing human-centric and sustainable innovation. Dr. Neppel is also a member of the Supervisory Board of EIT Digital, the Scientific-Industrial Advisory Board of Research Studios Austria FSG, the Software Competence Center Hagenberg Strategy Board, as well as the Independent Advisory Board of the UK RI Centre for Doctoral Training in Accountable, Responsible and Transparent AI.

Dr. Neppel holds a Ph.D. in Computer Science from the Technical University of Munich and a Master in Intellectual Property Law and Management from the University of Strasbourg.

Speakers

Prof Raja Chatila



Chair of the IEEE Global Initiative on Ethics of Intelligent and Autonomous Systems.

Raja Chatila is Professor Emeritus of Artificial Intelligence, Robotics and IT Ethics at Sorbonne University in Paris. He is former director of the SMART Laboratory of Excellence on Human-Machine Interactions and of the Institute of Intelligent Systems and Robotics. He is author of about 175 publications on autonomous robotics, perception, human-robot interaction, Machine learning, cognitive architectures, and AI ethics.

He is co-chair of the Responsible AI Working group of the Global Partnership on AI (GPAI). He is chair of the IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems and member of the French National Pilot Committee on Digital Ethics (CNPEN).

He is Fellow of the IEEE and recipient of the IEEE Robotics and Automation Society Pioneer Award.

Prof Ali Hessami



VC & Process Architect, IEEE AI Ethics Certification Programme, Director of R&D and Innovation - Vega Systems, UK

Ali is currently the Director of R&D and Innovation at Vega Systems. He extensive track record in systems assurance and safety, security, sustainability, knowledge assessment/management methodologies and has a background in design and development of advanced control systems for business and safety critical industrial applications.

Ali represents UK on CENELEC & IEC safety systems, hardware & software standards committees. He was appointed by CENELEC as convener of a number of Working Groups for Safety Critical Software Standard and for update and restructuring of the software, hardware and system safety standards in CENELEC. Ali also a member of Cyber Security Standardisation Groups and started the IEEE SMC and chairs Systems Council Chapters in the UK and Ireland Section.

During 2017 Ali joined the IEEE Standards Association (IEEE SA) initially as a committee member for the new landmark IEEE P7000 standard focused on “Addressing Ethical Concerns in System Design”. He was subsequently appointed as the Technical Editor and later the Chair of P7000 standard which was published in September 2021. In November 2018, he was appointed as the VC and Process Architect of the IEEE ‘s global Ethics Certification Programme for Autonomous & Intelligent Systems.

He has been the recent Chair of the IEEE in the UK and the Republic of Ireland driving an extensive programme of reform and member value initiatives ranging from a structured educational programme for online and face to face delivery to events, Open Days, Lectures and Professional Recognition and Registration for members.

Ali is a Visiting Professor at London City University’s Centre for Systems and Control in the School of Engineering & Mathematics and at Beijing Jiaotong University School of Electronics & Information

Engineering. He is also a Fellow of Royal Society of Arts (FRSA), Fellow of the UK Institution of Engineering & Technology (IET) and a Life Senior Member of IEEE.

Prof Theodoros Evgeniou



INSEAD Paris, Founder TREMAU

Professor at INSEAD since 2001, working on Machine Learning and AI for the past 25 years, on areas ranging from AI innovations for business process optimization and improving decisions in Marketing and Finance, to AI and regulation, as well as on new Machine Learning methods. He has four degrees from MIT, two BSc degrees simultaneously, Computer Science and Mathematics, a Master and a PhD degree in Computer Science. His work has appeared in leading journals, such as in Science Magazine, Machine Learning, Nature Digital Medicine, Harvard Business Review magazine, and others.

He is currently director of the INSEAD Executive Education program on “Transforming your Business with AI”. He is a member of the OECD Network of Experts on AI, an advisor for the BCG Henderson Institute, a World Economic Forum Academic Partner for Artificial Intelligence, and co-founder of Tremau a technology company for digital regulations.

Prof Alfredo Milani



University of Perugia, Italy, Director of KIT-Lab Knowledge and Information Technology Laboratory

Alfredo Milani, is an Associate Professor with the Department of Computer Science, University of Perugia, Italy, where he is Director of KIT-Lab Knowledge and Information Technology Laboratory. He has been member of the executive committee of Italian Association for Artificial Intelligence and the European Network of Excellence in AI Planning. He has been a Visiting Associate Professor with Hong Kong Baptist University, Hong Kong, and a Visiting Scientist with Jet Propulsion Laboratory, Pasadena, CA, USA.

His current research interests range in the area of artificial intelligence (AI), including planning and agent systems, evolutionary meta-heuristics, machine learning and semantic proximity measures, and digital ethical issues.