

Annual Conference of the IEEE Industrial Electronics Society (IECON 2022)

Special Session on “Reliability of Autonomous Robots”

Organized by

Jan Lemeire (jan.lemeire@vub.be)
Vrije Universiteit Brussel (VUB), Brussels, Belgium

Roy Sterritt (r.sterritt@ulster.ac.uk)
Ulster University, Belfast, UK

Tristan Schnell (schnell@fzi.de)
FZI Forschungszentrum Informatik, Mannheim, Germany

Call for Papers

Theme:

A major challenge in increasing the autonomy of robots is reliability, due to many reasons such as their inherent complexity, hardware and software failures, unexpected events, the variety and changes of the environment, ...

This special session is devoted to the problems, current challenges and latest solutions linked with reliability and safety assessment and insurance for intelligent autonomous vehicles.

Topics of interest include, but are not limited to:

1	Fault handling: fault identification, diagnosis, recovery
2	Fault tolerance enhancement
3	Architectures for fault handling
4	Dealing with failures of sensors and actuators
5	Robot health estimation & monitoring
6	Risk assessment
7	Modelling, analysis, validation, and testing of reliability and safety
8	Anomaly detection
9	Adaptability & self-learning robots
10	Developmental robots, cognitive robots

Sponsoring IES Technical Committee(s):

IEEE IES Technical Committee on **Sensors and Actuators** <https://sites.google.com/view/ies-tcsa/home>

IEEE IES Technical Committee on **Control, Robotics, and Mechatronics** <https://crm.ieee-ies.org/>

1 Good quality papers may be considered for publication in the IEEE Trans. on Industrial Electronics, subject to further rounds of review.

Submissions Procedure:

All the instructions for paper submission are included in the conference website: <https://iecon2022.org/>

Deadlines:

Full paper submission:	April 15, 2022
Paper acceptance notification:	June 17, 2022
Camera-ready paper submission:	July 29, 2022