



**ICRES 2026: 11th
International Conference on
Robot Ethics and Standards**

**Cranfield University
17th – 18th September 2026**

Conference Programme

WELCOME TO ICRES 2026

ICRES 2026 is the eleventh edition of the annual International Conference series on Robot Ethics and Standards. This year's conference is organised by the CLAWAR Association who strive for "*the advancement of education and science for the public benefit in the field of robotics and associated technologies*", in collaboration with Cranfield University's Centre for Robotics and Assembly.

Previous editions of the conference were held in Instituto Superior de Engenharia do Porto (ISEP), Portugal (2025), Yokohama, Japan (2024), Utrecht, The Netherlands (2023), Seoul, South Korea (2022), New York, USA (2021), Taipei, Taiwan (2020), London, UK (2019), New York, USA (2018), Lisbon, Portugal (2017 & 2015). This year the conference is held at Cranfield University where research and teaching in the field of robotics and automation has a long history, particularly in the aerospace and manufacturing industrial sectors.

The ICRES 2026 conference organisers would like to thank members of the International Scientific Committee and National Organising Committee for their efforts in reviewing the submitted articles, and authors for addressing the comments and suggestions of the reviewers in their final submissions. We hope that participants will find the conference presentations and proceedings valuable for their research and development efforts in this rapidly growing area of robot ethics and standards and associated technologies.

Sarah Fletcher, M. Osman Tokhi, Maria. Isabel. A. Ferreira, Anne-Marie Oostveen
ICRES 2026 General Co-Chairs

Conference Organisers



CLAWAR Association

www.clawar.org



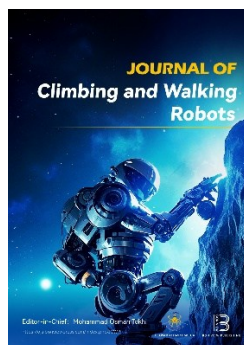
Cranfield University

<https://www.cranfield.ac.uk/>

Centre for Robotics and Assembly

<https://www.cranfield.ac.uk/centres/centre-for-robotics-and-assembly>

Conference Sponsors and Supporters



Journal of Climbing and Walking Robots

<https://ojs.bonviewpress.com/index.php/JCWR>

Conference Committees AND CHAIRS

Conference General Co-Chairs

Sarah Fletcher, Cranfield University, UK
Mohammad Osman Tokhi, London South Bank University, UK
Maria Isabel A. Ferreira, University of Lisbon, Portugal
Anne-Marie Oostveen, Cranfield University, UK

International Scientific Committee Co-Chairs

Manuel F. Silva, ISEP, Polytechnic of Porto & INESC TEC, Portugal
Iveta Eimontaite, Cranfield University, UK
Naveen Sundar Govindarajulu, Rensselaer Polytechnic Institute, NY, USA

International Advisory Committee

Gurvinder S Virk, CLAWAR Association, UK
Endre E. Kadar, University of Portsmouth, UK

Local Organising Committee Chair

Iveta Eimontaite, Cranfield University, UK
Philip Lance, CLAWAR Association, UK

Special/Workshop Sessions Co-Chairs

Sarah Fletcher, Cranfield University, UK
Praminda Caleb-Solly, University of Nottingham, UK
Khaled M. Goher, Sultan Qaboos University, Oman

Publication Co-Chairs

Anne-Marie Oostveen, Cranfield University, UK
M. Osman Tokhi, London South Bank University, UK

Publicity Co-Chairs

Gilbert Tang, Cranfield University, UK
Gabriela Gallegos Garrido, London South Bank University, UK

Website Co-Chairs

Jingyi Zhang, Cranfield University, UK
Louie Webb, London South Bank University, UK

International Scientific Committee

Ronald Arkin, Georgia Institute of Technology
Minoru Asada, Osaka University
Dominik Boesl, Technical University Munich (TUM) & KUKA AG
Fabio Bonsignorio, FER, University of Zagreb Heron Robots
Selmer Bringsjord, Rensselaer Polytechnic Institute
Sunyong Byun, Seoul National University of Education
Roeland de Bruin, Utrecht University
Emilia Duarte, IADE, Universidade Europeia
Khaled M. Goher, Sultan Qaboos University, Oman
Ali Hessami, Vega Systems
Tetsunari Inamura, Tamagawa University
Endre Kadar, University of Portsmouth
Matthew Kilbane, Human in the Loop
Shin Kim, Hankuk University of Foreign Studies
Philip Lance, PA Consulting
Tim Lee, Sangmyung University
Rosa Lee, Korean Information Society Development Institute
Benedita Malheiro, Instituto Superior de Engenharia do Porto and INESC TEC
Ajung Moon, McGill University
Seungbin Moon, Sejong University
Rui Oliveira, University of Minho
Amit Kumar Pandey, SoftBank Robotics (formerly Aldebaran Robotics), Paris
Kathleen Richardson, DMU
Matthew Studley, University of the West of England
Matimba Swana, University of Bristol
Gianmarco Veruggio, CNR
Alan Winfield, Bristol Robotics Lab
Sule Yildirim-Yayilgan, Norwegian University of Science and Technology
Kyoko Yoshinaga, Graduate School of Media and Governance, Keio University

Day 1: Thursday 17th September 2026

08:00 – 09:00	Registration (<i>Vincent Building main entrance</i>)
09:00 – 09:20	Opening of ICRES 2026
09:20 – 10:20	Plenary Presentation 1 (<i>Vincent auditorium</i>) Chair: Sarah Fletcher Building an ethical future: How robotics and AI are transforming work, health, and sustainability <i>Prof. Samia Nefti-Meziani, University of Birmingham</i>
10:20 – 10:40	Coffee Break (<i>Vincent atrium</i>)
10:40 – 12:00	Session 1: Robotics Standards and Ethics Regulation (<i>Vincent auditorium</i>) Chair: Osman Tokhi
10:40 – 11:00	Robotic Standards and Standardisation at BSI <i>Takiyah Williams (BSI)</i>
11:00 – 11:20	A Standards-Oriented Gap Analysis for Hybrid Human-Robot Skill Orchestration <i>Laura Moya-Ruiz, Francisco Fraile, Sarah Fletcher and Raul Poler</i>
11:20 – 11:40	Partner, Playmate, Persecutor: Safeguarding Against Coercive Evolution of Assistive Robots <i>Catherine Menon, Jeni Mitchell, Silvia Moros and Gabriella Lakatos</i>
11:40 – 12:00	Toward a Normative Ethical Framework for Embedding Public Values in Autonomous AI and Robotic Systems <i>Hyoungbin Park</i>
12:00 – 13:00	Lunch (<i>Vincent atrium</i>)
13:00 – 14:00	Plenary Presentation 2 (<i>Vincent auditorium</i>) Chair: Iveta Eimontaite Making the invisible visible: Building AI governance that actually works <i>Maria Axente, Responsible Intelligence</i>
14:00 – 15:00	Session 2: Human-Centred AI Communication (<i>Vincent auditorium</i>) Chair: Christopher Burns
14:00 – 14:20	Language Mirrors Scientific and Technological Evolution: Terminological Innovation, Conceptual Drift, and Ontological Transformation in the Age of Artificial Intelligence <i>Isabel Ferreira</i>
14:20 – 14:40	Worker-Centric Automation for Remanufacturing: the Campetella Robotic Pilot <i>Gabriele Marchello</i>
14:40 – 15:00	Governing Escalation in Reflexive Human–AI Dialogue: A Layered Framework for Boundary-Respecting Interaction

	<i>Yiping Bai</i>
15:00 – 15:20	Coffee Break (<i>Vincent atrium</i>)
15:20 – 16:20	Plenary Presentation 3 (<i>Vincent auditorium</i>) Chair: Gilbert Tang From prompt engineering to prompt programming for providing automation in LLM-based systems <i>Prof. Mark Levene, Birkbeck College, University of London</i>
16:20 – 18:00	Session 3: Trust, Emotion and Ethical Human-Robot Design (<i>Vincent auditorium</i>) Chair: Gilbert Tang
16:20 – 16:40	Towards a Context-Adaptive Trust Scale for Industrial Human-Robot Collaboration: Development and Initial Content Validation <i>Jingyi Zhang, Christopher Burns, Pratyush Pallav and Sarah Fletcher</i>
16:40 – 17:00	Telerogetic Collaborative Intelligence Systems - Ethical and Regulatory Considerations in Industry 5.0 <i>Ines Filipa Fernandes Ramos, Maria Chiara Leva, Gabriele Gianini and Ernesto Damiani</i>
17:00 – 17:20	Humanoid Robot Governance: Relational Lifecycle Risk and the Limits of Anthropomorphic Design <i>Kyoko Yoshinaga</i>
17:20 – 17:40	Emotional Design in Robotics: Myths and Red Lines <i>Isabel Ferreira</i>
17:40 – 18:00	Embedding Ethics in Robotics Engineering <i>Gilbert Tang, Anne-Marie Oostveen, Rebecca Raper, Richard Halliburton and Phil Webb</i>

Social Programme:

19:00	Banquet – Mitchell Hall, Cranfield
-------	---

Day 2: Friday 18th September 2026

08:00 – 09:00	Registration (<i>Vincent Building main entrance</i>)
09:00 – 10:00	Plenary Presentation 4 (<i>Vincent auditorium</i>) Chair: Osman Tokhi What could possibly go wrong? A case study in responsible robotics <i>Prof. Alan Winfield, University of the West of England</i>
10:00 – 10:20	Coffee Break (<i>Vincent atrium</i>)
10:20 – 12:00	Session 4: AI, Cybernetic Avatars and LLMs: impacts on Economy and Society (<i>Vincent auditorium</i>) Chairs: Rui Ota and Masahiro Sato
10:20 – 10:40	Dignity as the Mediating Principle: Postmortem Personhood in the Age of Digital Resurrection <i>Kunifumi Saito</i>
10:40 – 11:00	Automation and Structural Change in an Open Economy <i>Rui Ota, Liuchun Deng, Minako Fujio, Xin Lin</i>
11:00 – 11:20	Social Welfare and Technological Innovation in an Agentic Economy <i>Masahiro Sato and Rui Ota</i>
11:20 – 11:40	Task delegation to generative AI: trust, risk perception, and implications for trustworthy AI <i>Hidetaka Oshima, Shinichi Yamaguchi, Yukiko Osaka and Tomoaki Watanabe</i>
11:40 – 12:00	A Legal Framework for Regulating Deepfakes in the Avatar Age: A Japanese Law Perspective <i>Takayuki Matsuo</i>
12:00 – 13:00	Lunch (<i>Vincent atrium</i>)
13:00 – 14:40	Session 5: Human-Robot Trust and Work in the Industry 5.0 era (<i>Vincent auditorium</i>) Chair: Vaishnavi Sashidharan
13:00 – 13:20	Trust Calibration as the Engineering Condition for Human–Robot Collaboration at Scale <i>Gabriele Marchello</i>
13:20 – 13:40	Human Factors Challenges in Human–Robot Collaboration: Trust, Acceptance, and Future Directions Across Two White Goods Manufacturing Use Cases <i>Maryam Bathaei Javareshk, Vaishnavi Sashidharan, Iveta Eimontaite and Sarah Fletcher</i>
13:40 – 14:00	Robot-in-the-Loop Collaboration: Ethics and Responsibility for Manual Professions <i>Sotiris Manitsaris, Alina Glushkova and Alexandros Spyridonos</i>
14:00 – 14:20	From Expectation to Experience: Understanding Operator Perceptions of Industrial Human–Robot Collaboration

	<i>Vaishnavi Sashidharan, Iveta Eimontaite and Sarah Fletcher</i>
14:20 – 14:40	Neoliberalism, Artificial Intelligence, and the Transformation of Work: The Future is Now <i>Isabel Ferreira</i>
14:40 – 15:00	Coffee Break (<i>Vincent atrium</i>)
15:00 – 16:00	Session 6: AI and Military Applications (<i>Vincent auditorium</i>) Chair: Matthew Kilbane
15:00 – 15:20	The Robotic Mosaic: From Iran's Antifragile Doctrine to Ukraine's Machine War <i>Matthew Kilbane</i>
15:20 – 15:40	Waging War in the 'Foggy Infosphere': a socio-technical framing of military edge-AI <i>Matt Jarvis</i>
15:40 – 16:00	Toward an Ethically Correct AI Kill Chain <i>Selmer Bringsjord, Naveen Sundar Govindarajulu and Alexander Bringsjord</i>
16:00 – 17:40	Session 7: Ethics, Legality and Transparency (<i>Vincent auditorium</i>) Chair: Kyoko Yoshinaga
16:00 – 16:20	When Transparency Deceives: Risks and Ethical Safeguards in XAI <i>Alessia Vlasceanu, Emily C. Collins and Caroline Jay</i>
16:20 – 16:40	Industry Consensus as Safe Harbor: Risk Assessment Standards as a Reasonable-Care Anchor for AI Agent Liability After Section 230 <i>Eddan Katz</i>
16:40 – 17:00	The ethical risks and mitigation of LLM enhanced robots <i>Yuting Li and Alan Winfield</i>
17:00 – 17:20	To go or not to go with the flow <i>Endre Kadar</i>
17:20 – 17:40	Dignity Over Alignment: Long-term Care and AI Interaction <i>Thomas Arnold and Matthias Scheutz</i>
17:40 – 18:00	Closure of ICRES 2026

Format of presentations

Plenary presentations:

A 60-minute time slot has been allocated to plenary presentations; 45 minutes for presentation, 10 minutes for discussion/Q&A and 5 minutes for change over.

Regular and Special session presentations:

A 20-minute time slot has been allocated to each regular and Special session presentations; 15 for presentation, 3 minutes for discussion/Q&A and 2 minutes for change over.

Remote Participation

It will be possible to remotely join the conference; *links will be provided soon.*

Conference Venue

Travel to the university:

The Cranfield University address is: College Road, Cranfield, Bedfordshire, MK43 0AL.

We are served by six international airports:

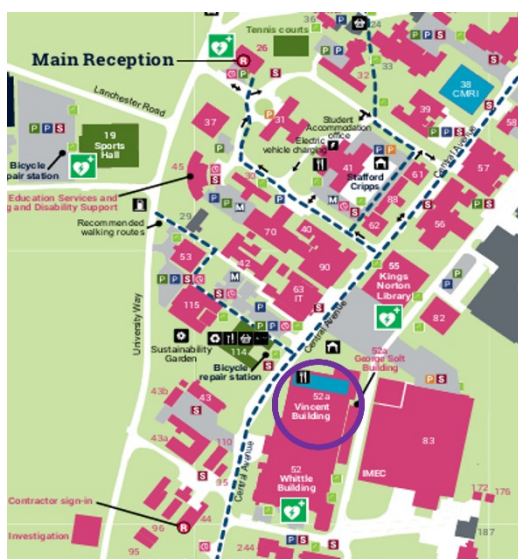
- Luton airport 22 miles
- Heathrow airport 52 miles
- Birmingham airport 63 miles
- Stansted airport 70 miles
- London City airport 68 miles
- Gatwick airport 87 miles



All of the airports are linked to major road and rail networks; for information and bookings:

- Rail: <https://www.nationalrail.co.uk/>
- Bus: <https://www.nationalexpress.com/en>
- Taxi: <https://www.skylinetaxis.co.uk/airport-taxi/>

Campus directions:



All conference sessions are in the Vincent Building (Building 52a), which is situated off Central Avenue and opposite the Kings Norton Library.



Further travel and campus information can be found in the Cranfield visitor information leaflet available at the conference website: <https://clawar.org/icres2026>. This includes a map showing the Vincent building in square D4.

A virtual map can also be accessed using this QR code:

