The 8th IEEE International Conference on RiTA
Robot Intelligence Technology and Applications
In conjunction with EUREKA Eisteddfod Roboteg, the first Robotics Expo in Wales

**WELCOME**
Under the theme of this year’s conference in Cardiff, “Ready, willing and able for Robot Intelligence Tech & Apps?”, the International Conference on Robot Intelligence Technology and Applications (RiTA) 2020 aims to serve as a platform for academics, researchers, government & policymakers, experts, industrial practitioners and other relevant stakeholders in the dissemination of new knowledge on RiTA fundamental research, design & developing RiTA, working & living with RiTA, and shaping RiTA for ethical and legal governance.

**IMPORTANT DATES**
- 1st July 2020: Deadline of Paper Submission
- 31st Aug: Final Manuscript due

**PUBLICATION**
All accepted and presented papers will be published in the Springer Nature LNME or CCIS proceedings on Scopus. Extended version of conference papers from the RiTA 2020 with at least 50% new content are welcomed to submit to the following possible journals: IEEE Access (impact factor of 4.098 in the 2018 JCR-SCI) and On the Horizon (Scopus & ESCI-indexed).

**TECHNICAL CO-SPONSORS:**
- IEEE
- Springer
- IEEE Computational Intelligence Society
- On The Horizon

**FINANCIAL CO-SPONSORS:**
Conference Scope

Cognitive Intelligence
Machine learning
Cognitive modeling of agent systems
Probabilistic and uncertain reasoning
Multi-criteria decision making
Task scheduling
Memory management
Fuzzy reasoning
Reasoning strategies
Brain models / cognitive science
Other aspect of Cognitive Robotics

Social & Service Intelligence
Intelligent interactive technology
Human-robot interaction
Human-machine interface/integration
Televsion/ Tele-Semitism
Human biology and biochemistry
Markets and computational societies
Interface design and assessment
Chatbot
Social robotics, model & implementation
Other aspect of Service & Social Robotics

Genetic & Quantum Intelligence
Computational intelligence
Evolutionary algorithm
Evolutionary robotics
Mimetic algorithm
Immune algorithm
Quantum computing
Quantum Support Vector machine
Quantum robotics

Educational Intelligence
Reinforcement learning
Smart assessment & feedback
Educational theories for robotics
Robotic teaching assistant
Design thinking for education intelligence
STEM with robotics
STEAM with robotics
Other aspect of Educational Robotics

Behavioral Intelligence
Kinetastics/dynamics/control
Task/motion/trajectory planning
Mobile/humanoid/micro/nano robotics
Neuroscience based control
Neurobots
CGI-based control
Physiologic signals integrated robot control
Ambient Intelligence
Sensor integration/fusion/perception
Multi-sensor data fusion
Navigation, SLAM/localization
Distributed intelligent algorithms and techniques
Ubiquitous computing

Artificial Intelligence

Applications
Digital creatures
Intelligent agents
Computer vision
Virtual/Augmented reality
Robotics for tourism or hospitality
Robotics for healthcare and rehab
Robotics for Military
Robotics for Surveillance
Pattern recognition
Face recognition
Finger print recognition

Collective Intelligence
Multi-robot systems
Cellular/distributed/ cooperating robotics
Learning and hybrid systems
Human knowledge discovery
Modeling and system
Swarm intelligence
Cooperative Systems and Control

Other
Soft robotics
Bio-inspired robotic design & control
Self-propelled capsule robotic systems
Robotics Control with AR
Aesthetics and Robotics
Ethical, Social, Legal and Policy Implications for RiTA
Chatbots

PhDs / Student Poster Competitions

CONFERENCE FEES

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<th></th>
<th>Online</th>
<th>Early Bird (20th Sept)</th>
<th>Regular (after 20th Sept)</th>
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Conference registration fee includes admission to RiTA2020, Robots Eisteddfod, EUREKA Robotics Lab and CST tour, program booklet; welcome reception, conference dinner, teas & coffees, and lunches (online excluded).
### ORGANISING COMMITTEE

<table>
<thead>
<tr>
<th>Advisory Committee</th>
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<tbody>
<tr>
<td>Holly Yanco</td>
<td>NERVE Center, University of Massachusetts Lowell</td>
<td>USA</td>
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<td>Richard Clement</td>
<td>Cardiff Council, Welsh Government</td>
<td>UK</td>
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<th>Honorary General Chair</th>
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<tr>
<td>Jong-Hwan Kim</td>
<td>KAIST</td>
<td>Korea</td>
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<td>Hyun Myung</td>
<td>KAIST</td>
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<td>Jon Platts</td>
<td>Cardiff School of Technologies</td>
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<th>General Chair</th>
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<tr>
<td>Esyin Chew</td>
<td>EUREKA Robotics Lab</td>
<td>UK</td>
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<td>Junmo Kim</td>
<td>KAIST</td>
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<th>Program Chair</th>
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<tr>
<td>Fiona Carroll</td>
<td>EUREKA Robotics Lab</td>
<td>UK</td>
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<td>Simon Thorne</td>
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<td>Juyoun Park</td>
<td>KAIST</td>
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<td>David Hogg</td>
<td>Leeds University</td>
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<td>Jongrae Kim</td>
<td>Leeds University</td>
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<tr>
<td>Jens Lambrecht</td>
<td>Technische Universität Berlin</td>
<td>Germany</td>
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<tr>
<td>Anwar A. Majeed</td>
<td>Universiti Malaysia Pahang</td>
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<th>Plenary Session Chair</th>
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<tr>
<td>Ales Leonardis</td>
<td>Univ of Birmingham</td>
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<tr>
<td>Guangming Xie</td>
<td>Peiking University</td>
<td>China</td>
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<td>Deepti Mishra</td>
<td>Norwegian University of Science &amp; Technology</td>
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<td>Wang Tao</td>
<td>Peiking University</td>
<td>China</td>
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<td>Loo Choo Kiong</td>
<td>University of Malaya</td>
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<th>Special Workshop Chairs</th>
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<tr>
<td>Fiona Carroll, Lisa Fenn, Natalie Lambert, Jason Williams &amp; Catherine Tryfona</td>
<td>Cardiff Metropolitan University</td>
<td>UK</td>
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<td>Zati Hakim Azizul</td>
<td>University of Malaya</td>
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<th>Publicity Chairs</th>
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<tr>
<td>Fusaomi Nagata</td>
<td>Tokyo University of Science</td>
<td>Japan</td>
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<td>Gyeong-Moon Park</td>
<td>KAIST</td>
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<td>Chan Chee Seng</td>
<td>University of Malaya</td>
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<th>Publications Chairs &amp; Best Research Paper Award</th>
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<tr>
<td>Hyun Myung</td>
<td>KAIST</td>
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<td>Pengcheng Liu</td>
<td>York University</td>
<td>UK</td>
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<td>Universiti Malaysia Pahang</td>
<td>Malaysia</td>
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### Exhibition, Booth Competition and Social Event Chair
- **Nigel Jones**
  - EUREKA Robotics Lab
  - UK

### PhD Posters & Competition Chair
- **Edmond Prakash**
  - Cardiff Metropolitan University
  - UK

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  - Cardiff Metropolitan University
  - UK

- **Hyangmi Kim**
  - KAIST
  - Korea

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  - USA

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  - Portugal

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  - Italy

- **Guangming Xie**
  - Peeking University
  - China

- **Tangwen Yang**
  - Beijing Jiaotong Univ.
  - China

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  - Aberystwthy’s Intelligent Robotics
  - UK

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  - Denmark

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  - Malaysia

- **Sri Devi**
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  - Malaysia

- **Zati Hakim Azizul**
  - University of Malaya
  - Malaysia

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  - University Putra Malaysia
  - Malaysia

- **Edwin Teo**
  - Monash University
  - Malaysia

- **Anuja Thimali Dharmaratne**
  - Monash University
  - Malaysia

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  - UK

- **Neveen I. Ghali**
  - Future University
  - Egypt

- **Aliaa A.A. Youssif**
  - Arab Academy for Science, Technology & Maritime Transport
  - Egypt

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  - UK

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  - UK

- **Fiona Carroll**
  - EUREKA Robotics Lab
  - UK

- **Thanuja Mallikarachchi**
  - EUREKA Robotics Lab
  - UK

- **Wenshu Zhang**
  - EUREKA Robotics Lab
  - UK

### Local Arrangement & Technical Assistants
- **Jack Jiaji Yang**
  - David Shuyang Hu
  - EUREKA Robotics Lab
  - UK

- **Joel Pinney**
  - EUREKA Robotics Lab
  - UK

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### Keynotes speakers:

- **Autonomous Car with industrial partnership**, Professor Ingmar Posner, Oxford Robotics Institute, UK

- **Horses (or Robots) for Courses: Robotics and education**, Professor David Turner, Beijing Normal University, China

- **Made in China: the World Most Advanced Social and Service Robots**, Simon Wang, Canbot Technologies Beijing Ltd., China

- **Robotics Entrepreneurship**, Dr Hanafiah, CEO, Robopreneur Ltd., Malaysia

- **More renowned speaker(s) TBC**