ICAIR 2024

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Mini Track on Artificial intelligence, Machine Learning and Automation in the Aeronautics Sector

Mini Track Chair: Dr. Carlos Pedro Gonçalves, Lusófona University - University Centre of Lisbon, Portugal

Machine learning and automation are key drivers of change and transformation in the aeronautics sector, with significant impact ranging from areas as diverse as the supply chain, operations, business processes, risk and crisis management systems and aeronautical security, as well as specific challenges linked to flight automation and robotics. Aeronautics' entrepreneurship within the context of the Fourth Industrial Revolution also includes the field of civilian and military robotics, in which automation and artificial intelligence (AI) play key roles, with specific emphasis in the business line of Unmanned Aerial Vehicles. Besides the integration of AI in the aeronautics industry at its multiple levels, AI also presents new challenges on different fronts including aeronautical law regarding drones and AI, human resources management challenges from AI introduction as well as cybersecurity threats associated with the use of AI in hacking leading to new threats both regarding the safety of data as well as possible disruption targeting flight systems and aeronautical automation, physical security threats to airports are also present linked to the possible use of drones to attack airports. This mini track will explore the latest trends, developments and challenges presented by artificial intelligence, machine learning and automation in the aeronautics sector, providing valuable information for researchers, policy makers and industry professionals. Together, we will delve into both the transformative potential of AI and the possible threats and challenges from AI to the aeronautics sector. Examining how decision-makers and managers in the aviation sector are addressing these challenges and can harness AI technologies to face the major transformations resulting from the exponentially changing technological horizon associated with the cyber-physical-cognitive systems revolution that is driving the Fourth Industrial Revolution. We are inviting submissions of abstracts for presentations including the following:

- Impact of artificial intelligence and automation in the business processes and value chain of the aeronautics sector.
- Unmanned Aerial Vehicle technologies and its integration in both the civilian and military sectors.
- Application of machine learning technologies in risk and crisis management in the aeronautics sector.
- The legal challenges presented by AI and automation in the aeronautics sector.
- The potential of AI and drone technologies in civil protection.
- Human resources management challenges from AI and automation in the aeronautics sector.
- The use of AI technologies in facing security threats to the aeronautics sector and the threats coming from AI and drone technologies.

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Submission details

In the first instance a 300 word abstract is required, to be received by **15th May 2024.** Submissions must be made using the online submission form at https://www.academic-conferences.org/conferences/icair/icair-call-for-papers/

If you have any questions about this track, please email the mini track chair: cgon.aulas@gmail.com
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