WAC 2024

Applied Machine Learning and Artificial Intelligence for Autonomous Vehicles in the 21st Century

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16th Bi-annual Congress, Playa Paraiso, Riviera Maya, Mexico

September 22-26, 2024

Special session on:

Deep Learning Applied to Manufacturing and Digital Twins

Artificial Intelligence (AI) and Machine Learning (ML) are enabling computers to learn from representative data and imitate the way humans learn and operate without having to be explicitly programmed. Deep Learning (DL) is a type of Machine Learning where Artificial Neural Networks are modelled to work like the human brain by having the ability to learn from large amounts of data. The power of DL is having a great influence in many sectors including Manufacturing where large amounts of data can be generated from various products, processes and systems as well as from the holistic manufacturing process. The Factories of the Future will be more and more data-driven and highly networked through interconnected machines and services together with a high level of automation to achieve zero waste processes leading to sustainable manufacturing. In order to monitor, run and control the manufacturing processes remotely the FoF will depend on Digital Twins (DTs) which are digital models of the real-world physical products, processes and systems that serve as an indistinguishable digital counterpart. Therefore, manufacturing and DTs will continue to become ever more data-rich and will benefit from AI and ML and in particular DL. This special session addresses all applications of DL within the context of Manufacturing and DTs.

Selected papers from this session will be invited for publication in a special issue for a JCR publication, following standard review/revision procedures.

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Time Schedule: Special Sessions & regular papers Due .... April 15, 2024 Acceptance notification.. May 20, 2024 Final manuscripts upload and early registration ………………………...…… August 1, 2024 Congress .... September 22-26, 2024