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:

Advancing Bioprocess Control through Machine Learning Techniques

Bioprocesses are present in multiple industries such as food production, feed manufacture, energy generation, chemical synthesis, and pharmaceutical research. These processes range from biocatalysis to fermentation and mammalian cell cultures, each utilizing different reaction mechanisms. The increasing focus on bioeconomy activities worldwide is expected to lead to a further increase in the number of bioprocesses. An essential feature found in all these varied bioprocesses is the complex reaction matrix consisting of numerous chemicals. These processes often include three-phase systems that consist of liquid, gas, and solid phases. Comprehensive monitoring and supervision systems are essential for the efficient operation of these processes at all stages. Although bioprocesses have been used for thousands of years, including the ancient fermentation of dough, there are few online measurement techniques for important process variables. Measuring important factors is difficult, but achieving the best results by controlling them is an even bigger problem.

This special session on " Advancing Bioprocess Control through Machine Learning Techniques" intends to present unique instances of online monitoring and control methods that can be used in various bioprocesses using Artificial Intelligence. 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 .... March 1, 2024	
Acceptance notification.. May 20, 2024	
Final manuscripts upload and early registration ………………………....…… August 1, 2024	
Congress .... September 22-26, 2024	