

## ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN BIOENGINEERING

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### ABSTRACT

Computational bioengineering faces to new challenges related to massive data acquired on human body at multiple scales ranging from molecular level to the population. With the progress of new efficient algorithms and data processing protocols, new knowledge could be extracted from these data for clinical decision support.

This mini-symposium aims to present methodological approaches as well as practical applications related to the use of artificial intelligence and machine learning approaches to extract knowledge from multimodal bio-data and then to develop predictive models for clinical decision support.

In this Mini-symposium, the following subjects are welcomed:

- Machine learning models of the bio-data at different length scales
- Deep learning models of the bio-data at different length scales
- Reinforcement learning models in bioengineering
- Clinical decision support systems
- Predictive modeling based on statistical approaches