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Machine Learning for Biomedical Data Processing

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Message from the Guest Editors

Dear Colleagues,

The purpose of this Special Issue is to present recent advances in signal processing and machine learning for biomedical signal analysis. We are targeting original research works in this field, covering new theories, algorithms, implementations, and applications for signal and data analytics. Potential topics of interests are related to recent advances in machine learning in signal analysis and processing, but are not limited to them:

- Biomedical Signal Processing and Analysis
- Biomedical Image Processing and Analysis
- Brain Computer Interface
- Human Machine Interfaces
- Neural Rehabilitation Engineering
- Biomedical Data processing for Big Data
- Information forensics and security
- The Internet of Things and RFID
- Machine learning for signal/image processing
- Signal/Image Processing for Brain Machine Interface
- Time-frequency and Non-stationary Biosignal Analysis
- Machine learning for biomedical signal/image processing
- Machine Learning in Biomedical Applications
- Biometrics with biomedical signals



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Guest Editors

Special Issue



machine learning & knowledge extraction



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Message from the Editor-in-Chief

Machine learning deals with understanding intelligence to design algorithms that can learn from data, gain knowledge from experience and improve their learning behaviour over time. The challenge is to extract relevant structural and/or temporal patterns (“knowledge”) from data, which is often hidden in high dimensional spaces, thus not accessible to humans. Many application domains, e.g., smart health, smart factory, etc. affect our daily life, e.g., recommender systems, speech recognition, autonomous driving, etc. The grand challenge is to understand the context in the real-world under uncertainty. Probabilistic inference can be of great help here as the inverse probability allows to learn from data, to infer unknowns, and to make predictions to support decision making.

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