



## Applications of Evolutionary Computation to Machine Learning and Data Mining

Guest Editors:

**Dr. Michael Affenzeller**

Heuristic and Evolutionary  
Algorithms Laboratory (HEAL),  
University of Applied Sciences  
Upper Austria—Campus  
Hagenberg, Softwarepark 11,  
4232 Hagenberg, Austria

**Dr. Kaifeng Yang**

School of Informatics,  
Communications and Media  
University of Applied Sciences  
Upper Austria Softwarepark 13, A-  
4232 Hagenberg, Austria

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### Message from the Guest Editors

The potential interactions between evolutionary computation and machine learning are manifold and are further advanced by recent developments in the areas of human-centered AI as well as interpretable and explainable AI. Application perspectives often arise in but are not limited to manufacturing, logistics and product design. In terms of applications, there are strong connections to industrial AI, and in terms of methods and algorithms, there is a close relationship with predictive and prescriptive analytics.

In the data-based generation of surrogate models, as often practiced in simulation-based optimization, evolutionary algorithms can be used both on the optimization side and on the machine-learning side. Further examples in this environment are the topology optimization of neural networks with genetic algorithms or the anticipation of dynamic systems' behavior in optimization by means of machine learning.





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## Editor-in-Chief

**Prof. Dr. Giulio Nicola Cerullo**

Dipartimento di Fisica,  
Politecnico di Milano, Piazza L.  
da Vinci 32, 20133 Milano, Italy

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*Applied Sciences* Editorial Office  
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