Dynamic System Modelling from Data: Emerging Algorithms and Applications

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Message from the Guest Editors

With fast-changing technology and ever-increasing computing capacity, many emerging algorithms in the fields of machine learning, big data, soft-sensor techniques, and reinforcement learning can realistically find applications in the identification of modern systems, ranging from manmade (engineering) to natural domains. On the other hand, no matter whatever algorithm is considered, some inherent issues must be overcome in one way or another, such as the proper handling of data uncertainty due to imperfect measurements that result in the presence of noise, time-delays, and data losses. Hence, a current challenge is to develop identification algorithms that will yield compact mathematical models which are useful for providing simple solutions to complex problems within a rigorous analytical framework.

The aim of this Special Issue is to report emerging novel identification algorithms for system modelling from data. The Editors welcome submissions in form of regular technical reports, comprehensive surveys, and case studies.

Special Issue

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Message from the Editor-in-Chief

Algorithms are the very core of Computer Science. The whole area has been considered from quite different perspectives, having led to the development of many sub-communities: Complexity theory (limitations), approximation or parameterized algorithms (types of problems), geometric algorithms (subject area), metaheuristics, algorithm engineering, medical imaging (applications), indicates the range of perspectives. Our journal welcomes submissions written from any of these perspectives, so that it may become a forum for exchange of ideas between the corresponding scientific subcommunities.

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