Special Issue

Robust Perception and Control in Prognostic Systems

Message from the Guest Editors

In real-world applications, noise/domain shift is an issue that cannot be avoided. Agile adaptions without sensitivity to such interferences is a crucial feature of a well-built prognostic model. The current mainstream models adopt an engineering-friendly but costly paradigm that refines/re-designs the previous model/control-principle obtained in old scenarios using newly gathered labeled data from new scenarios. Furthermore, with increasing business-orientated demands such as safety, privacy, and agility, perception/control under these constraints becomes a challenging problem that attracts the attention of both artificial intelligence and reliability communities. In this context, some techniques are proposed to address this issue in relation to domain adaptation (for transfer with full data access), unsupervised model adaptation (for safety transfer), efficient online algorithms (for agility), and fuzzy controlling (for adaptive control). This Special Issue aims to present recent advances in robust perception and control in prognostic systems, as well as investigating their applications in real-world scenarios.

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The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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