Hybrid Modeling of Chemical Processes: Theory and Applications

Guest Editor:

Dr. Marco S. Reis
Department of Chemical Engineering, University of Coimbra, Polo II, Rua Sílvio Lima, 3030-790 Coimbra, Portugal

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Message from the Guest Editor

The main focus of this Special Issue is to collect state-of-the-art methods and new exciting applications of hybrid modeling (i.e., integrating data-driven and first principles modeling) for monitoring, forecasting, control and optimization, especially in industrial applications. Topics include, but are not limited to:

- New hybrid model architectures;
- Platforms for hybrid modeling;
- Parameter identification for hybrid modeling;
- Physics-informed neural networks (PINNs);
- Dealing with heterogeneous knowledge and data sources;
- Hybrid control theory, approaches, and applications;
- Fault diagnosis and process health monitoring;
- Condition-based monitoring;
- Optimization, scheduling, decision making, and simulation;
- Transfer learning.

Special Issue

Editor-in-Chief

Prof. Dr. Giancarlo Cravotto
Department of Drug Science and
Technology, University of Turin,
Via P. Giuria 9, 10125 Turin, Italy

Message from the Editor-in-Chief

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