Call for Authors

Introducing a New Series from CRC Press

Computational Analysis, Synthesis, and Design of Dynamic Systems

Over the past decades, computing power has increased exponentially. In the domain of dynamic systems, the resulting comoditization of computation has spurred developments in three directions:

(i) Computation has become the third pillar of scientific discovery, next to theory and experimentation.
(ii) Computation has enabled implementation and integration of otherwise unrealistic functionality in engineered systems and become a main feature differentiator in consumer products.
(iii) Computational models have become first-class deliverables in engineered system design.

CRC Press
Taylor & Francis Group

Aims and Scope of this Series

This series of books is dedicated to theory and methods for dynamic systems. It attempts to disseminate, harness, and help continue to capitalize on achievements of computational analysis, synthesis, and design of dynamic systems as well as further their respective developments. Contributed work is intended to include:

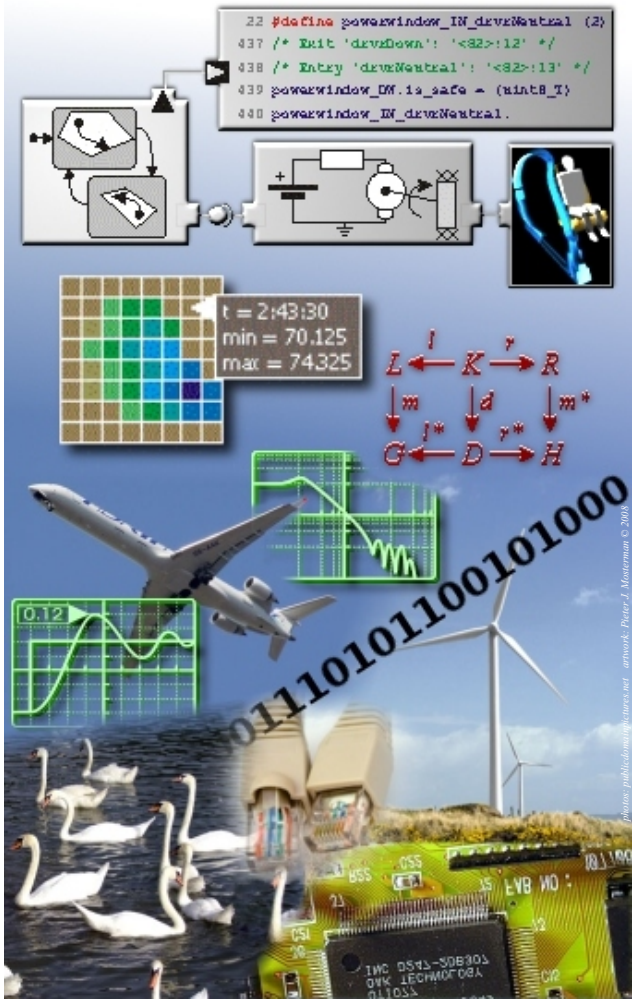
- Introductory and advanced teaching material that covers computational foundations of dynamic systems.
- Collections of established and promising computational approaches in a particular field of dynamic systems.
- Topical overviews to serve as a reference for practitioners and students and that provide an entry point to further investigate a specific direction.
- Application content that documents approaches in a well-defined area of industry or government.

Contributions can be single-authored textbooks as well as compilations of chapters by different authors. In general, breadth is preferred over depth, where the clarity of presentation is paramount and including concrete examples is encouraged.

Illustrative Topics

Topics of interest are many and comprise:

- Simulation ranging from discrete event to continuous time and combinations.
- Cosimulation of different tools and with physics in the loop.
- Verification, validation, and accreditation of models with respect to theory and experiments.
- Data processing for sensor fusion, situational awareness, and ambient intelligence.
- Computer Automated Multiparadigm Modeling, including model transformation, multi-abstraction models, multi-formalism modeling, as well as syntax and semantics modeling.
- Design approaches such as Model-Driven Engineering, Platform-Based Design, and Model-Based Design.
- Platform definitions, architecture modeling, and performance effects of an application mapping.
- Modeling approaches including physics-based, component-based, agent-based, and object-oriented modeling.
- Model based approaches to, for example, diagnosis, testing, and calibration.
- Computation for verification, optimization, symbolic manipulation, and qualitative analyses.
- Application domains such as wired and wireless networks possibly combined with information and physics aspects in cyber-physical systems and mechatronics.
- Language overviews, comparisons, and application surveys.



Proposals for the series may be submitted to the series editor or directly to:

Nora Konopka
Electrical and Computer Engineering Acquisitions Editor
Taylor & Francis/CRC Press
6000 Broken Sound Parkway NW, Suite 300, Boca Raton, FL 33487
Tel: (561) 998-2531 Blackberry: (561) 843-8397
nora.konopka@taylorandfrancis.com

Pieter J. Mosterman
Series Editor
The MathWorks
3 Apple Hill Drive, Natick, MA 01760
Tel: +1 508 647 7765
pieter.mosterman@mathworks.com