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PhD degree in Numerical Analysis from St. Petersburg State University (1984).

Dr. Sci. degree (Computer Science) from St. Petersburg Polytechnic University (2005).

Author of 125 scientific publications – conference papers, articles, monographs and textbooks.

A board member of National Simulation Society - NSS (<http://simulation.su/en.html>), and Federation of European Simulation Societies – EuroSim (<http://www.eurosim.info/>).

A member of Scientific Editorial Board of «Simulation Notes Europe» Journal (<http://www.sne-journal.org/>), and «Computer Tools in Education» Journal (<http://ipo.spb.ru/journal/>).

Chairman and Chief-Editor of COMOD 2001-2014 conferences (<https://dcn.icc.spbstu.ru/>).

Annual report.

COMOD-20XX: Step by step toward the National Symposium on Modeling and Simulation

keywords: COMOD – computer modelling, tools and applications, complex dynamical systems, power systems, computers in Education, young generation of Russian scientists.

Abstract

Step 1. Conference papers (2013).

Step 2. Selected conference papers in Journals (2013).

Step 3. International collaboration (2014). COMOD and EUROSIM.

Step 4. Conference papers in Scopus. What should be done? International Program and Organizing committees (2014). International Experts (2014). High-quality papers.

Plenary Lecture.*

*(Yu. B. Kolesv, Yu.B. Senichenkov)

MvStudium_Group: A family of tools for modeling and simulation of complex dynamical systems.

keywords: Object-Oriented Modelling; hybrid systems: state machines and Behaviour-Charts; component modelling: causal and physical models, active dynamical objects (agents); tools for computer experiment; automatic analyses and building component models.

Abstract

Designing of new version of Rand Model Designing under the name RMD 7 is coming to an end. It will be possible using dynamic objects, dynamic connections (bonds), and arrays of objects in the new version. These types are used for Simulation Modeling, and Agent Based Modeling. The first trial version will be available at year-end.

The tools developed by MvStudium_Group are considered by authors as universal tools for automation modeling and simulation of complex dynamical systems. We are feeling strongly that at least nitty-gritty real system is multi-component, hierarchical, and event-driven system. Modeling of such systems requires using object-oriented technologies, expressive graphical languages and various mathematical models for event-driven systems. The last versions of Model Vision Modeling Language are intended for multi-component models with variable structure and event-driven behavior.

Training.

Rand Model Designer for Beginners and Experts

(Concise course).

keywords: Object-Oriented modelling in Rand Model Designer: Science, Manufacturing and Engineering Applications, Education, MvStudium Group.

Lecture 1. Isolated classical dynamical and hybrid systems. Comparison RMD and Simulink+StateFlow.

Lesson 1. Pendulum with different types of friction: equations and B-Charts, executable model.

Lecture 2. «Inputs/Outputs» components with hybrid behaviour.

Lesson 2. Sliding mode control: Object-Oriented Modeling, classes and instances, inheritance.

Lecture 3. «Contacts/Flows» components with hybrid behaviour. Comparison Model Vision Language (MVL) and Modelica.

Lesson 3. Electric circuit with diode: building and solving model equations for component systems, RMD's NAE, ODE, DAE-solvers, debugging and testing.