6th EUROSIM Congress on Modelling and Simulation
September 9-13, 2007
Ljubljana, Slovenia

http://www.eurosim2007.org

Announcement of a special session:

MODELS NETWORKS FOR PROCESS SYSTEMS SIMULATION

The purpose of this session is development of the new simulation technologies, life time process technologies cycles, real time process cognitive technologies, process information systems and product information systems. The subject of the session is building sophisticated models, designers, optimizers, controllers, and on-line interactive systems supported by data base, expert systems, decision systems, signal processing and telesystems.

The main contribution of the session "Models network for process systems simulation" is development knowledge bases and databases network models for new process technologies, real time interacting systems, virtual reality, and intelligent applications in the business and process industries. A significant contribution of this session is development data bases and knowledge bases processing and cognitive engineering. Cognitive learning systems are building for validation and identification of process parameters, data reconciliation, dynamic simulation, risk analysis and fault detection, trouble recognition and classification.

This session outlines process modelling and simulation provide some philosophy, and give some motivation for becoming to be familiar with this topic.

The most important engineering tools that can be employed in such activities is models networking. Network models are wide range areas of applications. As computers have become more powerful, the size and complexity of problems which can be solved by modelling, simulation, optimization and information processing methods have corresponding expanded. The next step will be verification of the simulation results directly in the real systems or plants and applications. The most vibrant applications area are information systems, telecommunications, process systems and transportation.

The rapid development of what some call process modeling, system engineering and operation research as an essentially interdisciplinary field has brought into usage an inevitable proliferation of terms and concepts. The process denotes an actual series of operations or treatment of materials. The process model represents formalism for description of the real process and algorithm for model usage. System is assemblage of elements which are tied together by common flows of materials, energy and information. The output of the system is the function not only of the characteristics of the elements of the system, which are also known as subsystem, but also of their interactions and interrelations. Simulation is operation for a study of a system or its part by manipulation of its model.

Models network shows how do you seek out way to create process plant design, how do you modeling the plant life cycle and how you make plant history. The networks optimization requests maximum product flow, minimum cost flow, concern the assignment problem, the matching and the minimum spanning trees, and heuristics. The network models implementation request:

Decision support model
Safety model
Operation and estimation model
Design model
Data bases

Papers of this session focuses of the new modeling and simulation methods, tools and applications in the chemical, pharmaceutical, food and bioinformatics engineering.

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Deadlines:

Announcement of a contribution (to facilitate session organization):
As soon as possible

Submission of 2 page extended abstract or daft paper:
15 May 2007 (by E-mail to the session organizer)

Acceptance notification after paper review:
30 May 2007

Full paper (camera ready) due to:
30 June 2007 (to the conference server with copy to the session organizer)
See also instructions: http://www.eurosim2007.org/Instructions.html

Jelenka Savković-Stevanović