The **DYCOPS 7** Symposium brings together engineers and scientists from universities, R & D laboratories and the process industries to focus attention on new methodologies and challenging applications in the following areas of **DY**namics and **CO**ntrol of **P**rocess **S**ystems (DYCOPS).

Organized under the auspices of the International Federation of Automatic Control (IFAC), the DYCOPS Symposium Series is a continuing series of international conferences held most recently in Korea (2001) and Greece (1998). These meetings focus on advances in methods for control and modeling for all types of chemical processes and are part of a three-year rotation of IFAC meetings in process control, which also include the IFAC ADCHEM series.

The main topics for the meeting include, but are not limited, to the following:

Particulate and Polymer Processes
Industrial applications and novel approaches to control, or monitoring of polymerization and particulate processes and polymer processing operations.

Bio-Processes
Industrial applications and novel approaches to control of bio-processes.

Control and Optimization Applied to Scheduling and Production Management
The integration of control and optimization methods with scheduling and production management problems.

Modeling and Identification
Linear and nonlinear identification methods, and first principles modeling for control. Industrial applications.

Monitoring, Fault-Detection, Data Reconciliation and Signal Processing
Multivariate monitoring and fault detection of batch and continuous processes; controller performance assessment; data reconciliation.

Advances in Control and Emerging New Approaches to Dynamics and Control
Linear and nonlinear MPC, robust control, adaptive control, nonlinear control, optimization-based techniques, state estimation, discrete event and hybrid system.

New Sensor Technologies and their Potential Impact on Control
New hardware sensors and their use in process control; process analytical sensors; imaging systems; soft sensors.

Industrial Applications
Applications of advanced control, state estimation, monitoring, to industrial processes.

Process Control Education
Life-long learning requirements for control engineers - roles of industry, academia, and vendors. Novel approaches to control education.

Batch and Semi-batch Processes
Advanced control and monitoring methods for batch and semi-batch processes, batch optimization and scheduling.

Design and Control
Analysis of the interaction between design and control, and methodologies for integrated plant and control system design.