

**Symposium on Multiagent Systems, Robotics and Cybernetics:
Theory and Practice I**

Moderator: Professor Jochen Pfalzgraf, University of Salzburg, Austria

<http://www.cosy.sbg.ac.at/~jpfalz/InterSymp-2009.html>

Morning Session 10:00 – 12:00

Welcome and Opening Talk

**Seemingly Abstract Mathematics can Help to Treat and Solve Hard Practical Problems:
Selected Examples from Robotics**

Jochen Pfalzgraf (Symposium Organizer and Chairman), University of Salzburg, Austria

**Flexible Independence of Net Transformations and Token Firing in the Cospan DPO
Approach**

Kathrin Hoffmann, Hartmut Ehrig, Frank Hermann, Technical University of Berlin, Germany

Modeling of Communication Spaces with Higher-order Petri Nets

Tony Modica, Technical University of Berlin, Germany

Lunch Break 12:00 – 14:30

Afternoon Session 14:30 – 18:00

Special Session on *“Cognitive Factory and Human Robot Cooperation”*

**Cybernetic Approach for an Automated Generation of Industrial Robot Programs for
Remote Laser Welding and Cutting**

Jens Hatwig, Jan Musiol, Gunther Reinhart, Michael F. Zäh, Technical University of Munich, Germany, Institute for Machine Tools and Industrial Management (*iwb*)

Prediction of Human Strategies in Production Control

Gunther Reinhart, Tobias Gyger, *iwb*, Technical University of Munich, Germany

**Integration of Human Workers in Production Environments - Situationally Oriented
Guidance in Manual Assembly Scenarios**

Mathey Wiesbeck, *iwb*, Technical University of Munich, Germany

Coffee Break 16:00 – 16:30

Robot Path Planning Algorithms for Remote Laser Welding

Ulrich Munzert, Blackbird Robotersysteme GmbH, Garching, Germany

Agent-based Information Search in Industrial Automation Systems

Stephan Pech, Peter Göhner, University of Stuttgart, Germany