



International Federation of Automatic Control

WODES'04

Workshop on Discrete Event Systems (7th edition)

September 22-24, 2004
Reims, France

Time schedule

Wednesday 22 September 2004	
Room 1-2	Room 5
08:30	Registration
10:00	Opening session
10:20	Invited Lecture (1) – Oded Maler
11:20	Control Synthesis Practice
	Petri nets
13:00	Lunch
15:00	Supervisory Control (1) - invited session
	Dioids Algebra (MIN,+), (MAX,+)
17:00	End of Parallel Sessions
18:30	Reception at the City Hall

Thursday 23 September 2004	
Room 1	Room 2
08:45	Control of Hybrid Systems
	Diagnosis of DES (1)
10:00	Coffee break
10:30	Supervisory Control (2) - invited session
	Scheduling and Optimization
12:15	Lunch
14:00	Colored Petri nets – invited session
	Performance Evaluation and Optimization
16:00	Coffee break and poster session
18:00	End of poster session
19:30	Banquet at Pommery Champagne-House

Friday 24 September 2004	
Room 1-2	Room 5
09:15	Invited Lecture (2) – Stefan Kowalewski
10:15	Coffee break
10:45	Control Synthesis
	Verification and Design of Logic Controllers
12:30	Lunch
14:15	Invited Lecture (3) – Alessandro Giua
15:15	Analysis and Verification of Hybrid Systems
	Diagnosis of DES (2)
16:30	Closing session

Saturday 25 September 2004 : Post-conference tour - villages and traditional champagne crus

Final program

Wednesday 22 September 2004

08:30 Registration

10:00 Opening session

10:20 Invited Lecture: Oded Maler. *On optimal and sub-optimal control in the presence of adversaries*

10:20 Parallel Sessions

Control Synthesis Practice

D. Gouyon, J.F. Petin, G. Morel. *Control synthesis for product-driven automation*

I. Tolga Hasdemir, S. Kurtulan, L. Gören. *Implementation of local modular supervisory control for a pneumatic system using PLC*

E. Almeida, D. Tilbury. *Automatic logic generation for reconfigurable cell-based manufacturing systems*

A. Khoumsi. *Supervisory control for the conformance of real-time discrete event systems*

Petri nets

A. Di Febbraro, D. Giglio, N. Sacco. *A HPN-based control structure for privileged vehicle performance optimisation*

Z. Achour, N. Rezg, X. Xie. *Supervisory controller of Petri nets under partial observation*

J. Ashley, L.E. Holloway. *An equivalent LTL/Kripke structure for the Condition Sequence/Condition System model*

A. Giua, X. Xie. *Control of safe ordinary Petri nets with marking specifications using unfolding*

13:00 Lunch

15:00 Parallel Sessions

Supervisory Control: Theory and Applications (1)

Invited session, organized by Toshimitsu Ushio and Naly Rakoto

R. Kumar, S. Takai, M. Fabian, T. Ushio. *Maximally permissive mutually & globally nonblocking supervisors for discrete event systems*

J. Komenda, J. H. van Schuppen. *Supremal normal sublanguages of large distributed discrete-event systems*

A. Vahidi, B. Lennartson, M. Fabian. *Efficient supervisory synthesis of large systems*

S. Khuller, G. Kortsarz, K. R. Rohloff. *Approximating the minimal sensor selection for supervisory control*

K. Hiraishi. *On solvability of an agent-based control problem under dynamic environment*

Dioids Algebra (MIN,+), (MAX,+)

B. Heidergott, J. van der Woude, G. J. Olsder. *An ergodic theorem for stochastic max-plus linear systems*

L. Houssin, S. Lahaye, J.-L. Boimond. *Modelling and control of urban bus networks in dioids algebra*

E. Münz, G. Schullerus, V. Krebs. *On the use of hybrid system identification methods for max-plus-linear system identification*

T. T. J. van den Boom, B. De Schutter. *Modelling and control of discrete event systems using switching max-plus-linear systems*

M. Lhommeau, L. Hardouin, C.-A. Maia, R. Santos-Mendes. *Control and robustness analysis for (max,+)-linear systems*

17:00 End of Parallel Sessions

18:30 Reception at the city hall

Thursday 23 September 2004

8:45 Parallel Sessions

Control of Hybrid Systems

M. Boccadoro, M. Egerstedt, Y. Wardi. *Optimal control of switching surfaces in hybrid dynamic systems*

G. Lichtenberg, J. Neidig. *Discrete event control of a pinball machine*

Y. Pang, M.P. Spathopoulos. *On weighted time-optimal control for linear hybrid automata using quantifier elimination*

Diagnosis of DES (1)

W. Qiu, R. Kumar. *Decentralized failure diagnosis of discrete event systems*

A. Correcher, E. García, F. Morant, E. Quiles. *Intermittent failure diagnosis based on discrete event models*

R. Su, W.M. Wonham. *Hierarchical distributed diagnosis under global consistency*

10:00 Coffee break

10:30 Parallel Sessions

Supervisory Control: Theory and Applications (2)

Invited session, organized by Toshimitsu Ushio and Naly Rakoto

M. Adachi, T. Ushio, Y. Ukawa. *Bisimulation based design of user-interface for discrete event systems*

A. B. Leal, J. E. R. Cury. *Modular supervision of hybrid systems: a DES approach*

M. H. de Queiroz, J. E. R. Cury, W. M. Wonham. *Multi-tasking supervisory control of discrete-event systems*

B. Gaudin, H. Marchand. *Modular supervisory control of a class of concurrent discrete event systems*

Scheduling and Optimization

R. Chiovelli, F. Martinelli, P. Valigi. *Optimal control for a class of manufacturing systems with production rate dependent failure rates*

B. Gaujal, E. Hyon, A. Jean-Marie. *Optimal routing in two parallel queues*

S. Panek, O. Stursberg, S. Engell. *Job-shop scheduling by combining reachability analysis with linear programming*

D. Giglio, R. Minciardi. *A dynamic programming-based technique for multi-class job scheduling on a single machine*

12:15 Lunch

14:00 Parallel Sessions

Theory and Applications of Colored Petri Nets

Invited session, organized by Carla Seatzu and Maria Pia Fanti

M. Dotoli, M. P. Fanti. *An urban traffic network model via coloured timed Petri nets*

F. Basile, C. Carbone, P. Chiacchio. *PNetLab: A tool for the simulation, analysis and control of discrete event systems based on Petri nets*

S. Baarir, S. Haddad, J.M. Ilié. *Exploiting partial symmetries in well-formed nets for the reachability and the linear time model checking problems*

L. Capra, M. De Pierro, G. Franceschinis. *An application example of symbolic calculus for SWN structural relations*

B. Zouari, K. Ghedira. *Synthesis of controllers using coloured Petri nets and theory of regions*

Performance Evaluation and Optimization

F. J. Vázquez-Abad, B. Heidergott. *Gradient estimation for a problem in public transportation: A comparison of SPA, SF and MVD*

C. Panayiotou, C. G. Cassandras. *Infinitesimal perturbation analysis for make-to-stock manufacturing systems based on stochastic fluid models*

S. Haddad, L. Mokdad, P. Moreaux. *Performance evaluation of non Markovian stochastic discrete event systems – a new approach*

M. Noureldath, A. Khatib. *Ant colony optimization for multi-state series-parallel system expansion-scheduling*

S. Reveliotis, J. Young Choi. *The thinning problem*

16:00 **Poster session** (and coffee break)

S. Evangelista, S. Haddad, J.F. Pradat-Peyre. *New coloured reductions for software validation*

A. Giua, C. Seatzu. *Monitor design for colored Petri nets with uncontrollable and unobservable transitions*

S. Hamaci, J.-L. Boimond, S. Lahaye, M. Mostefaoui. *On the linearizability of discrete timed event graphs with multipliers using $(\min, +)$ algebra*

S. Pailler, A. Choquet-Geniet. *Off-line scheduling of real time applications with variable duration tasks*
 S. E. Merzouk, O. Grunder, M. El Bagdouri. *A branch & bound procedure to optimize loading sequences of a simple supply chain under aperiodic demand*
 M. Stanica, H. Guéguen. *Using timed automata for the verification of IEC 61499 applications*
 M. Sayed Mouchaweh, A. Philippot, S. Triki, B. Riera. *Separated approach for active monitoring of discrete event systems*
 A. Philippot, A. Tajer, F. Gellot, V. Carré-Ménétrier. *On-line synthesis approach based on a structured plant modeling*
 E. W. Endsley, D. M. Tilbury. *Modular finite state machines for logic control*
 Y. Gong, L. Holloway. *Applying automated control synthesis methods to condition systems requiring state observers*
 D. Li, E. Mayer, J. Raisch. *A novel hierarchical control architecture for a class of discrete-event systems*
 D. Corona, A. Giua, C. Seatzu. *State estimation and control of nondeterministic 1-free labeled Petri nets*
 R. Su, W.M. Wonham. *A model of component consistency in distributed diagnosis*
 B. Gebremichael, T. Krilavicius, Y. S. Usenko. *A formal analysis of a car periphery supervision System*
 V. Jovan, B. Hauptman. *An approach to on-line batch sequencing*
 V. Schastai, E. A. Lima, L. A. Künzle. *Sequence analysis for time Petri nets*
 L. Aguirre-Salas, O. Begovich, A. Ramirez-Treviño. *Sensor assignment for observability in interpreted Petri nets*
 C. Munteanu, R. David, H. Alla. *Algorithmic speed calculation for a timed continuous Petri net*
 A. Vahidi, M. Fabian, B. Lennartson. *Early termination by local string in incremental language containment tests*
 H. Boucheneb, R. Hadjidj. *Towards optimal CTL* model checking of time Petri nets*
 M. Miskowicz. *Bandwidth requirements for event-driven observations of continuous-time variable*

18:00 End of Poster Session

19:30 Banquet at Pommery Champagne-House

Friday 24 September 2004

09:15 Invited Lecture: Stefan Kowalewski, *Discrete control systems for cars – quality is more than correct function*

10:15 Coffee break

10:45 Parallel Sessions

Control Synthesis

F. Wenck, J. H. Richter. *A composition oriented perspective on controllability of large scale DES*
 R. Malik. *On the set of certain conflicts of a given language*
 S. Riedweg, S. Pinchinat. *Maximally permissive controllers in all contexts*
 K. Schmidt, J. Reger, T. Moor. *Hierarchical control for structural decentralized DES*

Verification and Design of Logic controllers

E. Dumitrescu, A. Girault, E. Rutten. *Validating fault-tolerant behaviors of synchronous system specifications by discrete controller synthesis*
 M. Bonfè, C. Fantuzzi. *On the suitability of object-oriented models for industrial logic controllers*
 N. Ben Hadj-Alouane, S. Lafrance, F. Lin, J. Mullins, M. Yeddes. *Discrete event systems approach to the verification of the information flow properties in secure protocols*
 J.-M. Roussel, J.-M. Faure. *Designing dependable logic controllers using algebraic specifications*

12:30 Lunch

14:15 Invited Lecture: Alessandro Giua and Carla Seatzu. *A systems theory view of Petri nets*

15:15 Parallel Sessions

Analysis and Verification of Hybrid Systems

A. Hélias, F. Guerrin, J.-P. Steyer. *Abstraction of continuous system trajectories into timed automata*
 J. Kapinski, K. Schmidt, B. H. Krogh. *Reachability analysis using proximity based automata*
 A. Chutinan, Z. Han, B.H. Krogh. *ACTL strong negation and its application to hybrid system verification*

Diagnosis of DES (2)

O. Contant, S. Lafortune, D. Teneketzis. *Diagnosis of modular discrete event systems*
 R. K. Boel, G. Jiroveanu. *Distributed contextual diagnosis for very large systems*
 J. Lunze. *Complexity reduction in state observation of stochastic automata*

16:30 Closing Session