

1st IFAC Workshop on Thermodynamic Foundations of Mathematical Systems Theory 2015

**Lyon, France
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Content List of 2013 IFAC Workshop on Thermodynamic Foundations of Mathematical Systems Theory

Technical Program for Sunday July 14, 2013

SuTutT1	Room: Madame de Coligny
Tutorial Talks (Plenary Session)	
Chair: Dochain, Denis	Univ. Catholique de Louvain
13:00-13:45	SuTutT1.1
<i>Dissipativity and Process Control*</i> .	
Ydstie, Erik B.	Carnegie Mellon
13:45-14:30	SuTutT1.2
<i>Quantum Mechanics, Information Loss and Entropy*</i> .	
Rouchon, Pierre	Mines-ParisTech
15:00-15:45	SuTutT1.4
<i>Geometric Decomposition and Systems Representation*</i> .	
Hudon, Nicolas	Univ. Catholique de Louvain

Technical Program for Monday July 15, 2013

MoS1T1	Room: Madame de Coligny
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Chair: Maschke, Bernhard	Univ. Claude Bernard of Lyon
09:50-10:10	MoS1T1.2
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Grmela, Miroslav	Ec. Pol. de Montreal
10:10-10:30	MoS1T1.3
<i>Control of Input-Output Contact Systems</i> , pp. 6-11.	
Ramirez, Hector	FEMTO-ST, ENSMM
Maschke, Bernhard	Univ. Claude Bernard of Lyon
Sbarbaro, Daniel G.	Univ. de Concepcion
10:50-11:10	MoS1T1.5
<i>Feedback Stabilization of Metriplectic Systems</i> , pp. 12-17.	
Hudon, Nicolas	Univ. Catholique de Louvain
Dochain, Denis	Univ. Catholique de Louvain
Guay, Martin	Queen's Univ.
11:10-11:30	MoS1T1.6
<i>Geometric Construction of Mixed Potentials</i> , pp. 18-23.	
Hudon, Nicolas	Univ. Catholique de Louvain
Bao, Jie	The Univ. of New South Wales
Ydstie, B. Erik	Carnegie Mellon
MoBT1	
Room: Madame de Coligny	
Reaction Networks (Regular Session)	
Chair: Dochain, Denis	Univ. Catholique de Louvain
13:15-13:30	MoBT1.2
<i>On the Network Thermodynamics of Mass Action Chemical Reaction Networks</i> , pp. 24-29.	
van der Schaft, Arjan J.	Univ. of Groningen
Rao, Shodhan	Univ. of Groningen
Jayawardhana, Bayu	Univ. of Groningen
13:30-13:45	MoBT1.3
<i>The Effect of Conservation on the Dynamics of Chemical Reaction Networks</i> , pp. 30-35.	
Hangos, Katalin M.	Computer and Automation Res. Inst. HAS
Szederkényi, Gabor	Computer and Automation Res. Inst. Hungarian
14:15-14:30	MoBT1.6
<i>Stability in Chemical Reaction Networks</i> , pp. 36-41.	
Alonso, Antonio A.	IIM-CSIC
14:30-14:45	MoBT1.7
<i>ATP Production Optimization in Biochemical Mass Action Models with Protein Turnover</i> , pp. 42-47.	
Csercsik, Dávid	Computer and Automation Res. Inst. Hungarian Academy of S
Szederkényi, Gabor	Computer and Automation Res. Inst. Hungarian
14:45-15:00	MoBT1.8
<i>Reaction Kinetic Form for Lumped Process System Models</i> , pp. 48-53.	
Hangos, Katalin M.	Computer and Automation Res. Inst. HAS
Szederkényi, Gabor	Computer and Automation Res. Inst. Hungarian
Alonso, Antonio A.	IIM-CSIC
MoS3T1	
Room: Madame de Coligny	
Modelling and Applications (Regular Session)	
Chair: Baldea, Michael	The Univ. of Texas at Austin
15:45-16:00	MoS3T1.2
<i>Integrated Approach to Identification and Control of Multivariable Processes Based on Dissipativity</i> , pp. 54-59.	
Tippett, Michael James	The Univ. of New South Wales
Hioe, Denny	The Univ. of New South Wales

Bao, Jie	The Univ. of New South Wales
16:00-16:15	MoS3T1.3
<i>Material Balance and Closure Equations for Plasmas in Tokamaks</i> , pp. 60-65.	
Vu, Trang	LCIS Lab.
Lefevre, Laurent	Grenoble INP
16:45-17:00	MoS3T1.6
<i>Irreversible Thermodynamics and Smart Materials Systems Modelling. Example of Magnetic Shape Memory Actuators</i> , pp. 66-71.	
Hubert, Arnaud	FEMTO-ST Inst. Univ. of Franche-Comte
Calchand, Nandish	FEMTO-ST AS2M
Le Gorrec, Yann	FEMTO-ST
17:00-17:15	MoS3T1.7
<i>Dissipativity of Thermodynamical Model of Process of Streaming Heated Fluids through Reservoir</i> , pp. 72-77.	
Kablar, Natasa A.	Lola Inst.
Kvrgic, Vlada	Lola Inst.
Debeljkovic, Dragutin	Univ. of Belgrade
17:15-17:30	MoS3T1.8
<i>Temperature Control Applications of the Phase Transformations of Materials</i> , pp. 78-83.	
Wang, Siyun	The Univ. of Texas at Austin
Pattison, Richard C.	The Univ. of Texas at Austin
Baldea, Michael	The Univ. of Texas at Austin

Technical Program for Tuesday July 16, 2013

TuS4T1		Room: Madame de Coligny
Physical Invariants and Balance Equations (Regular Session)		
Chair: Ydstie, Erik B.		Carnegie Mellon
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Ramirez, Hector		FEMTO-ST, ENSMM
Le Gorrec, Yann		FEMTO-ST
Maschke, Bernhard		Univ. Claude Bernard of Lyon
Couenne, Françoise		Univ. of Lyon 1
10:00-10:15		TuS4T1.3
<i>A Thermodynamic Approach to Measurement Selection for Process Networks</i> , pp. 90-95.		
Du, Juan		Carnegie Mellon Univ.
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<i>Availability Based Stabilization of Tubular Chemical Reactors</i> , pp. 96-101.		
Zhou, Weijun		Univ. Claude Bernard Lyon 1
Hamroun, Boussad		Lab. d'Automatique et Génie des Procédés
Le Gorrec, Yann		FEMTO-ST
Couenne, Françoise		Univ. of Lyon 1
10:45-11:00		TuS4T1.6
<i>Variant and Invariant States for Reaction Systems</i> , pp. 102-107.		
Bonvin, Dominique		EPFL
Srinivasan, Sriniketh		EPFL
Billeter, Julien		EPFL
11:00-11:15		TuS4T1.7
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Abdollahi, Javad		Univ. of Alberta
Dubljevic, Stevan		University of Alberta