

2010 17th International Symposium on Temporal Representation and Reasoning

(TIME 2010)

**Paris, France
6 – 8 September 2010**



IEEE Catalog Number: CFP10109-PRT
ISBN: 978-1-4244-8014-2

2010 17th International Symposium on Temporal Representation and Reasoning

TIME 2010 Table of Contents

Message from the Chairs.....	vii
TIME 2010 Committees.....	viii

Invited Talks

Regular Linear-Time Temporal Logic	3
<i>Martin Leucker and César Sánchez</i>	
Interval Temporal Logics with Chop-Like Operators	6
<i>Ian Hodkinson</i>	
Dealing with Uncertainty in Trajectory Databases	7
<i>Bart Kuijpers</i>	

Temporal Logics

CTL-Like Fragments of a Temporal Logic of Robustness	11
<i>John C. McCabe-Dansted and Clare Dixon</i>	
Axiomatizing the Temporal Logic Defined over the Class of All	
Lexicographic Products of Dense Linear Orders without Endpoints	19
<i>Philippe Balbiani</i>	
Decidability of the Logics of the Reflexive Sub-interval and Super-interval	
Relations over Finite Linear Orders	27
<i>Angelo Montanari, Ian Pratt-Hartmann, and Pietro Sala</i>	
Conflict-Tolerant Real-Time Specifications in Metric Temporal Logic	35
<i>Sumesh Divakaran, Deepak D'Souza, and Raj Mohan M.</i>	
Bounded Reachability for Temporal Logic over Constraint Systems	43
<i>Marcello M. Bersani, Achille Frigeri, Angelo Morzenti, Matteo Pradella, Matteo Rossi, and Pierluigi San Pietro</i>	
Counting LTL	51
<i>François Laroussinie, Antoine Meyer, and Eudes Petonnet</i>	

Real-Time Systems

Analysis of Timed Recursive State Machines	61
<i>Massimo Benerecetti, Stefano Minopoli, and Adriano Peron</i>	
Real Time Properties for Interrupt Timed Automata	69
<i>Béatrice Bérard, Serge Haddad, and Mathieu Sassolas</i>	
A Concurrency-Preserving Translation from Time Petri Nets to Networks of Timed Automata	77
<i>Sandie Balaguer, Thomas Chatain, and Stefan Haar</i>	

Spatial and Temporal Reasoning

Allen's Hourglass: Probabilistic Treatment of Interval Relations	87
<i>Sergios Petridis, Georgios Paliouras, and Stavros J. Perantonis</i>	
A Decidable Spatial Generalization of Metric Interval Temporal Logic	95
<i>Davide Bresolin, Pietro Sala, Dario Della Monica, Angelo Montanari, and Guido Sciavicco</i>	
Ontology Based Spatial Planning for Human-Robot Interaction	103
<i>Lamia Belouaer, Maroua Bouzid, and Abdel-Illah Mouaddib</i>	

Planning and Control

Solving Temporally-Cyclic Planning Problems	113
<i>Martin C. Cooper, Frédéric Maris, and Pierre Régnier</i>	
A Fast Incremental Algorithm for Managing the Execution of Dynamically Controllable Temporal Networks	121
<i>Luke Hunsberger</i>	
Towards Temporal Controllabilities for Workflow Schemata	129
<i>Carlo Combi and Roberto Posenato</i>	

Databases

Valid-Time Indeterminacy in Temporal Relational Databases: A Family of Data Models	139
<i>Luca Anselma, Paolo Terenziani, and Richard T. Snodgrass</i>	
Multi-granular Time-Based Sliding Windows over Data Streams	146
<i>Kostas Patroumpas and Timos Sellis</i>	
Local Polynomial Regression Models for Average Traffic Speed Estimation and Forecasting in Linear Constraint Databases	154
<i>Hang Yue, Elizabeth G. Jones, and Peter Revesz</i>	

Author Index	163
---------------------------	-----