

Logical Regulatory Graphs to Standard Petri Nets -- Finite Unfoldings of Unbounded Petri Nets -- Compositional Modeling of Complex Systems: Contact Center Scenarios in OsMoSys -- Generalised Soundness of Workflow Nets Is Decidable -- Petri Net Based Model Validation in Systems Biology -- Synthesis of Controlled Behavior with Modules of Signal Nets -- New Canonical Representative Marking Algorithms for Place/Transition-Nets -- Properties of Object Petri Nets -- LTL Model Checking for Modular Petri Nets -- Covering Fairness against Conspiracies -- Modeling and Analysis of Margolus Quantum Cellular Automata Using Net-Theoretical Methods -- A Framework for the Modelling and Simulation of Distributed Transaction Processing Systems Using Coloured Petri Nets -- Time Petri Nets with Inhibitor Hyperarcs. Formal Semantics and State Space Computation -- Transit Case Study -- Eliminating Internal Behaviour in Petri Nets -- Infinity of Intermediate States Is Decidable for Petri Nets -- Operation Net System: A Formal Design Representation Model for High-Level Synthesis of Asynchronous Systems Based on Transformations -- Tool Papers -- EMiT: A Process Mining Tool -- 3D-Visualization of Petri Net Models: Concept and Realization -- An Approach to Distributed State Space Exploration for Coloured Petri Nets -- An Extensible Editor and Simulation Engine for Petri Nets: Renew -- Web Supported Enactment of Petri-Net Based Workflows with XRL/Flower.

Sommario/riassunto

This volume contains the proceedings of the 25th International Conference on Application and Theory of Petri Nets (ICATPN 2004). The aim of the Petri net conferences is to create a forum for discussing progress in the application and theory of Petri nets. Typically, the conferences have 100–150 participants, one third of these coming from industry, whereas the others are from universities and research institutions. The conferences always take place in the last week of June. The conference and a number of other activities are coordinated by a steering committee with the following members: Wil van der Aalst (The Netherlands), Jonathan Billington (Australia), Jrg Desel (Germany), Susanna Donatelli (Italy), Serge Haddad (France), Kurt Jensen (Denmark), Maciej Koutny (United Kingdom), Sadatoshi Kumagai (Japan), Giorgio De Michelis (Italy), Tadao Murata (USA), Carl Adam Petri (Germany, Honorary Member), Wolfgang Reisig (Germany), Grzegorz Rozenberg (The Netherlands, Chairman) and Manuel Silva (Spain). The 2004 conference was organized by the Department of Computer Science of the University of Bologna, Italy. We would like to thank the organizing committee, chaired by Roberto Gorrieri, for the effort invested in making the event successful. We are also grateful to the following sponsoring institutions and organizations: Associazione Italiana per l'Informatica ed il Calcolo Automatico (AICA), Microsoft Research, and Network Project & Solutions (NPS Group). We received a total of 62 submissions from 26 different countries. The program committee finally selected 19 regular papers and 5 tool presentation papers. This volume comprises the papers that were accepted for presentation. Invited lectures were given by Gianfranco Ciardo, Roberto Gorrieri, Thomas A. Henzinger, Wojciech Penczek, Lucia Pomello and William H. Sanders. Their papers are also included in this volume.
