



## Program

14th Static Analysis Symposium  
SAS 2007

17th International Symposium on  
Logic-Based Program Synthesis  
and Transformation  
LOPSTR 2007



Wednesday 22 August		Thursday 23 August		Friday 24 August	
SAS		SAS	LOPSTR	SAS	LOPSTR
09:00	Welcome: Christian Stubkjær, Dean of Research, DTU				
	<b>Session chair: Hanne Riis Nielson</b>	<b>Session chair: Andy King</b>		<b>Session chair: Gilberto Filé</b>	
09:00	Frank Tip. Refactoring using Type Constraints (SAS invited talk)	Michael Codish. Proving Termination with (Boolean) Satisfaction (LOPSTR invited talk)		Alan Mycroft. Programming Language Design and Analysis Motivated by Hardware Evolution (SAS invited talk)	09:00
	<b>Session chair: Hanne Riis Nielson</b>	<b>Session chair: Flemming Nielson</b>	<b>Session chair: Andy King</b>	<b>Session chair: Gilberto Filé</b>	<b>Session chair: Jacob Howe</b>
10:00	Kung Chen, Shu-Chun Weng, Meng Wang, Siau-Cheng Khoo and Chung-Hsin Chen. A Compilation Model for Aspect-Oriented Polymorphically Typed Functional Languages	Akash Lal, Nicholas Kidd, Thomas Reps and Tayssir Touili. Abstract Error Projection	Manh Thang Nguyen, Jürgen Giesl, Peter Schneider-Kamp and Daniel De Schreye. Termination Analysis of Logic Programs based on Dependency Graph	Francesco Banterle and Roberto Giacobazzi. A Fast Implementation of Octagon Abstract Domain on Graphics Hardware	Amadeo Casas, Manuel Carro and Manuel Hermenegildo. Annotation Algorithms for Unrestricted Independent AND-Parallelism in Logic Programs
coffee break		coffee break		coffee break	
	<b>Session chair: Helmut Seidl</b>	<b>Session chair: Flemming Nielson</b>	<b>Session chair: Michael Hanus</b>	<b>Session chair: Harald Søndergård</b>	<b>Session chair: John Gallagher</b>
11:00	Tristan Le Gall and Bertrand Jeannot. Lattice Automata: a Representation for Languages on Infinite Alphabets, and Some Applications to Verification	Alexander Malkis, Andreas Podelski and Andrey Rybalchenko. Precise Thread-Modular Verification	Elvira Albert, John Gallagher, Miguel Gomez-Zamalloa and German Puebla. Typed-based Homeomorphic Embedding for Online Termination	Patrick Cousot, Pierre Ganty and Jean-François Raskin. Fixpoint-Guided Abstraction Refinements	Mario Mendez, Jorge Navas and Manuel Hermenegildo. A Flexible, CLP-based Approach to the Analysis of Object-Oriented Program
	Sharon Shoham and Orna Grumberg. Compositional Verification and 3-Valued Abstractions Join Forces	Cristiano Calcagno, Matthew Parkinson and Viktor Vafeiadis. Modular Safety Checking for Fine-Grained Concurrency	Jiri Vyskocil and Petr Stepáne. Improving Efficiency of Prolog Programs by Fully Automated Transformation	Denis Gopan and Thomas Reps. Guided Static Analysis	Sebastian Fischer, Josep Silva, Salvador Tamarit and German Vidal. Preserving Sharing in the Partial Evaluation of Lazy Functional Programs
12:00	James Brotherston. Formalised Inductive Reasoning in the Logic of Bunched Implications	Jörg Bauer and Reinhard Wilhelm. Static Analysis of Dynamic Communication Systems by Partner Abstraction	François Degraeve and Wim Vanhoof. Towards a normal form for Mercury programs	Sriram Sankaranarayanan, Franjo Ivančić and Aarti Gupta. Program Analysis using Symbolic Ranges	Bernd Brassel and Jan Christiansen. Denotation by Transformation - Towards Obtaining a Denotational Semantics by Transformation to Point-free Style
lunch break		lunch break		lunch break	
	<b>Session chair: Roberto Giacobazzi</b>	<b>Session chair: Julia Lawall</b>	<b>Session chair: Elvira Albert</b>	<b>Session chair: Reinhard Wilhelm</b>	<b>Session chair: Wim Vanhoof</b>
14:00	David Monniaux. Optimal Abstraction on Real-Valued Programs	Ben Hardekopf and Calvin Lin. Exploiting Pointer and Location Equivalence to Optimize Pointer Analysis	Peter Van Weert, Jon Sneyers and Bart Demoen. Aggregates for CHR through Program Transformation	Bor-Yuh Evan Chang, Xavier Rival and George Necula. Shape Analysis with Structural Invariant Checkers	Mauro Ferrari, Camillo Fiorentini, Alberto Momigliano and Mario Ornaghi. Snapshot Generation in a Constructive Object-oriented Modeling Language
	Axel Simon and Andy King. Taming the Wrapping of Integer Arithmetic	Amir Kamil and Katherine Yelick. Hierarchical Pointer Analysis for Distributed Programs	Slim Abdennadher and Ingi Sobhi. Generation of Rule-based Constraint Solvers: Combined Approach	Cristiano Calcagno, Dino Distefano, Peter O'Hearn and Hongseok Yang. Footprint Analysis: A Shape Analysis That Discovers Preconditions	Michel Sintzof. Symbolic Generation of Optimal Control Policies for Discrete-Time Systems
15:00	Eric Goubault and Sylvie Putot. Under-Approximations of Computations in Real Numbers Based on Generalized Affine Arithmetic	Matthieu Martel. Semantics-Based Transformation of Arithmetic Expressions	Ye Zhang and Flemming Nielson. A Scalable Inclusion Constraint Solver Using Unification	Stephen Magill, Josh Berdine, Edmund Clarke and Byron Cook. Arithmetic Strengthening for Shape Analysis	Iman Poernomo. Synthesis of Data Views for Communicating Processes
coffee break				coffee break	
	<b>Session chair: Christian W. Probst</b>	excursion & conference dinner		<b>Session chair: David Schmidt</b>	<b>Session chair: Mario Ornaghi</b>
16:00	Krishna Nandivada, Fernando Pereira and Jens Palsberg. A Framework for End-to-End Verification and Evaluation of Register Allocators			David Delmas and Jean Souyris. Astrée: From Research to Industry	Barbara Fila and Siva Anantharaman. A Clausal View for Access Control and XPath Query Evaluation
	Tao Wei, Jian Mao, Wei Zou and Yu Chen. A New Algorithm for Identifying Loops in Decompilation			Étienne Payet and Fausto Spoto. Magic-Sets Tranformation for the Analysis of Java Bytecode	Annalisa Bossi, Carla Piazza and Sabina Rossi. Action Refinement in Process Algebra and Security Issues
17:00	Jérôme Leroux and Grégoire Sutre. Accelerated Data-flow Analysis				