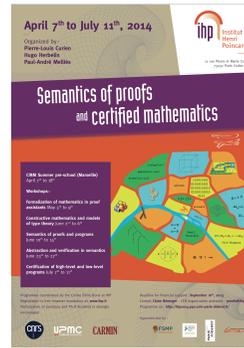


« **Semantics of proofs and certified mathematics** »
April 7th – July 11th, 2014

Workshop
« **Certification of high-level and low-level programs** »
Paris, July 7th – 11th, 2014

Amphithéâtre Hermite



ORGANIZERS

Christine Paulin-Mohring (Université Paris Sud & INRIA)
Zhong Shao (Yale University, New Haven, USA)

SPEAKERS

Andreas Abel (Chalmers University)
Amal Ahmed (Northeastern University)
Nick Benton (MSR Cambridge)
Lars Birkedal (Aarhus University)
Arthur Charguéraud (INRIA Saclay Île-de-France)
Adam Chlipala (MIT)
Derek Dreyer (MPI- SWS)
Philippa Gardner (Imperial College, London)

Dan Ghica (University of Birmingham)
Martin Hofmann (LMU, München, Germany)
Andrew Kennedy (MSR Cambridge)
Xavier Leroy (INRIA Paris-Rocquencourt)
Greg Morrisett (Harvard University)
Magnus Myreen (University of Cambridge)
David Pichardie (ENS Rennes)
Brigitte Pientka (McGill University)
Peter Sewell (University of Cambridge)

Tarmo Uustalu (Tallin Univ. of Technology)
Viktor Vafeiadis (MPI- SWS)
Stephanie Weirich (University of Pennsylvania)
Hongseok Yang (University of Oxford)
Nobuko Yoshida (Imperial College, London)
Francesco Zappa-Nardelli (INRIA Paris-Rocquencourt)
Steve Zdancewic (University of Pennsylvania)

PROGRAM

Monday July 7th

09.30 am – 10.30 am	Registration/Welcome coffee – IHP ground floor and Introduction	
10.30 am – 11.30 am	Andreas Abel	Coinduction in Agda using Copatterns and Sized Types.
11.30 am – 12.15 pm	Stephanie Weirich	Combining Proofs and Programs in a Dependently Typed Language.
12.15 pm – 02.00 pm	<i>Lunch time</i>	
02.00 pm – 02.45 pm	Brigitte Pientka	Programming logical relations proofs.
02.45 pm – 03.45 pm	Arthur Charguéraud	Interactive verification of stateful higher-order programs using characteristic formulae.
03.45 pm – 04.15 pm	<i>Coffee break</i>	<i>IHP ground floor</i>

Tuesday July 8th

09.30 am – 10.30 am	Nobuko Yoshida	Idioms for Interaction and their applications in large distributed systems.
10.30 am – 11.00 am	<i>Coffee break</i>	<i>IHP ground floor</i>
11.00 am – 11.45 am	Tarmo Uustalu	Precise qualification of effects with dependently typed monads.
11.45 am – 12.30 pm	Greg Morrisett	Engineering Challenges for Modeling Languages.

Wednesday July 9th

09.30 am – 10.30 am	Amal Ahmed	Compositional Compiler Verification for a Multi-language World.
10.30 am – 11.00 am	<i>Coffee break</i>	<i>IHP ground floor</i>
11.00 am – 11.45 am	Magnus Myreen	CakeML: a verified implementation of ML.
11.45 am – 12.30 pm	David Pichardie	Atomicity Refinement for Verified Compilation.
12.30 pm – 02.30 pm	<i>Lunch time</i>	
02.30 pm – 03.15 pm	Steve Zdancewic	Vellvm: Verifying Transformations of the LLVM IR.
03.15 pm – 04.00 pm	Francesco Zappa-Nardelli	Concurrency and compiler correctness.
04.00 pm – 04.30 pm	<i>Coffee break</i>	<i>IHP ground floor</i>
04.30 pm – 05.30 pm	Xavier Leroy	Verified static analyses.
06.00 pm	Cocktail	<i>IHP ground floor</i>

Thursday July 10th

09.30 am – 10.30 am	Derek Dreyer	GPS: Navigating weak memory with ghosts, protocols, and separation.
10.30 am – 11.00 am	<i>Coffee break</i>	<i>IHP ground floor</i>
11.00 am – 11.45 am	Lars Birkedal	Impredicative Concurrent Abstract Predicates.
11.45 am – 12.30 pm	Philippa Gardner	Abstract Disjointness, Abstract Atomicity and Abstract Connectivity.
12.30 pm – 02.30 pm	<i>Lunch time</i>	

02.30 pm – 03.15 pm	Viktor Vafeiadis	An Argument for Relaxed Program Logic.
03.15 pm – 04.00 pm	Hongseok Yang	Replicated Data Types: Specification, Verification, Optimality.
04.00 pm – 04.30 pm	<i>Coffee break</i>	<i>IHP ground floor</i>
04.30 pm – 05.30 pm	Peter Sewell	Before Certification: Engineering Validatable Models.

Friday July 11th

09.00 am – 10.00 am	Nick Benton and Andrew Kennedy	Generating Certified x86 Code in a Proof Assistant.
10.00 am – 10.45 am	Adam Chlipala	Bedrock: A Foundational Proof-Carrying Code Platform with Functional Correctness Proofs.
10.45 am – 11.15 am	<i>Coffee break</i>	<i>IHP ground floor</i>
11.15 am – 12.00 pm	Dan Ghica	Compiling functional programs to distributed architectures using abstract machine nets.
12.00 pm – 12.45 pm	Martin Hofmann	Abstract effects and proof-relevant logical relations.