

Monday (6th Floor)

9:00 – 10:00 (chairs: X. Zhang, C. Urban)
Short Intro Session
M. Moscato, C. Munoz, A. Smith Affine Arithmetic and Applications to Real-Number Proving
20 mins coffee break
10:20 – 11:10 (chair: T. Nipkow)
J. Hölzl, A. Lochbihler, D. Traytel A Formalized Hierarchy of Probabilistic System Types (Proof Pearl)
F. Immler A Verified Enclosure for the Lorenz Attractor (Rough Diamond)
20 mins coffee break
11:30 – 12:30 (chair: R. Thiemann) (moved to Thursday)
H. Chan, M. Norrish Mechanisation of AKS Algorithm: Part 1 – the Main Theorem
2hs lunch break
14:30 – 15:30 (chair: R. Kumar)
S. Schneider, G. Smolka, S. Hack A First-Order Functional Intermediate Language for Verified Compilers
A. Fox Improved Tool Support for Machine-Code Decompileation in HOL4
30 mins coffee break
16:00 – 17:00 (chair: H. Herbelin)
F. Besson, S. Blazy, P. Wilke A Concrete Memory Model for CompCert
T. Tuerk, M. Myreen, R. Kumar Pattern Matches in HOL: A New Representation and Improved Code Generation

Tuesday (6th Floor)

9:00 – 10:00 (chair: M. Norrish)
A. Charguéraud, F. Pottier Machine-Checked Verification of the Correctness and Amortized Complexity of an Efficient Union-Find Implementation
T. Nipkow Amortized Complexity Verified
20 mins coffee break
10:20 – 11:10 (chair: J. Urban)
S. Blazy, D. Demange, D. Pichardie Validating Dominator Trees for a Fast, Verified Dominance Test
A. Lochbihler, A. Maximova Stream Fusion for Isabelle's Code Generator (Rough Diamond)
20 mins coffee break
11:30 – 12:30 (chair: X. Zhang)
L. Birkedal Invited Talk
2hs lunch break
14:30 – 15:30 (chair: A. Fox)
M. Abdulaziz, M. Norrish, C. Gretton Verified Over-Approximation of the Diameters of Propositionally Factored Transition Systems
T. Prathamesh Formalizing Knot Theory in Isabelle/HOL
30 mins coffee break
16:00 – 17:00 (chair: S. Blazy)
S. Schäfer, T. Tebbi, G. Smolka Autosubst: Reasoning with de Bruijn Terms and Parallel Substitutions
P. Maksimovic, A. Schmitt HOCore in Coq
short coffee break
17:15 – 18:00 ITP Business Meeting

Wednesday (6th Floor)

9:00 – 10:00 (chair: A. Charguéraud)
R. Spadotti A Mechanized Theory of Regular Trees in Dependent Type Theory
G. Smolka, S. Schäfer, C. Doczkal Transfinite Constructions in Classical Type Theory
30 mins coffee break
10:30 – 11:30 (chair: C. Urban)
M. Norrish Invited Talk
1h lunch break
12:30 – 22:30
Excursion to Ge Yuan Garden and Slender West Lake The bus departs at 12:30 sharp from the hotel. Dinner will be at the Lion Pavilion restaurant which is close to the Slender West Lake. We expect to be back at the hotel around 22:30.

Thursday (6th Floor)

9:00 – 10:00 (chair: G. Smolka)
B. Fallenstein, R. Kumar Proof-Producing Reflection for HOL, with an Application to Model Polymorphism
O. Kunčar, A. Popescu A Consistent Foundation for Isabelle/HOL
20 mins coffee break
10:20 – 11:10 (chair: S. Boulmé)
Z. Paraskevopoulou <i>et al</i> Foundational Property-Based Testing
C. Kaliszyk, J. Urban, J. Vyskocil Learning To Parse on Aligned Corpora (Rough Diamond)
20 mins coffee break
11:30 – 12:30 (chair: D. Pichardie)
F. Stęczkowski, A. Bizjak, L. Birkedal ModuRes: A Coq Library for Modular Reasoning about Concurrent Higher-Order Imperative Programming Languages
S. Boulmé, A. Maréchal Refinement to Certify Abstract Interpretations, Illustrated on Linearization for Polyhedra
2hs lunch break
14:30 – 15:30 (chair: C. Wu)
C. Sternagel, R. Thiemann Deriving Comparators and Show-Functions in Isabelle/HOL
R. Affeldt, J. Garrigue Formalization of Error-Correcting Codes: from Hamming to Modern Coding Theory
30 mins coffee break
16:00 – 17:00 (chair: G. Malecha)
P. Lammich Refinement to Imperative/HOL
B. Barras, C. Tankink, E. Tassi Asynchronous Processing of Coq Documents: from the Kernel up to the User Interface
short coffee break
17:15 – 18:15 (chair: M. Moscato)
L. Cruz-Filipe, P. Schneider-Kamp Formalizing Size-Optimal Sorting Networks: Extracting a Certified Proof Checker
A. Anand, R. Knepper ROSCoq: Robots Powered by Constructive Reals