

**MONDAY, 10 SEPTEMBER 2007**

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| 08:30 – 09:00 | <b>REGISTRATION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 09:00 – 09:30 | <b>OPENING SESSION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 09:30 – 10:30 | <b>RESEARCH PAPERS</b> (Session Chair: Joe Hurd) <ul style="list-style-type: none"><li>● Zhaozhong Ni, Dachuan Yu and Zhong Shao. <i>Using XCAP to Certify Realistic Systems Code: Machine Context Management</i></li><li>● Eunsuk Kang and Mark Aagaard. <i>Improving the Usability of HOL through Controlled Automation Tactics</i></li></ul>                                                                                                                                                                                                                                                                                                                                                                                           |
| 10:30 – 11:00 | <b>COFFEE BREAK</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 11:00 – 12:30 | <b>RESEARCH PAPERS</b> (Session Chair: John Harrison) <ul style="list-style-type: none"><li>● Norbert Voelker. <i>HOL2P - A System of Classical Higher Order Logic with Second Order Polymorphism</i></li><li>● Christoph Sprenger and David Basin. <i>A Monad-Based Modeling and Verification Toolbox with Application to Security Protocols</i></li><li>● María-José Hidalgo, José-Antonio Alonso, Joaquín Borrego-Díaz, Francisco-Jesus Martin-Mateos and José-Luis Ruiz-Reina. <i>A Formally Verified Prover for the ALC Description Logic</i></li></ul>                                                                                                                                                                              |
| 12:30 – 14:00 | <b>LUNCH</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 14:00 – 15:30 | <b>EMERGING TRENDS</b> (Session Chair: Michael Gordon) <ul style="list-style-type: none"><li>● Achim D. Brucker and Burkhart Wolff. <i>Extensible Object-oriented Data Models in Isabelle/HOL</i></li><li>● Magnus Myreen and Michael Gordon. <i>Verification of Machine Code Implementations of Arithmetic Functions for Cryptography</i></li><li>● Florian Kammuehler. <i>CSP Revisited</i></li><li>● Pierre Corbineau. <i>A Declarative Language for the Coq Proof Assistant</i></li><li>● Sa'ed Abed, Otmane Ait Mohamed and Ghiath Al Sammane. <i>A High Level Reachability Analysis using Multiway Decision Graph in the HOL Theorem Prover</i></li><li>● Hanne Gottliebsen. <i>Coinductive Proofs for Streams in PVS</i></li></ul> |
| 15:30 – 16:00 | <b>COFFEE BREAK</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 16:00 – 17:30 | <b>PROOF PEARLS</b> (Session Chair: Peter Homeier) <ul style="list-style-type: none"><li>● Joe Hurd. <i>The Termination Analysis of TERMINATOR</i></li><li>● Brigitte Pientka. <i>The power of higher-order encodings in the logical framework LF</i></li><li>● Konrad Slind and Matt Kaufmann. <i>Wellfounded Induction on the Ordinals up to Epsilon-0</i></li></ul>                                                                                                                                                                                                                                                                                                                                                                    |

**TUESDAY, 11 SEPTEMBER 2007**

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| 08:45 – 09:00 | <b>REGISTRATION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 09:00 – 10:00 | <b>KEYNOTE</b> (Session Chair: Yves Bertot) <ul style="list-style-type: none"><li>● Peter Liggesmeyer. <i>Formal Techniques in Software Engineering: Correct Software and Safe Systems</i></li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 10:00 – 10:30 | <b>RESEARCH PAPERS</b> <ul style="list-style-type: none"><li>● Lawrence Paulson and Kong Woei Susanto. <i>Source-Level Proof Reconstruction for Interactive Theorem Proving</i></li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 10:30 – 11:00 | <b>COFFEE BREAK</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 11:00 – 12:30 | <b>RESEARCH PAPERS</b> (Session Chair: Lawrence Paulson) <ul style="list-style-type: none"><li>● Laurent Théry and Guillaume Hanrot. <i>Primality Proving with Elliptic Curves</i></li><li>● Yasuhiko Minamide. <i>Verified Decision Procedures on Context-Free Grammars</i></li><li>● Andrew Appel and Sandrine Blazy. <i>Separation Logic for Small-Step Cminor</i></li></ul>                                                                                                                                                                                                                                                                                                             |
| 12:30 – 14:00 | <b>LUNCH</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 14:00 – 15:30 | <b>EMERGING TRENDS</b> (Session Chair: John Matthews) <ul style="list-style-type: none"><li>● Hasan Amjad. <i>Propositional Simplification With BDDs and SAT Solvers</i></li><li>● Holger Gast. <i>An Architecture for Extensible Click'n Prove Interfaces</i></li><li>● Florian Haftmann and Tobias Nipkow. <i>A Code Generator Framework for Isabelle/HOL</i></li><li>● Christoph Benzmueller. <i>Progress Report on Leo-II, an Automatic Theorem Prover for Higher-Order Logic</i></li><li>● Paolo Torrini, Christoph Lueth, Christian Maeder and Till Mossakowski. <i>Translating Haskell to Isabelle</i></li><li>● Jeremy Dawson. <i>Isabelle Theories for Machine Words</i></li></ul> |
| 15:30 – 16:00 | <b>COFFEE BREAK</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 16:00 – 17:00 | <b>PROOF PEARLS</b> (Session Chair: Konrad Slind) <ul style="list-style-type: none"><li>● Michael Norrish and Rene Vestergaard. <i>De Bruijn terms really do work</i></li><li>● Steven Obua. <i>Looping around the Orbit</i></li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 17:30 – 18:30 | <b>BUSINESS MEETING</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

**WEDNESDAY, 12 SEPTEMBER 2007**

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| 08:45 – 09:00 | <b>REGISTRATION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 09:00 – 10:00 | <b>KEYNOTE</b> (Session Chair: Andrew Appel) <ul style="list-style-type: none"><li>● Constance L. Heitmeyer.<br/><i>On the Utility of Formal Methods in the Development and Certification of Software</i></li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 10:00 – 10:30 | <b>RESEARCH PAPERS</b> <ul style="list-style-type: none"><li>● Freek Wiedijk. <i>Mizar's Soft Type System</i></li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 10:30 – 11:00 | <b>COFFEE BREAK</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 11:00 – 12:30 | <b>RESEARCH PAPERS</b> (Session Chair: Burkhart Wolff) <ul style="list-style-type: none"><li>● David Aspinall and Jaroslav Sevcik. <i>Formalising Java's Data-Race-Free Guarantee</i></li><li>● James Reynolds. <i>Automatically Translating Type and Function Definitions from HOL to ACL2</i></li><li>● Georges Gonthier, Assia Mahboubi, Laurence Rideau, Enrico Tassi and Laurent Théry. <i>A Modular Formalisation of Finite Group Theory</i></li></ul>                                                                                                                                                                                     |
| 12:30 – 14:00 | <b>LUNCH</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 14:00         | <b>EXCURSION AND CONFERENCE BANQUET</b> <ul style="list-style-type: none"><li>● The excursion is to <b>Worms</b> on the Rhine, which is approximately a 60 km drive from Kaiserslautern. We will have a guided tour "on foot through two thousand years" of its rich history and see the Romanesque Worms, the Worms of the Reformation, the Jewish Worms and the Worms of the Nibelungen. The excursion coach will depart from Fraunhofer Centre after lunch.</li><li>● The coach back to Kaiserslautern will leave at 19:00, and it will bring you directly to the <b>Blechhammer</b>, where the conference banquet will take place.</li></ul> |

## THURSDAY, 13 SEPTEMBER 2007

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| 08:45 – 09:00 | <b>REGISTRATION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 09:00 – 10:00 | <b>KEYNOTE</b> (Session Chair: Tobias Nipkow) <ul style="list-style-type: none"><li>● Xavier Leroy. <i>Formal Verification of an Optimizing Compiler</i></li></ul>                                                                                                                                                                                                                                                                                                                                                                                                              |
| 10:00 – 10:30 | <b>RESEARCH PAPERS</b> <ul style="list-style-type: none"><li>● Jeremy Dawson. <i>Formalising Generalised Substitutions</i></li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 10:30 – 11:00 | <b>COFFEE BREAK</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 11:00 – 12:30 | <b>RESEARCH PAPERS</b> (Session Chair: Sofiène Tahar) <ul style="list-style-type: none"><li>● Lukas Bulwahn, Alexander Krauss and Tobias Nipkow. Finding Lexicographic Orders for Termination Proofs in Isabelle/HOL</li><li>● John Harrison. <i>Verifying Nonlinear Real Formulas via Sums of Squares</i></li><li>● Tom Ridge. <i>Operational Reasoning for Concurrent Caml Programs and Weak Memory Models</i></li></ul>                                                                                                                                                      |
| 12:30 – 14:00 | <b>LUNCH</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 14:00 – 16:00 | <b>RESEARCH PAPERS</b> (Session Chair: Jens Brandt) <ul style="list-style-type: none"><li>● Osman Hasan and Sofiène Tahar. <i>Verification of Expectation Properties for Discrete Random Variables in HOL</i></li><li>● David Delahaye, Catherine Dubois and Jean-Frédéric Étienne. <i>Extracting Purely Functional Contents from Logical Inductive Types</i></li><li>● Benjamin Werner and François Garillot. <i>Simple Types, Deep and Shallow</i></li><li>● Makarius Wenzel and Burkhart Wolff. <i>Building Formal Method Tools in the Isabelle/Isar Framework</i></li></ul> |
| 16:00 – 16:30 | <b>COFFEE BREAK AND CLOSING SESSION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |