

## Tuesday, October 7<sup>th</sup>

	Room: tba
18:00	<b>Welcome Reception and Registration</b> <b>Speech: A Modest Proposal to the NSA</b> <i>Lenore Zuck</i>
20:00	

## Wednesday, October 8<sup>th</sup>

	Room: tba	Room: tba	Room:tba
8:00	Registration		
8:45	Opening ISOLa		
9:00	<b>Evolving Critical Systems</b> <b>(M.Hinchey, T. Margaria)</b> <b>Session 1:</b>  <b>Introduction</b>  <b>Statistical Abstraction Boosts Design and Test Efficiency of Evolving Critical Systems.</b> <i>A. Legay, S. Sedwards</i>  <b>Combinatory Logic Synthesizer.</b> <i>J. Bessai, A. Dudenhefner, B. Döder, M. Martens, J. Rehof</i>	<b>Rigorous Examination of Reative Systems</b> <b>(F. Howar, J. van de Pol, M. Schordan, M. Isberner T. Ruys, B. Steffen)</b>  <b>Presentation of the RERS challenge.</b> <i>B. Steffen</i>  <b>Presentation of the results</b> <i>M. Isberner</i>  <b>Brief statement of the winners.</b>	<b>Engineering Virtualized Systems</b> <b>(R. Hähnle, E. Broch Johnsen)</b> <b>Session 1:</b>  <b>Introduction</b>  <b>Erlang-style error recovery for concurrent objects with cooperative scheduling.</b> <i>G. Göri, E. B. Johnsen, R. Schlatte, and V. Stolz.</i>  <b>Fault model design space for cooperative concurrency.</b> <i>I. Ianesse, M. Lienhardt, M. Bravetti, E. B. Johnsen, R. Schlatte, V. Stolz, and G. Zavattaro</i>
	Discussion	Discussion	Discussion

10:30	<b>COFFEE BREAK</b>		
11:00	<p><b>Evolving Critical Systems</b> (M.Hinchey, T. Margaria) <b>Session 2:</b></p> <p><b>Incremental Syntactic-Semantic Reliability Analysis of Evolving Structured Workflows.</b> <i>D. Bianculli, A. Filieri, C. Ghezzi, D. Mandrioli</i></p> <p><b>Prototype-Driven Development of Web Applications with DyWA.</b> <i>Johannes Neubauer, Bernhard Steffen, Markus Frohme und Tiziana Margaria</i></p> <p><b>Domain-Specific Languages for Enterprise Systems.</b> <i>Jesper Andersen, Patrick Bahr, Fritz Henglein, and Tom Hvitve</i></p>	<p><b>Statistical Model Checking</b> (K.G. Larsen, A. Legay) <b>Session 1:</b></p> <p><b>Introduction</b></p> <p><b>An effective heuristic for adaptive importance splitting in statistical model checking.</b> <i>C. Jegourel, A. Legay, and S. Sedwards.</i></p> <p><b>A formalism for stochastic adaptive systems.</b> <i>B. Boyer, A. Legay, and L. Traonouez.</i></p>	<p><b>Engineering Virtualized Systems</b> (R. Hähnle, E. Broch Johnsen) <b>Session 2:</b></p> <p><b>Programming with actors in Java 8.</b> <i>F. de Boer and B. Nobakht.</i></p> <p><b>Contracts in CML.</b> <i>J. Woodcock, A. Cavalcanti, J. Fitzgerald, S. Foster, and P. G. Larsen.</i></p> <p><b>Distributed energy management case study: A formal approach to analyzing utility functions.</b> <i>A. Causevic, C. Seceleanu, and P. Pettersson.</i></p>
	<b>Discussion</b>	<b>Discussion</b>	<b>Discussion</b>
12:30	<b>LUNCH</b>		
14:00	<p><b>Risk-Based Testing</b> (M. Felderer, M.-F. Wendland, I. Schieferdecker) <b>Session 1:</b></p> <p><b>Introduction</b></p> <p><b>A technique for risk-based test procedure identification, prioritization and selection.</b> <i>Seehusen, F.</i></p> <p><b>A risk assessment framework for software testing.</b></p>	<p><b>Statistical Model Checking</b> (K.G. Larsen, A. Legay) <b>Session 2:</b></p> <p><b>A Review Of Statistical Model Checking Pitfalls on Real-Time Stochastic Models.</b> <i>H. Bruintjes, V. Yen Nguyen, D. Bohlender, S. Junges, J. Katelaan, and T. Noll.</i></p>	<p><b>Engineering Virtualized Systems</b> (R. Hähnle, E. Broch Johnsen) <b>Session 3:</b></p> <p><b>Towards the typing of resource deployment.</b> <i>E. Giachino and C. Laneve.</i></p> <p><b>Static inference of transmission data sizes in distributed systems.</b> <i>E. Albert, J. Correas, E. Martin-Martin, and G. Roman-Diez.</i></p>

	<p><i>Felderer, M., Haisjackl, C., Pekar, V., Breu, R.</i></p> <p><b>Data driven testing of open source software.</b> <i>Yahav, I., Kenett, R.S., Bai, X.</i></p> <p><b>Combining risk analysis and security testing.</b> <i>Grossmann, J., Schneider, M., Viehmann, J., Wendland, M.F.</i></p> <p><b>Risk-based vulnerability testing using security test patterns.</b> <i>Botella, J., Legeard, B., Peureux, F. Verotte, A.</i></p>	<p><b>Formal analysis of the wnt beta-catenin pathway dynamics through statistical model checking.</b> <i>P. Ballarini, E. Gallet, P. Le Gall and M. Manceny.</i></p> <p><b>Battery-Aware Scheduling of Mixed Criticality Systems.</b> <i>E. Ramsgaard Wagnsen, R. Rydhof Hansen, and K.G.Larsen</i></p>	<p><b>Fully abstract method contracts.</b> <i>R. Bubel, R. Hähnle, and M. Pelevina.</i></p>
	<b>Discussion</b>	<b>Discussion</b>	<b>Discussion</b>
15:30	<b>COFFEE BREAK</b>		
16:00	<p><b>Risk-Based Testing (M. Felderer, M.-F. Wendland, I. Schieferdecker)</b> <b>Session 2:</b></p> <p><b>Working Session on Risk-Based Testing</b></p>	<p><b>Statistical Model Checking (K.G. Larsen, A. Legay)</b> <b>Session 3:</b></p> <p><b>Using statistical model checking for measuring systems.</b> <i>R. Grosu, D. Peled, S. Smolka, S. Stoller, and C.R. Ramakrishnan.</i></p> <p><b>Blocking advertisements on android devices using monitoring techniques.</b> <i>K. El-Harake, Y. Falcone, W. Jerad, M. Langet and M. Mamlouk.</i></p> <p><b>Monitoring with data automata.</b> <i>K. Havelund.</i></p>	<p><b>Student Contributions (A. Lamprecht)</b> <b>Session 1:</b></p> <p><b>G. Barany</b></p> <p><b>N. Triantafyllou/K. Ksystra/P. Stefaneas</b></p> <p><b>M. Geske</b></p> <p><b>M. Jasper</b></p> <p><b>O. Bauer</b></p> <p><b>A. Wickert</b></p> <p><b>S. Alareqi</b></p>
	<b>Discussion</b>	<b>Discussion</b>	<b>Discussion</b>
17:30			

## Thursday, October 9<sup>th</sup>

	Room: tba	Room: tba	Room:tba
9:00	<p><b>Rigorous Engineering of Autonomous Ensembles</b> (M. Wirsing, R. De Nicola, M. Hölzl)</p> <p>Session 1:</p> <p><b>Introduction</b></p> <p><b>Helena@Work: Modeling the Science Cloud Platform.</b> <i>Klarl, A., Mayer, P., Henninger, R.</i></p> <p><b>Formalizing Self-Adaptive Clouds with KnowLang.</b> <i>Vassev, E., Hinchey, M</i></p> <p><b>Towards Performance-Aware Engineering of Autonomous Component Ensembles.</b> <i>Bures, T., Horky, V., Kit, M., Marek, L., Tuma, P.</i></p>	<p><b>Medical Cyber-Physical Systems</b> (E. Bartocci, S. Gao, S.Smolka)</p> <p>Session 1:</p> <p><b>Introduction</b></p> <p><b>Compositional, approximate, and quantitative reasoning for medical cyber-physical systems with application to patient-specific cardiac dynamics and devices.</b> <i>Grosu, R., Cherry, E., Clarke, E.M., Cleveland, R., Dixit, S., Fenton, F., Gao, S., Glimm, J., Gray, R.A., Mangharam, R., Ray, A., Smolka, S.A.</i></p> <p><b>On quantitative software quality assurance methodologies for cardiac pacemakers.</b> <i>Kwiatkowska, M., Mereacre, A., Paoletti, N.</i></p>	<p><b>Industrial Track</b> (A. Hessenkämper)</p> <p>Session 1</p> <p><b>Fostering the collaboration of Information Technology and Machine and Plant Engineering is one of the keys to the Industry of tomorrow.</b></p> <p><b>Presentations of world leading automation equipment vendors will show their approaches towards computational excellence in the industry sector.</b></p>
	<b>Discussion</b>	<b>Discussion</b>	<b>Discussion</b>
10:30	<b>COFFEE BREAK</b>		
11:00	<p><b>Autonomous Ensembles</b> (M. Wirsing, R. De Nicola, M. Hölzl)</p> <p>Session 2</p> <p><b>Self-Expression and Dynamic Attribute-based Ensembles in SCEL.</b> <i>Cabri, G., Capodiceci, N., Cesari, L., Nicola, R.D.,</i></p>	<p><b>Medical Cyber-Physical Systems</b> (E. Bartocci, S. Gao, S.Smolka)</p> <p>Session 2:</p> <p><b>Model checking hybrid systems.</b> <i>Clarke, E.M., Gao, S.</i></p>	<p><b>Industrial Track</b> (A. Hessenkämper)</p> <p>Session 2</p> <p>Ongoing open discussion</p>

	<p><i>Pugliese, R., Tiezzi, F., Zambonelli, F.</i></p> <p><b>On Programming and Policing Autonomic Computing Systems.</b> <i>Loreti, M., Margheri, A., Pugliese, R., Tiezzi, F.</i></p> <p><b>Rigorous System Design Flow for Autonomous Systems.</b> <i>Bensalem, S., Bozga, M., Combaz, J., Triki, A.</i></p>	<p><b>Challenges for the dynamic interconnection of medical devices.</b> <i>Leucker, M.</i></p> <p><b>Temporal logic based monitoring of assisted ventilation in intensive care patients.</b> <i>Bufo, S., Bartocci, E., Sanguinetti, G., Borelli, M., Lucangelo, U., Bortolussi, L.</i></p>	
	<b>Discussion</b>	<b>Discussion</b>	<b>Discussion</b>
12:30	<b>LUNCH</b>		
14:30 22:00	<b>Excursion and Conference Dinner</b>		

# Friday, October 10<sup>th</sup>

	Room: tba	Room: tba	Room:tba
9:00	<p><b>Formal Methods and Analysis in Software Product Line Engineering</b> (I. Schaefer, M. ter Beek) Session 1:</p> <p><b>Introduction</b></p> <p>The role of precise descriptions in industrial software projects - source of competitive advantage or just waste of time? <i>Juha Savolainen</i></p>	<p><b>Scientific Workflows</b> (J. Kok, A.-L. Lamprecht, K. Turner, K. Wolstencroft) Session 1: Workflow Applications</p> <p><b>Introduction</b></p> <p><b>Meta-analysis of Disjoint Sets of Attributes in Large Cohort Studies.</b> <i>J. Vis, J. Kok</i></p> <p><b>Towards a flexible assessment of climate impacts: The example of agile workflows for the ci:grasp platform.</b> <i>S. Alareqi, S. Kriewald, A.-L. Lamprecht, D. Reusser, M. Wrobel, T.Margaria</i></p>	<p><b>Automata Learning</b> (F. Howar, Bernhard Steffen)</p> <p><b>Introduction</b></p> <p><b>Algorithms for Inferring Register Automata: A comparison of existing approaches.</b> <i>F. Aarts, F. Howar, H. Kuppens, and F. Vaandrager</i></p> <p><b>Active Learning of Nondeterministic Systems from a ioco Perspective.</b> M. Volpato, and J. Tretmans</p> <p>Applications: a Black-Box Approach. <i>S. Arlt, E. Ermis, S. Feo-Arenis, and A. Podelski</i></p>
	<b>Discussion</b>	<b>Discussion</b>	<b>Discussion</b>
10:30	<b>COFFEE BREAK</b>		
11:00	<p><b>Formal Methods and Analysis in Software Product Line Engineering</b> (I. Schaefer, M. ter Beek) Session 2:</p> <p><b>Introduction</b></p> <p><b>A Core Language for Separate Variability Modeling.</b> <i>A. Iosif-Lazar, I. Schaefer, and A. Wasowski.</i></p> <p><b>Domain Specific Languages for Managing Feature</b></p>	<p><b>Scientific Workflows</b> (J. Kok, A.-L. Lamprecht, K. Turner, K. Wolstencroft) Session 2: Workflow Analysis and Annotation</p> <p><b>A visual programming approach to beat-driven humanoid robot dancing.</b> <i>V. Podpecan</i></p>	<p><b>Tutorial: Automata Learning in Practice</b> (F. Howar, M. Isberner, B. Steffen)</p> <p><b>Session 1</b></p> <p><b>Introduction and fundamental concepts.</b> <i>B. Steffen</i></p> <p><b>First practical experience with the LearnLib.</b> <i>F. Howar, M. Isberner</i></p>

	<p><b>Models: Advances and Challenges.</b> <i>P. Collet.</i></p>	<p><b>jABCstats: An Extensible Process Library for the Empirical Analysis of jABC Workflows.</b> <i>A. Wickert, A.-L. Lamprecht</i></p> <p><b>Automatic annotation of bioinformatics workflows with biomedical ontologies.</b> <i>B. Garcia-Jimenez, M. D. Wilkinson</i></p>	
	<b>Discussion</b>	<b>Discussion</b>	<b>Discussion</b>
12:30	<b>LUNCH</b>		
14:00	<p><b>Formal Methods and Analysis in Software Product Line Engineering (I. Schaefer, M. ter Beek)</b> <b>Session 3:</b> <b>Delta-Trait Programming of Software Product Lines.</b> <i>F. Damiani, I. Schaefer, S. Schuster, T. Winkelmann.</i></p> <p><b>Deployment Variability in Delta-Oriented Models.</b> <i>E. Broch Johnsen, R. Schlafte, S. L. Tapia Tarifa.</i></p> <p><b>DeltaCCS: A Core Calculus for Behavioral Change.</b> <i>M. Lochau, S. Mennicke, H. Baller, and L. Ribbeck.</i></p>	<p style="text-align: center;"><b>Tool Panel</b></p> <p><b>Moderator</b> <i>Kim Larsen</i></p> <p><b>Details will be announced at the conference</b></p>	<p style="text-align: center;"><b>LearnLib Tutorial</b> <b>(F. Howar, M. Isberner, B. Steffen)</b></p> <p><b>Session 2</b> <b>The power of counter example examination.</b> <i>F. Howar, M. Isberner</i></p> <p><b>Hands on experience.</b> <i>F. Howar, M. Isberner</i></p>
	<b>Discussion</b>	<b>Discussion</b>	<b>Discussion</b>
15:30	<b>COFFEE BREAK</b>		

16:00 0	<p><b>Software Product Lines Formal Methods and Analysis in Software Product Line Engineering</b> (I. Schaefer, M. ter Beek)</p> <p><b>Session 4:</b> <b>Coverage Criteria for Behavioural Testing of Software Product Lines.</b> <i>X. Devroey, G. Perrouin, A. Legay, M. Cordy, P.-Y. Schobbens, P. Heymans.</i></p> <p><b>Challenges in Modelling and Analyzing Quantitative Aspects of Bike-Sharing Systems.</b> <i>M. H. ter Beek, A. Fantechi, and S. Gnesi.</i></p> <p><b>Towards Modular Verification of Software Product Lines with mCRL2.</b> <i>M. H. ter Beek and E. P. de Vink.</i></p>	<p><b>Rigorous Examination of Reactive Systems</b> (F. Howar, J. van de Pol, M. Schordan, M. Isberner, T. Ruys, B. Steffen)</p> <p><b>Discussion and planning of the RERS future.</b></p>	<p><b>Tutorial: Automata Learning in Practice</b> (F. Howar, M. Isberner, B. Steffen)</p> <p><b>Session 3</b> <b>Learning realistic systems</b> <i>F. Howar, M. Isberner</i></p> <p><b>Hands on experience.</b> <i>F. Howar, M. Isberner</i></p>
	<b>Discussion</b>	<b>Discussion</b>	<b>Discussion</b>
17:30			
18:00	<b>Optional Excursion and Fish Dinner</b>		



# Saturday, October 11<sup>th</sup>

	Room: tba	Room: tba	Room:tba
9:00	<p><b>Evaluation and Reproducibility of Program Analysis</b> (M. Schordan, W. Löwe, D. Beyer)</p> <p>Session 1:</p> <p><b>Introduction</b></p> <p><b>SWEET - a tool for WCET flow analysis.</b> <i>B. Lisper</i></p> <p><b>Test-driving static analysis tools in search of C code vulnerabilities.</b> <i>G. Chatzieleftheriou, A. Chatzopoulos, P. Katsaros.</i></p>	<p><b>Processes and Data Integration in the Networked Healthcare</b> (J.Mündler, T. Margaria, C. Rasche)</p> <p>Session 1:</p> <p><b>Introduction</b></p> <p><b>Simple Management of High Assurance Data in Long-lived Interdisciplinary Healthcare Research: A Proposal.</b> <i>T. Margaria, B. Floyd, A.-L. Lamprecht, R. Gonzalez Camargo, J. Neubauer, M. Seelaender</i></p> <p><b>Domain-specific Business Modeling with the Business Model Developer.</b> <i>T. Margaria, S. Boßelmann</i></p>	<p><b>Student Contributions (A.-L. Lamprecht)</b></p> <p>Session 2:</p> <p><b>D. Kühn,</b></p> <p><b>D. Kopetzki/M. Lybecait</b></p> <p><b>B. Steffen</b></p> <p><b>A.Hessenkämper</b></p> <p><b>F. Gossen</b></p>
	<b>Discussion</b>	<b>Discussion</b>	<b>Discussion</b>
10:30	<b>COFFEE BREAK</b>		
11:00	<p><b>Evaluation and Reproducibility of Program Analysis</b> (M. Schordan, W. Löwe, D. Beyer)</p> <p>Session 2:</p> <p><b>Construction of abstract domains for heterogeneous properties.</b> <i>X. Rival, A. Toubhans, and B.-Y. E. Chang.</i></p>	<p><b>Dr. Watson? Balancing Automation and Human Expertise in Healthcare Delivery.</b> <i>M. Gaynor, G. Wyner, A. Gupta</i></p>	<p><b>Editorial Board meeting: LNCS Transactions on the Foundations for Mastering Change</b></p> <p><b>Introduction by the EiC: Bernhard Steffen</b></p> <p><b>Position statements of the editorial board members and discussion.</b></p>

	<p><b>Verification of polyhedral optimizations with constant loop bounds infinite state space computations.</b>  <i>M. Schordan, P.-H. Lin, D. Quinlan, L.-N. Pouchet.</i></p> <p><b>The Guided System Development Framework: Modeling and verifying communication systems.</b>  <i>J. Quresma, C. W. Probst, and F. Nielson.</i></p>		<p><b>Software (must) change,</b>  <i>Mike Hinchey</i></p> <p><b>Mastering Change @ runtime</b>  <i>Klaus Havelund</i></p> <p><b>Mastering Change: Some research Topics</b>  <i>Axel Legay</i></p> <p><b>Managing Change in Formal Software Analysis: Two Research Challenges</b>  <i>Reiner Hähnle,</i></p>
	<b>Discussion</b>	<b>Discussion</b>	<b>Discussion</b>
12.30	<b>LUNCH</b>		

14:00	<p><b>Model-based Code-Generators and Compilers</b> (U. Assmann, J. Knoop, W. Zimmermann)</p> <p><b>Session 1:</b></p> <p><b>Introduction</b></p> <p><b>DSL Implementation for Model-based Development of Pumps.</b> <i>Berg, C., Zimmermann, W.</i></p> <p><b>Building Code Generators for DSLs using a Partial Evaluator for the Xtend Language.</b> <i>Birken, K.</i></p> <p><b>Back-To-Back Testing Of Model-Based Code Generators.</b> <i>Jörges, S., Steffen, B.</i></p>	<p><b>Semantic heterogeneity in the formal development of complex systems</b> (P. Gibson, I. Ait-Sadoune)</p> <p><b>Introduction</b></p> <p><b>Modelling and Verifying an Evolving Distributed Control System Using an Event-based Approach.</b> <i>Attiogbe, C.</i></p> <p><b>Requirements driven Data Warehouse Design: We can go further.</b> <i>Khouri, S., Bellatreche, L., Jean, S., Ait-Ameur, Y.</i></p> <p><b>On Implicit and Explicit Semantics: Integration issues in proof-based development of systems.</b> <i>Ait-Ameur, Y., Gibson, J., Mery, D.</i></p>	<p><b>Editorial Board meeting: LNCS Transactions on the Foundations for Mastering Change</b></p> <p><b>Position statements of the editorial board members and discussion.</b></p> <p><b>Compositional Model-Based System Design as a Foundation for mastering Change</b> <i>Stavros Tripakis</i></p> <p><b>Forever Software</b> <i>Arend Rensink</i></p> <p><b>Current Issues on Model-Based Software Quality Assuring for mastering Change</b> <i>Michael Felderer</i></p> <p><i>Tiziana Margaria</i></p> <p><b>Formal Methods for Collective Adaptive ensembles</b> <i>Martin Wirsing</i></p>
	<b>Discussion</b>	<b>Discussion</b>	<b>Discussion</b>
15:30	<b>Coffee Break</b>		

16:00	<p><b>Model-based Code-Generators and Compilers</b> (U. Assmann, J. Knoop, W. Zimmermann)</p> <p><b>Session 2:</b></p> <p><b>Rewriting Object Models With Cycles and Nested Collections: A Model-Based Metaprogramming Problem.</b> <i>Lepper, M., Widemann, B.T.</i></p> <p><b>Compiling SCCharts : A Case-Study on Interactive Model-Based Compilation.</b> <i>Motika, Ch., Smyth, St., von Hanxleden, R.</i></p> <p><b>Domain-Specific Modeling of Code Generators: A Case Study for Multi-Faceted Concurrent Systems.</b> <i>Naujokat, S., Traonouez, L.-M., Isberner, M., Steffen, B., Legay, A.</i></p>		<p><b>Editorial Board meeting: LNCS Transactions on the Foundations for Mastering Change</b></p> <p><b>Discussion and planning :</b></p> <ul style="list-style-type: none"> <li>- <b>First Issues</b></li> <li>- <b>Special Sections</b></li> <li>- <b>Strategic Links</b></li> </ul>
17:30	<b>Closing ISoLA</b>		