Dagstuhl Seminar 13211 – Automatic Reasoning on Conceptual Schemas
Final Program

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<tr><th></th><th>Monday</th><th>Tuesday</th><th>Wednesday</th><th>Thursday</th><th>Friday</th></tr>
<tr><td>08:30-09:00</td><td></td><td rowspan="2">Reasoning about the Dynamics</td><td></td><td></td><td></td></tr>
<tr><td>9:00-10:00</td><td>Opening
Reasoning on the Structural Schema (I)</td><td>Break Out Session</td><td>Break Out Session</td><td>Group Conclusions</td></tr>
<tr><td>10:00-10:30</td><td colspan="5">Coffee Break</td></tr>
<tr><td>10:30-12:00</td><td>Reasoning on the Structural Schema (II)</td><td>New Challenges</td><td>Break Out Session</td><td>Break Out Session</td><td>Group Conclusions</td></tr>
<tr><td>12:00-14:00</td><td colspan="5">Lunch</td></tr>
<tr><td>14:00-15:30</td><td>Reasoning on the Structural Schema (III)</td><td>Reasoning about Mappings</td><td rowspan="3">Excursion</td><td>Reports of the Break Out Sessions</td><td rowspan="4"></td></tr>
<tr><td>15:30-16:00</td><td colspan="2">Coffee Break</td><td>Coffee Break</td></tr>
<tr><td>16:00-17:30</td><td>Extensions</td><td>Reasoning about Dependencies</td><td>Discussion</td></tr>
<tr><td>18:00</td><td colspan="4">Dinner</td></tr>
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Session 1: Reasoning on the Structural Schema (I)

- *UML class diagrams -- decision, identification and repair of correctness and quality problems*, Mira Balaban
- *OCL2FOL: Using SMT solvers to automatically reason on conceptual schemata with OCL constraints*, Carolina Dania
- *Reasoning Techniques for Conceptual Models*, Alessandro Artale
- *Toward an ontology-driven unifying metamodel for UML Class Diagrams*, Maria Keet

Session 2: Reasoning on the Structural Schema (II)

- *"Automating Reasoning on Conceptual Schemas" in FamilySearch—a Large-Scale Reasoning Application*, David W. Embley
- *Incremental inconsistencies detection with low memory overhead*, Xavier Blanc
- *Constraints on Class Diagrams*, Ingo Feinerer
- *At SAP, class models are rarely used as they are "too close to real code"*, Achim D. Brucker

Session 3: Reasoning on the Structural Schema (III)

- *Reasoning in ORM,* Enrico Franconi
- *Exploring UML and OCL Model Properties with Relational Logic*, Martin Gogolla
- *AuRUS: Automated Reasoning on UML Schemas*, Ernest Teniente
- *ProB: Solving Constraints on Large Data and Higher-Order Formal Models*, Michael Leuschel

Session 4: Extensions

- *Preliminary Report on an Algebra of Lightweight Ontologies*, Marco A. Casanova
- *Temporal Extended Conceptual Models*, Roman Kontchakov
- *Reasoning on conceptual schemas of spatial data*, Stephan Mäs
- *Validation of Complex Domain-Specific Modeling Languages*, Daniel Varró

Session 5: Reasoning about the Dynamics

- *View Design for Updates*, Stephen Hegner
- *Reasoning About the Effect of Structural Events in UML Conceptual Schemas*, Xavier Oriol
- *Automated reasoning for security and compliance properties of business processes*, Achim D. Brucker
- *Unified approaches for modeling and reasoning over processes and data*, Diego Calvanese

Session 6: New Challenges

- *The Curse of Restructuring in Dependency Theory*, Klaus-Dieter Schewe
- *A Declarative Approach to Distributed Computing*, Jorge Lobo
- *On BDD, Finite controllability and the BDD/FC conjecture*, Jerzy Marcinkowski
- *Metrics for Visual Notations*, Sophie Dupuy-Chessa

Session 7: Reasoning about Mappings

- *Reasoning About Dependencies in Schema Mappings*, Qing Wang
- *Semantic-Based Mappings,* Guillem Rull
- *Relationship between approaches to ontology-based data access and object relational techniques*, Marco Montali
- *Armstrong Instances as an Aid for Automated Reasoning,* Sven Hartmann

Session 8: Reasoning about Dependencies

- *Information and Dependency Preserving BCNF Decomposition Algorithm via Attribute Splitting*, Elena V. Ravve
- *Visual Reasoning of (Functional) Dependencies*, Bernhard Thalheim
- *Representation of Instance-Derivations based on Dependencies*, Joachim Biskup
- *Reasoning over Order Dependencies for Relational Schema*, Parke Godfrey

Break Out Sessions

The participants will be allocated to three different groups, each one of them addressing a different aspect related to the topic of the workshop:

- *On the Practical Applicability of Current Techniques for Reasoning on the Structural Schema*
- *Reasoning about the Dynamics of the Conceptual Schema*
- *New Challenges for Automated Reasoning on Conceptual Schemas*