<table>
<thead>
<tr>
<th>Time/Day</th>
<th>Monday, January 16</th>
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<tbody>
<tr>
<td></td>
<td><strong>Registration hours</strong></td>
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<tr>
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<td>13:00 – 14:30</td>
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<tr>
<td>14:00-14:30</td>
<td><strong>Conference Opening</strong></td>
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<tr>
<td>14:30-16:00</td>
<td><strong>Keynote 1</strong></td>
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<td></td>
<td>Dependable and Optimal Cyber-Physical Systems</td>
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<td>Kim Larsen</td>
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<td>16:00-16:30</td>
<td><strong>Coffee Break</strong></td>
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<tr>
<td>16:30-18:00</td>
<td><strong>FOCS 1</strong></td>
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<td>Semantics, Specification and Compositionality</td>
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<tr>
<td>18:30-20:00</td>
<td><strong>Welcome Reception</strong></td>
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**Conference Opening (Room: KBS12)**

14:30 - 16:00

**Keynote 1 (Room: KBS12)**

Dependable and Optimal Cyber-Physical Systems
Kim Larsen

16:00 - 16:30

**Coffee Break**

16:30 - 18:00

**FOCS 1 (Room: KBS13)**

Semantics, Specification and Compositionality

Logical Characterization and Compositionality of Input/Output Conformance Simulation
Luca Aceto, Ignacio Fábregas, Carlos Gregorio-Rodríguez, Anna Ingólfsdóttir

A Linear-Time/Branching-Time Spectrum of Behavioral Specification Theories
Uli Fahrenberg, Axel Legay

Symbolic Semantics for Multiparty Interactions in the Link-Calculus
Linda Brodo, Carlos Olarte

**FOCS 2 (Room: KBS14)**

Theory of Mobile and Distributed Systems

Different Speeds Suffice for Rendezvous of Two Agents on Arbitrary Graphs
Evangelos Kranakis, Danny Krizanc, Euripides Markou, Aris Pagourtzis, Felipe Ramirez

Deciding Structural Liveness of Petri Nets
Petr Jancar

**Tutorial 1 (Room: KBS15)**

Cinco: A Simplicity-Focused Language Workbench for Domain-Specific Graphical Modeling Environments
Stefan Naujokat, Johannes Neubauer, Bernhard Steffen

18:30 - 20:00

**Welcome Reception**
Tuesday, January 17

09:00 - 10:30

**Keynote 2**
On Featured Transition Systems
Axel Legay

10:30 - 11:00

Coffee Break

11:00 - 12:30

**FOCS 3** (Room: KBS13)
Verification and Automated System Analysis

- Completeness of Hoare Logic Relative to the Standard Model
  Zhaowei Xu, Wenhui Zhang, Yuefei Sui

- Configuration- and Residual-Based Transition Systems for Event Structures with Asymmetric Conflicts
  Eike Best, Nataliya Gribovskaya, Irina Virbitskaite

- Hardness of Deriving Invertible Sequences from Finite-State Machines
  Uraz Turker, Robert M. Hierons, Mohammad Reza Mousavi, Micheal Thomasen

- Parametrized and Exact Algorithms for Class Domination Coloring
  R. Krithika, Ashutosh Rai, Saket Saurabh, Prafullkumar Tale

**SE** (Room: KBS14)
Software Engineering: Methods, Tools, Applications

- Characterising Malicious Software with High-Level Behavioural Patterns
  Jana Šťastná*, Martin Tomasek

- Erlang at work
  Rocco De Nicola, Tan Duong, Omar Inverso, Catia Trubiani

11:00 - 12:30

Lunch

12:30 - 13:30

Lunch

14:30 - 16:00

**Keynote 3**
Domain-Specific Languages: A Systematic Mapping Study
Marjan Mernik

16:00 - 16:30

Coffee Break

16:30 - 18:00

**FOCS 4** (Room: KBS13)
Petri Nets, Games and Relaxed Data Structures

**Tutorial 2**
Early Career Researcher Tutorial
Becoming Goldilocks: Privacy and Data Sharing in “Just Right” Conditions for Software Engineering

**ASE 2** (Room: KBS13)
Automotive Software Engineering

- Software Systems Migration towards Cloud-native Architectures for SME-sized Software Vendors.
  Frank Fowley, Divyaa Manimaran Elango, Hany Magar, Claus Pahl

- Using n-grams for the Automated Clustering of Structural Models
  Onder Babur, Loek Cleophas
ASE 1 (Room: KBS15)
Automotive Software Engineering

Invited talk: “Future Trends in Electric Vehicles, Enabled by Internet Connectivity, Solar and Battery Technology”
Ben Rutten

Towards Certifiable Software using Verified Model Transformations
Sander de Putter
12:30 - 13:30

Lunch
14:30 - 16:00

Keynote 3 (Room: KBS12)

Domain-Specific Languages: A Systematic Mapping Study
Marjan Mernik
16:00 – 16:30

Coffee Break
16:30 – 18:00

FOCS 4 (Room: KBS13)
Petri Nets, Games and Relaxed Data Structures

A Graph-Theoretical Characterization of State Separation
Eike Best, Raymond Devillers, Uli Schlachter

Selfish Transportation Games
Dimitris Fotakis, Laurent Gourvès, Jérôme Monnot

Decomposable Relaxation for Concurrent Data Structures
Chao Wang, Yi Lv, Peng Wu

Tutorial 2 (Room: KBS14)
Early Career Researcher Tutorial

Becoming Goldilocks: Privacy and Data Sharing in “Just Right” Conditions for Software Engineering
Fayola Peters

ASE 2 (Room: KBS15)
Automotive Software Engineering

Using Model-based Techniques to Support for Compliance with Automotive Standards: ISO 26262, ASPIE, J3061
Yaping Luo

The Soft Car: Automotive Research at CS@TU/e
Jeroen Redegeld

Safety analysis for a cooperative driving system
Yanja Dajsuren
Wednesday, January 18

09:00-10:30  
**Keynote 4**  
Trends and Challenges in Predictive Analytics  
*Jaakko Hollmen*

10:30-11:00  
Coffee Break

11:00-12:30  
**FOCS 5**  
Graph Theory and Scheduling Algorithms  
**DIKE**  
Data, Information and Knowledge Engineering  
**Tutorial 3**  
Unifying Theories of Programming: Principles, Theories and Tools

12:30-13:30  
Lunch

14:30  
Excursion and conference dinner

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**Keynote 4 (Room: KBS12)**  
Trends and Challenges in Predictive Analytics  
*Jaakko Hollmen*

10:30 - 11:00

**Coffee Break**

11:00 - 12:30  
**FOCS 5 (Room: KBS13)**  
Graph Theory and Scheduling Algorithms  
*Sufficient Conditions for a Graph to have a Hamiltonian Cycle*  
Benjamin Momège

**Enumerating Minimal Tropical Connected Sets**  
Dieter Kratsch, Mathieu Liedloff, Mohamed Yosri Sayadi

**Bamboo Garden Trimming Problem (Perpetual Maintenance of Machines with Different Attendance Urgency Factors)**  
Leszek Gasieniec, Ralf Klassing, Christos Levcopoulos, Andrzej Lingas, Jie Min, Tomasz Radzik

**DIKE (Room: KBS14)**  
Data, Information and Knowledge Engineering  
**Webpage Menu Detection Based on DOM**  
Julian Alarte, David Insa, Josep Silva

**A Hybrid Model for Linking Multiple Social Identities across Heterogeneous Online Social Networks**  
Athanasios Kokkos, Theodoros Tzouramanis, Yannis Manolopoulos

**Eco Data Warehouse Design Through Logical Variability**  
Selma Bouarar, Ladjel Bellatreche, Amine Roukh

**Tutorial 3 (Room: KBS15)**  
Unifying Theories of Programming: Principles, Theories and Tools  
Andrew Butterfield

12:30 - 13:30  
Lunch

14:30  
Excursion and conference dinner *(meet at the lobby of ‘Kemmy Building’)*
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<thead>
<tr>
<th>Time/Day</th>
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<tbody>
<tr>
<td>09:00-10:30</td>
<td><strong>Keynote 5</strong></td>
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<td>Model-driven Development in Practice: From Requirements to Code</td>
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<td>Óscar Pastor López</td>
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<td>10:30-11:00</td>
<td>Coffee Break</td>
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<td>11:00-12:30</td>
<td><strong>FOCS 6</strong></td>
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<td>Quantum and Matrix Algorithms</td>
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<tr>
<td>11:00-12:30</td>
<td><strong>Tutorial 4</strong></td>
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<td>Verification and Test-case Generation from Architectural Models of Automotive Systems</td>
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<td><strong>Student Research Forum</strong></td>
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<td>Lunch</td>
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<td><strong>Keynote 6</strong></td>
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<td>Network Constructors: A Model for Programmable Matter</td>
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<td>Paul Spirakis</td>
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<td>14:30-16:00</td>
<td><strong>Tutorial 5</strong></td>
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<td>Plasma Lab Statistical Model Checker: Architecture, Usage and Extension</td>
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<td>14:30-16:00</td>
<td><strong>Student Research Forum</strong></td>
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<tr>
<td>16:30-18:00</td>
<td><strong>FOCS 7</strong></td>
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<td>Planar and molecular graphs</td>
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<tr>
<td>16:30-18:00</td>
<td><strong>Student Research Forum</strong></td>
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09:00 - 10:30

**Keynote 5 (Room: KBS12)**
Model-driven Development in Practice: From Requirements to Code
Óscar Pastor López

10:30 - 11:00

**Coffee Break**

11:00 - 12:30

**FOCS 6 (Room: KBS13)**
Quantum and Matrix Algorithms

**Exact Quantum Query Complexity of EXACTnk**
Andris Ambainis, Janis Iraids, Daniel Ngaj

**Adjacent Vertices can be Hard to Find by Quantum Walks**
Nikolajs Nahimov, Raqueline Santos

**Matrix Semigroup Freeness Problems in SL(2,Z)**
Sang-Ki Ko, Igor Potapov

**Tutorial 4 (Room: KBS14)**
Verification and Test-case Generation from Architectural Models of Automotive Systems
Cristina Seceleanu

**Student Research Forum (Room: KBS15)**
Increasing Embedded Systems' Quality through Automated Specification and Analysis of Requirements and Behavioural Models
Predrag Filipovik

Identifying Architecturally Significant Requirements: An Empirical Study
Feng Chen

CINCO-based creation of XMDD community platform
Denis Kuehn

Investigating Social Networking Systems as a Way to Overcome Social Isolation of Older Adults Living in Rural Areas: A Research Proposal
Bilal Ahmed
12:30 - 13:30

**Lunch**

14:30 – 16:00

**Keynote 6 (Room: KBS12)**

Network Constructors: A Model for Programmable Matter  
Paul Spirakis  
16:00 – 16:30

**Coffee Break**

16:30 – 18:00

**FOCS 7 (Room: KBS13)**

Quantum and Matrix Algorithms

**Order-Preserving 1-String Representations of Planar Graphs**  
Martin Derka, Therese Biedl

**How to Draw a Planarization**  
Thomas Bläsius, Marcel Radermacher, Ignaz Rutter

**Finding Largest Common Substructures in Molecules in Quadratic Time**  
Andre Droschinsky, Nils Kriege, Petra Mutzel

**Tutorial 5 (Room: KBS14)**

Plasma Lab Statistical Model Checker: Architecture, Usage and Extension  
Axel Legay, Louis-Marie Traonouez

**Student Research Forum (Room: KBS15)**

Improving Mobile VoIP Quality Through Bandwidth Optimisation  
Rafael Dantas

It’s about time: applying temporality to improve productivity in Irish software development teams  
Mairead O’Connor
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<thead>
<tr>
<th>Time/Day</th>
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<th>Details</th>
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| 09:00-10:30 | Keynote 7 | Verifying Parametric Thread Creation  
Igor Walukievicz |
| 10:30-11:00 | Coffee Break |  |
| 11:00-12:30 | FOCS 8  
Coloring and Vertex Covers | FOCS 9  
Algorithms for Strings and Formal Languages |
| 12:30 | Closing Ceremony | Announcement of SOFSEM 2018 |

09:00 - 10:30

**Keynote 7 (Room: KBS12)**

Verifying Parametric Thread Creation  
Igor Walukievicz

10:30 - 11:00

**Coffee Break**

11:00 - 12:30

**FOCS 8 (Room: KBS13)**

Coloring and Vertex Covers

**Lower Bounds for Online Interval Coloring with Vector and Cardinality Constraints**  
Grzegorz Gutowski, Patryk Mikos

**The Approximability of Partial Vertex Covers in Trees**  
Vahan Mkrtchyan, Ojas Parekh, Danny Segev, K. Subramani

**FOCS 9 (Room: KBS14)**

Algorithms for Strings and Formal Languages

**Longest Common Subsequence in at least k Length Order-Isomorphic Substrings**  
Yohei Ueki, Diptarama, Masatoshi Kurihara, Yoshiaki Matsuoka, Kazuyuki Narisawa, Ryo Yoshinaka, Hideo Bannai, Shunsuke Inenaga, Ayumi Shinohara

**Computing Longest Single-Arm-Gapped Palindromes in a String**  
Shintaro Narisada, Diptarama, Kazuyuki Narisawa, Shunsuke Inenaga, Ayumi Shinohara

**Edit-Distance between Visibly Pushdown Languages**  
Yo-Sub Han, Sang-Ki Ko

12:30

**Closing Ceremony (Room: KBS12)**

Announcement of SOFSEM 2018