Koli Calling 2018 Program

Thursday, 22 November

Koli Bus Schedule

- 17:15 Joensuu Airport (the bus will wait for AY345 at 17:15)
- 19:00 Science Park
- 19:30 Joensuu Railway Station (the bus will wait for IC7 at 19:32)

21.15 Welcome buffet at Sokos Hotel Koli

Friday, 23 November

07.00 – 08.50 Breakfast (at the Koli Sokos Hotel Restaurant)

08:30 – 8:50 Posters set up (TBC)

09.00 Opening session: Mike Joy, Petri Ihantola

09.10 Session 1: Starting from school.
Chair: Nick Falkener. [80 min]

- Improving Assessment of Computational Thinking Through a Comprehensive Framework (short paper): *Ilenia Fronza, Demis Basso, Claus Pahl and Alessandro Colombi*
- Second Level Computer Science: The Irish Journey Begins (short paper): *Keith Quille, Roisin Faherty, Susan Bergin and Brett A. Becker*
- Drafting a Data Science Curriculum for Secondary Schools (short paper): *Birte Heinemann, Simone Opel, Lea Budde, Carsten Schulte, Daniel Frischemeier, Rolf Biehler, Susanne Podworny and Thomas Wassong*
- A Framework for Computing Education: Hybrid Interaction System. The need for a bigger picture in computing education: *Carsten Schulte and Lea Budde*

10.30 Short break

10.50 Session 2: Motivation and course design.
Chair: Ilkka Jormanainen. [80 min]

- Impact of Physical Computing on Learner Motivation: *Mareen Przybylla and Ralf Romeike*
- An Exploration of Grit in a CS1 Context (short paper): *Nikki Sigurdson and Andrew Petersen*
- On Supplementing Theoretical Computer Science Courses using E-Learning: *Arno Wilhelm-Weidner and Nadine Bergner*
- Designing a Blended Course in Android App Development using 4C/ID (short paper): *Marco Marcellis, Erik Barendsen and Jeroen van Merriënboer*

12.10 Lunch

13.10 Session 3: Supporting program(ming) comprehension (teaching).
Chair: André Santos. [60 min]

- Eye-movement Modeling Examples in Source Code Comprehension: A Classroom Study: *Roman Bednarik, Carsten Schulte, Lea Budde, Birte Heinemann and Hana Vrzakova*
- Role of Live-coding in Learning Introductory Programming: *Adalbert Gerald Soosai Raj, Jignesh Patel, Richard Halverson and Erica Rosenfeld Halverson*
- PCEX: Interactive Program Construction Examples for Learning Programming: *Roya Hosseini, Kamil Akhuseyinoglu, Andrew Peterson, Christian D. Schunn and Peter Brusilovsky*

14.10 Short break

14.30 Session 4: Supporting program(ming) comprehension (tools).
Chair: Carsten Schulte. [60 min]

- Enhancing Visualizations in Pedagogical Debuggers by Leveraging on Code Analysis: *André L. Santos*
- Earthworm - Automated Decomposition Suggestions (short paper): *Nupur Garg and Aaron Keen*
- Automatic Assessment of Source Code Highlighting Tasks - Investigation of different means of measurement: *Matthias Kramer, Mike Barkmin, Torsten Brinda and David Tobinski*

15.30 Refreshments and coffee break

16.00 Session 5: Data mining.
Chair: Judy Sheard. [40 min]

- Investigating the Applicability of the Normalized Programming State Model to BlueJ Programmers: *Brad Richards and Ayse Hunt*
- An Application to Discover Cheating in Digital Exams (short paper): *Julia Opgen-Rhein, Bastian Küppers and Ulrik Schroeder*

16.40 – 17.20 Special Session: Craft- and Project-based Making for STEAM Learning
Workshop – Outcomes and Prospects
Calkin Suero Montero

17.20 Program ends, free discussion time and preparation for dinner

17.20 – 18.30 PC meeting

19.00 Buffet Dinner

Sauna available 21.00-23.00

- 21:00 – 22:00 Women
- 22:00 – 23:00 Men

Saturday, 24 November

07.00 – 08.50 Breakfast

09.00 Keynote

Using Blocks for Professional Development – Are You Crazy?
Professor Michael Kölling, Department of Informatics, King's College London, UK

10.10 Short break

10.30 Session 6: Conceptions in computing and misconceptions.
Chair: Erik Barendsen. [80 min]

- Middle School Learners' Conceptions of Social Networks - Results of an Interview Study (K12 interviews): *Torsten Brinda, Matthias Kramer and Yannick Beeck*
- Discovering Missing Stages in the Teaching of Algorithm Analysis: an APOS-based study (short paper): *Andrew Kay and Shun Ha Sylvia Wong*
- Statistical Frequency-Analysis of Misconceptions In Object-Oriented-Programming - Regularized PCR Models for Frequency Analysis across OOP Concepts and related Factors: *Riko Kelter, Matthias Kramer and Torsten Brinda*
- What Are They Thinking? Eliciting Student Reasoning About Troublesome Concepts in Introductory Computer Science: *Cazembe Kennedy and Eileen Kraemer*

11.50 Lunch

12.50 – 14.40 Koli Calling Nature Walk – Free time for exploring the Koli National Park

14.40 Poster Session (7), with refreshments.
Chairs: Mike Joy and Petri Ihantola. [80 min]

- Teaching Programming in Kenya and South Africa: What is difficult and is it universal? *Jecton Tocho Anyango and Hussein Suleman*
- Leveraging Curricular Activities to Foster Software Engineering Principles in Non-Vocational Schools: *Ilenia Fronza and Claus Pahl*
- Scaffolding the Design Process using Parsons Problems: *Rita Garcia, Katrina Falkner and Rebecca Vivian*
- Backstage: A Versatile Platform Supporting Learning and Teaching Format Composition: *Niels Heller, Sebastian Mader and François Bry*
- Aligning Software Testing Activities to V-Model Phases: *Timo Hynninen, Antti Knutas and Jussi Kasurinen*
- On computer science major students' motivation in a practically oriented robotics course: *Ilkka Jormanainen*
- Facilitating Computational Thinking through Digital Fabrication: *Calkin Suero Montero*
- Integrating Computing Education to Teacher Education: *Lais Oliveira Leite, Sari Havu-Nuutinen and Calkin Suero Montero*
- Five Years of Mastery Learning-What did we learn? *Claudia Ott, Brendan McCane and Nick Meek*
- The Teacher's Role in Educational Robotics Competitions: *Nicolai Pöhner*

- An Interactive Learning Environment for Software Engineering Design Patterns: *Tobias Reischmann and Herbert Kuchen*

16.00 Session 8. Exercises and Feedback.
Chair: Andrew Petersen. [60 min]

- The lone wolf dies, the pack survives? Analyzing a Computer Science Learning Application on a Multitouch-Tabletop: *Matthias Ehlenz, Thiemo Leonhardt, Christian Cherek, Wiktoria Wilkowska and Ulrik Schroeder*
- Learning Programming Languages as Shortcuts to Natural Language Token Replacements: *Angelos Barmpoutis*
- Analysis of Students' Peer Reviews to Crowdsourced Programming Assignments (short paper): *Nea Pirttinen, Vilma Kangas, Henrik Nygren, Juho Leinonen and Arto Hellas*

17.00 Program ends. Free discussion time, Spa visit and preparation for dinner

20.00 Dinner Buffet

Sunday, 25 November

07.00 – 08.30 Breakfast; hotel checkout

08.45 Departure – Koli Bus Schedule

- 08.45 Departure from Koli
- 10.00 Joensuu Airport (AY344 to Helsinki at 11.35)
- 10.40 Joensuu Railway Station (IC8 to Helsinki at 12.12)
- 11.00 Joensuu Science Park