

Koli Calling 2017 Program

Thursday 16 November

Koli Bus schedule

- 17:15 Joensuu Airport. Receiving participants arriving on Flight AY345
- 18:00 Joensuu Science Park. Light refreshments and pre-Koli trip informal programme
- 19:29 Joensuu Railway Station. Receiving participants arriving on Intercity 7 train
- 20:40 Arrival to Sokos Hotel Koli (registration, etc.)

21.15 Welcome buffet at Sokos Hotel Koli

Friday 17 November

*Registration opens at 8:30 am
at the Ukko Nature Centre, Auditorio Vaarasali*

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

08:30 – 8:55 Posters set up (at Auditorio Vaarasali, Ukko Nature Centre)

09.00 Opening session: Calkin Suero Montero, Mike Joy

09.10 Session 1: Computational Thinking. Chair Valentina Dagiene [70 min]

How Presentation Affects the Difficulty of Computational Thinking Tasks: An IRT Analysis
Violetta Lonati, Dario Malchiodi, Mattia Monga and Anna Morpurgo

Guerrilla 1 -

Student Perspectives on Mathematics in Computer Science
Nikki Sigurdson and Andrew Petersen

Guerrilla 2 -

Guerrilla 3 -

Computational Thinking as an Emergent Learning Trajectory of Mathematics
Pia Niemelä, Tiina Partanen, Maarit Harsu, Leo Leppänen and Petri Ihantola

Guerrilla 4 -

Guerrilla 5 –

10.20 Refreshments (at the Ukko Nature Centre)

10.40 Session 2: Data Management, Support Tools. Chair André Santos [105 min]

An Intelligent Tutor to Learn the Evaluation of Microcontroller I/O Programming Expressions
Hugo Arends, Bastiaan Heeren, Hieke Keuning and Johan Jeuring

Integrating Parson's Programming Puzzles into a Game-based Mobile Learning Application (*short paper*)
Solomon Sunday Oyelere, Jarkko Suhonen and Teemu H. Laine

Guerrilla 6 –

The Nature of Physical Computing in Schools
Mareen Przybylla and Ralf Romeike

(10-minute break)

Examining Manual and Semi-Automated Methods of Analysing MOOC Data for Computing Education (*short paper*)
Michael Morgan, Matthew Butler, Neena Thota, Aletta Nylén, Anna Eckerdal and Päivi Kinnunen

Guerrilla 7 –

Key Concepts of Data Management - An Empirical Approach
Andreas Grillenberger and Ralf Romeike

12.25 – 13:25 Lunch (at the Koli Sokos Hotel Restaurant)

Celebrating the 100 years Finnish independence anniversary the 15mins-long short film “Mustarinta – A Film about Koli” will be shown at the Auditorio Vaarasali from 13:20. Participation is optional.

13.35 Session 3: Programming Teaching and Learning. Chair Arto Hellas [90 min]

The Program is the System: Introduction to Programming without Abstraction (*short*)
Matthias Hauswirth, Andrea Adamoli and Mohammad Reza

Guerrilla 8 -

Guerrilla 9 -

Designing and Comparing Two Scratch-Based Teaching Approaches for Students Aged 10-12 Years (*short paper*)
Nienke Van Es and Johan Jeuring

Metacognitive Calibration when Learning to Program
Matthias Hauswirth and Andrea Adamoli

Guerrilla 10 -

Guerrilla 11 -

The Impact of a Single Lecture on Program Plans in First-Year CS (*short paper*)
Francisco Enrique Vicente Castro, Kathi Fisler and Shriram Krishnamurthi

Guerrilla 12 -

An Exploratory Study of How Programming Instructors Illustrate Variables and Control Flow
(short paper)

André Santos and Hugo Sousa

15.05 Refreshments and Pop-up Workshop – eCraft2Learn part I

15.40 *Workshop wrap-up*

16.00 Session 4: Affect and Help (1), Chair Anna Eckerdal [60 min]

Student Affect in CS1: Insights from an Easy Data Collection Tool

Patricia Haden, Dale Parsons, Krissi Wood and Joy Gasson

Classifying the Nature of Lecturer Intervention on Computer Science Student
Behaviour (short paper)

Nickolas Falkner, Claudia Szabo and Antti Knuttas

Guerrilla 13 -

Teaching Master's Degree Students to Read Research Literature: Experience in a
Programming Languages Course 2002-2017 (short paper)

Antti-Juhani Kaijanaho

Guerrilla 14 -

17.00 Program ends, free discussion time and preparation for dinner

17.05 – 18.35 PC meeting

19.00 Christmas Dinner Buffet * (at the Koli Sokos Hotel Restaurant)

* Sauna available 21.00-23.00

Saturday 18 November

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

09.00 Keynote: Chair, Mike Joy [60 mins]

What Can We Learn about Teaching from MOOCs?

Professor Katrina Falkner, University of Adelaide, Australia

10.00 *Refreshments (at the Ukko Nature Centre)*

10.20 Session 5: Programming and Program Design. Chair Ville Isömöttönen [105 min]

Familiar Contexts and the Difficulty of Programming Problems (short paper)

Michelle Craig, Jacqueline Smith and Andrew Petersen

Guerrilla 15 -

Solving Parsons Problems versus Fixing and Writing Code

Barbara Ericson, Lauren Margulieux and Jochen Rick

Guerrilla 16 -

Identification Based on Typing Patterns between Programming and Free Text (*short paper*)
Petrus Peltola, Vilma Kangas, Nea Pirttinen, Henrik Nygren and Juho Leinonen

Guerrilla 17 -

(10-minute break)

Designing a Multi-Faceted SOLO Taxonomy to Track Program Design Skills through an Entire Course
Francisco Enrique Vicente Castro and Kathi Fisler

Guerrilla 18 -

On the Value of Using an Interactive Electronic Textbook in an Introductory Programming Course
(*short paper*)

Kerttu Pollari-Malmi, Julio Guerra, Peter Brusilovsky, Lauri Malmi and Teemu Sirkiä

12.05 – 13:05 Lunch (at the Koli Sokos Hotel Restaurant)

13.10 – 14.45 Koli Calling Nature Walk

Free time for exploring the Koli National Park

14.50 Guerrilla Posters Session and Pop-up Workshop – eCraft2Learn part II (6). Chairs Calkin Suero Montero and Mike Joy, with refreshments [80 min]

Comparing Different Styles of Automated Feedback for Programming Exercises
Aivar Annamaa, Reelika Suviste and Varmo Vene

Code Structure Difficulty in OOP – An Exploration Study Regarding Basic Cognitive Process
Mike Barkmin, David Tobinski, Matthias Kramer and Torsten Brinda

Plagiarism Networks: Finding Instances of Copied Answers in an Online Introductory Programming Environment
Timo Hynninen, Antti Knutas and Jussi Kasurinen

Introducing Computational Thinking to 5 and 6 Year Old Students in Dutch Primary Schools; an Educational Design Research Study
Josina I. Koning, Hylke H. Faber and Menno D.M. Wierdsma

Trajectories of Student Interaction with Learning Resources in Blended Learning: The Case of Data Science Minor
Ilya Musabirov and Alina Bakhitova

Automatic vs Manual Assessment of Programming Tasks
Vreda Pieterse and Janet Liebenberg

PandionJ: A Pedagogical Debugger Featuring Illustrations of Variable Tracing and Look-ahead
André Santos and Hugo Sousa

Towards a Dialectic Relationship between the Implicit and Explicit Nature of Computational Thinking – A Computer Semiotics Perspective
Thomas Spangenberg and Martin Brynskov

Let's Play! – Music Improvisation as a Medium to Facilitate Computational
Calkin Suero Montero and Kaisa Pihlainen

Teaching Programming to non-STEM Novices: A Didactical Study of Computational Thinking and non-STEM Computing Education

Thomas Hvid Spangsberg

Practical Thinking in Programming Education

Kristina von Hausswolff

Digital Capital - A Platform for Developing Computational Thinking

Tina Vrieler

Novice Programmers: What is the Match between Needs, Concepts and Learning Tools?

Henry Julie

Integration of Computational Thinking in undergraduate Geography Education

Jonathan Otto

Planning to write, designing to program (K-5 Abstraction in Action)

Jane Waite

Comparing different pedagogies and methods of teaching on computer science and software engineering

Taina Lintilä

Frameworks for Analyzing Computational Thinking in Primary School Students' Scratch Projects

Janne Fagerlund

I Think, therefore I Compute

Andrew Csizmadia

16.10 Session 7: Affect and Help (2). Chair Andrew Petersen [70 min]

Friends and Gurus: Do Students Ask for Help from Those They Know or Those Who Would Know

Mikko Nurminen, Pietari Heino and Petri Ihantola

Thought Crimes and Profanities whilst Programming (*short paper*)

Juho Leinonen and Arto Hellas

Exploring the Critical Incident Technique to Encourage Reflection during Project-Based Learning

Aletta Nylén and Ville Isomöttönen

Experiences of Teachers in Computing as Role Models: a Phenomenographic Study (*short paper*)

Virginia Grande, Anders Berglund and Mats Daniels

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

20:00 Dinner Buffet (at the Koli Sokos Hotel Restaurant)

Announcements: best paper award, best poster/demo award, best presentation award, feedback survey, green paper slip raffle

Sunday 19 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 11:00)*
- *10:40 Joensuu Railway station (InterCity 8 to Helsinki at 12:17)*
- *11:00 Joensuu Science Park*

*** Relax Spa and Sauna**

The sauna has always been part of Koli Calling, and will continue to be so. The sauna will be freely available on Friday night at the times indicated above, free drinks will be available in the sauna as part of the conference package.

The hotel also has a Spa. This is normally available throughout the day (for all hotel guests) until 20.00. One visit to the Spa is included in the conference package (with drink). *People will be required to pay the hotel for any additional visits.*