

# CSCL<sub>2015</sub>

## Exploring the Material Conditions of Learning

11th International Conference on Computer Supported Collaborative Learning

**Gothenburg, Sweden**

June 7th - 11th



International Society of  
the Learning Sciences



UNIVERSITY OF  
GOTHENBURG

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## PARTICIPANTS

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# WELCOME

We welcome you to CSCL 2015, the 11th International Conference on Computer Supported Collaborative Learning. The conference is a major international event, organized biennially by ISLS, which gathers together people involved in all aspects of the field of technology-based collaborative learning, including research, education, training and technology. CSCL concerns the nature of collaborative learning in technologically supported environments from empirical, theoretical, conceptual and design based approaches.

Within the learning sciences, the field of CSCL has continually raised the importance of the material conditions of learning. Reinvigorating this focus in this time of rapidly expanding forms of social, cognitive and technical mediation is particularly important. The conference theme this year is: Exploring the material conditions of learning: Opportunities and challenges for CSCL. The proliferation of digitized information, the affordances of digital technology and the current changes in the media ecology affect society at all levels. Not only do these material conditions influence the way we learn or what is considered relevant knowledge in the many social contexts of our lives, but they also set the premises for how knowledge is formed, how it is organised, made use of and communicated. Changing patterns of collaboration, authority and legitimacy of knowledge in society and its institutions have important implications for learning and cognitive processes and outcomes, and these changes are consequential for education, production, social administration and the public.

Given the high quality work that will be presented, we are confident that this will be a very a rewarding conference.

Welcome to the University of Gothenburg!

Oskar Lindwall and Sten Ludvigsen, Conference Chairs

# COMPUTERS AND INTERNET

## Wireless Network

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If your home organisation/university is part of the eduroam community and your computer is set up for using the eduroam network, you should be able to connect to the internet the same way you do at home using our wireless network called eduroam.

In most campus areas you will also have access to the university wireless network. Connect your computer to the wireless network called GoteborgsUniversitet and login via a web browser using the id and password that are printed on the sticker that can be found on the inside of the cover of this program.

## Computer Room

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In room B1 115, there are 18 computers with internet access that are available for delegate use.

### Opening hours:

Monday, June 8th: 13.00–16.00

Tuesday, June 9th: 10.30–12.00 and 13.30–15.00

Wednesday, June 10th: 10.15–11.45 and 13.00–14.30

Thursday, June 11th: 10.30–12.00

## Lecture Rooms

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All the lecture rooms are equipped with a computer, a projector and speakers.

### Use of computer in the lecture room

The computer – a desktop PC – is connected to the internet and has Windows XP or Windows 7 and Microsoft Office 2010 installed. You need to have your presentation on a pc-formatted USB stick if you are using this computer.

### Use of your own laptop

If you prefer to use your own laptop, you need to bring an adaptor that fits the Swedish power socket 230 V.

To connect your computer to the projector it must have a VGA port, either on board, or via an adapter. If your laptop does not have a VGA port you must bring an adapter.

# PRACTICALITIES

## Registration Desk

The registration desk is situated at Pedagogen A, entrance floor, and will be open all day, throughout the conference.

## Cloakroom

The cloakroom is situated at Pedagogen A, basement floor, room AK 2138, and will be accessible throughout the conference. It will be staffed in the mornings, during lunch breaks and in the afternoons. For access at other times, please contact the registration desk.

## Printing and Photocopying

Please go to the registration desk for help.

## Conference Room

Can be booked at the registration desk.

# IMPORTANT PHONE NUMBERS

<b>SOS</b>	<b>112</b>
<b>Sahlgrenska University Hospital</b>	<b>+46 (0)31 342 10 00</b>
<b>Dentist, Folk tandvårdens akuttandvård</b>	<b>+46 (0)10 441 88 00</b>
<b>Taxi Göteborg</b>	<b>+46 (0)31 650 000</b>
<b>Taxi Kurir</b>	<b>+46 (0)31 27 27 27</b>
<b>Doris Gustafson, Chief Administrator</b>	<b>+46 (0)708 72 99 65</b>

# CONFERENCE VENUE

The confence venue consists of two sites: Pedagogen A and B. At the main conference, there will be four rooms with tiered seating: BE 014, BE 015, and BE 036 with 100 seats in each and Kjell Härnqvist Hall with 300 seats. In addition, there are three rooms with more flexible seating: BE 016 and B1 114 with 40 seats, BE 026 with 25 seats and AK 2134+2135 with a total of 80 seats. The opening of the conference and the keynotes will also be telecasted to the adjacent room AK2 137.

## Venue Addresses

Pedagogen A, Västra Hamngatan 25 (official entrance)

Pedagogen B, Läroverksgatan 15

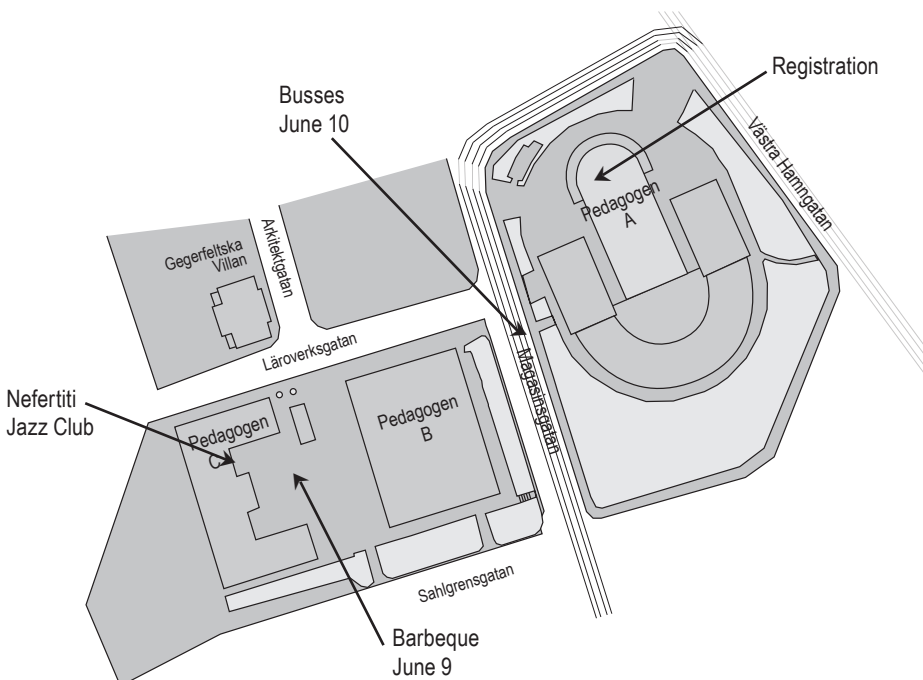
Restaurang Valand, Kungssportsavenyn 19

River Side Café, Dockpiren

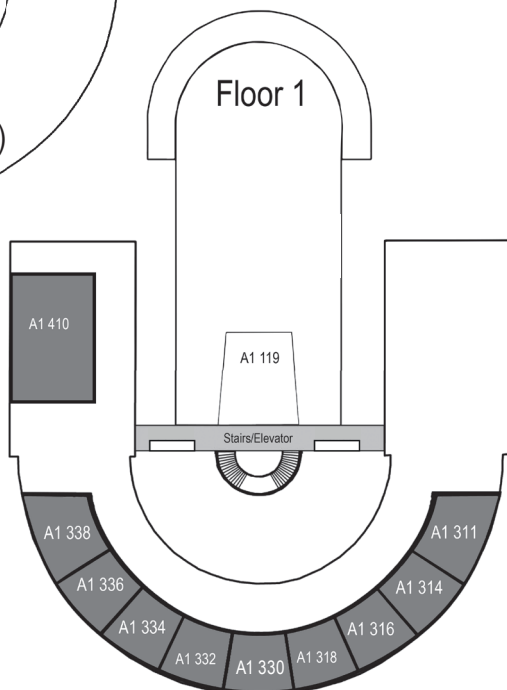
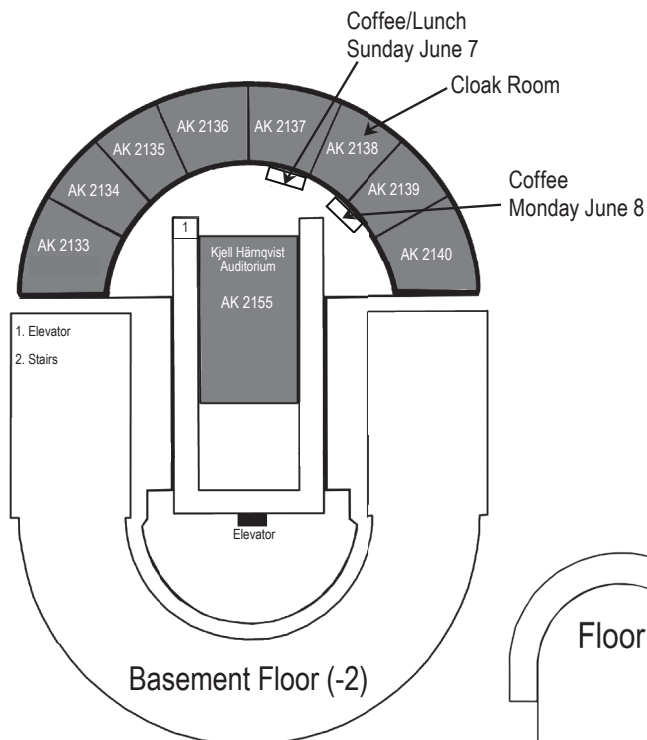
## Maps

You will find maps on the official website.

<http://www.isls.org/cscl2015/maps.html>

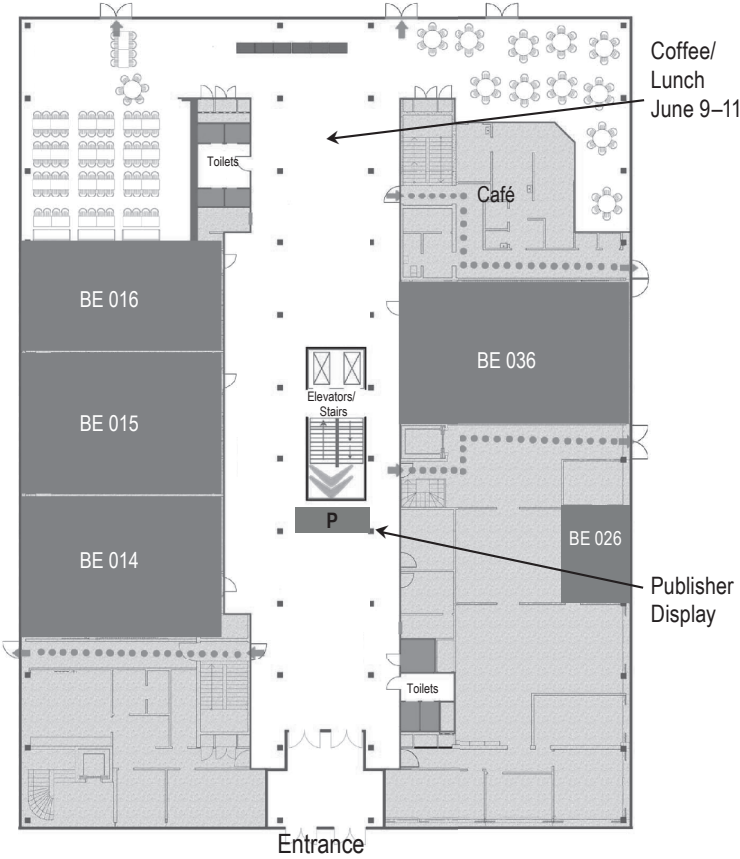


# PEDAGOGEN A

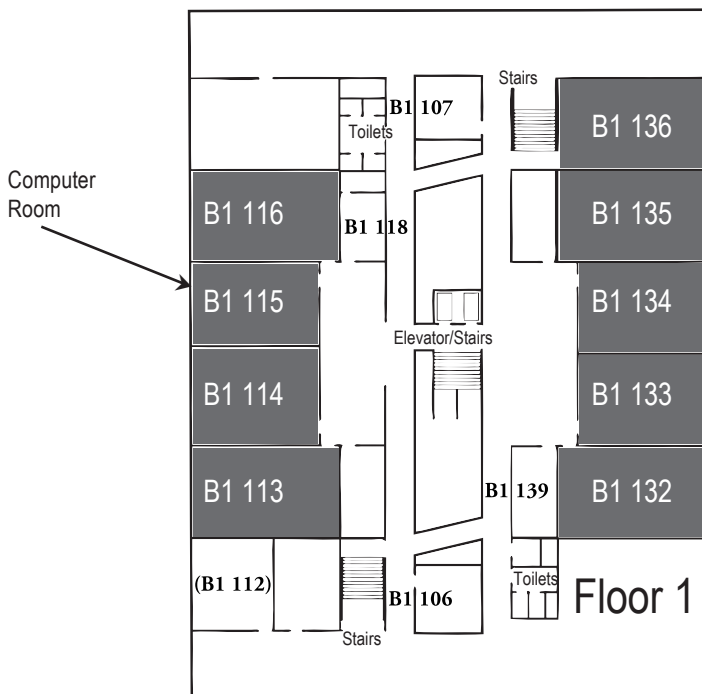




# PEDAGOGEN BE – ENTRANCE FLOOR



# PEDAGOGEN B1 – FIRST FLOOR



# WELCOME RECEPTION

An informal welcome reception will be organised by the City of Gothenburg with drinks and finger food. This event will follow the final sessions on Monday June 8th between 18.45–20.00 at the restaurant Valand.

The reception is free of charge to all registered conference delegates. Please observe that you need to have registered for the reception when registering for the conference. You will find two tickets together with your conference badge. These tickets will allow you two drinks at the bar. There will also be the possibility to buy additional drinks.

The Welcome Reception will take place at Restaurang Valand, Kungssportsavenyn 19.

# VALAND



## Getting there

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### By foot

We will have guides that walk us the short distance to Valand (app. 10 min. walk). You can find the guides outside Pedagogen B.

### Taxi

Call Taxi Göteborg: +46 (0)31 650 000 or Taxi Kurir: +46 (0) 31 27 27 27.

## BARBEQUE

On the evening of June 9th between 19.00–20.30, there will be a barbecue at the Faculty of Education. Drinks will be served by the legendary Jazz club Nefertiti, which is situated in the basement of Pedagogen C. Nefertiti will stay open after the BBQ and there will also be a DJ playing music.

In the conference bag, there are two tickets that can be used for drinks. It is also possible to buy drinks from the bar. Please note that according to Swedish alcohol regulations, you are not allowed to take the drinks away from the place that you bought them – you cannot bring them back into the University.



## CONFERENCE DINNER

The Conference Dinner will take place on June 10th between 19.30-22.00 at River Restaurant on the Pier. Busses will take participants to and from the Conference Dinner. (see page 4.) Busses leave at 19.00 from Pedagogen and 22.30 from the restaurant.



# PRESENTATION FORMATS

## Paper Sessions

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There are two presentation formats for the paper sessions: a traditional format and an interactive format.

### Interactive Format

In the interactive sessions, each of the four presenters gives a brief presentation. The individual presentations are then followed by a more interactive format – for instance, a common discussion at the end of the session or 3 or 4 extended round-table discussions with subgroups changing every 20 minutes. In some cases, the authors bring questions to discuss with members of the audience or they might bring supplementary materials for people to see, touch, and play with at their station. The room that is used has 42 chairs and 21 small tables. Both chairs and tables have wheels and can easily be reorganised to configurations that suit different formats.

### Traditional Format

In the "traditional" paper sessions, each of the four presenters give a 15 minute talk followed by a 5 minute discussion. Given that the total length of the sessions is 90 minutes, this also means that there is room for a 10 minute general discussion in the end. There is a person assigned as chair to each session. These presentations take place in lecture rooms with tiered seatings that have room for 100 persons.

## Symposia

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Symposia are for conveying larger ideas or results about a specific issue. Discussion among members of the symposium and with the audience are moderated to focus on certain positions or controversies.

## Poster Sessions

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The posters are presented at two different sessions that takes place at the ground floor of the Faculty of Education, House B. These sessions provide both the presenters and the audience an opportunity to engage in discussions about the presented research.

## Interactive Events

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These events enable participants to experiment with new interactive devices and environments for teaching and learning, explore designs for collaborative activities, or to try out and compare methods for research and practice. There is a particular interest in recently developed technologies as well as existing interactive technologies that support an innovative pedagogical model of collaborative learning.

## Data Sessions

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CSCL research in the Nordic countries has often featured various forms of interaction analysis. In a special track of data sessions, an organizer will present an excerpt of CSCL interaction (e.g., a video clip and a detailed log). During the sessions, the audience discuss how the material conditions of CSCL interaction can be seen at work in the excerpt.



# ➤ PROGRAMME ◀ CSCL 2015



# KEYNOTE SPEAKERS

## Steve Woolgar

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### **Mundane Governance – Government by Stealth?**

Popular conceptions of “government” tend to rely on a notion of politics which involves how people and institutions behave towards each other. Yet another, quite different, and much more pervasive form of government is often overlooked. This has to do with the way in which our lives are increasingly regulated in relation to very ordinary objects and everyday technologies. These aspects of daily life are mundane in the sense that they are ordinary, routine, unremarkable, run-of-the-mill, even boring. More interestingly, they are also mundane in the etymological sense of the term (latin: mundus: the world): these ordinary things seem to be just what they are: they are “of the world”. Our research focused on three main areas of contention about ordinary objects and technology:

the organisation and categorisation of different varieties of waste and recycling; the ways in which vehicles are subject to speed monitoring and parking regimes; and the management of passenger flow through airports. In short, we studied trash, traffic and transit.

We found a growing disquiet, often marked exasperation, about the increasing complexities of ordinary stuff. Now more than ever we seem to be governed through the small everyday routines, actions and objects by which we are surrounded. The problem gains particular significance when we notice that the same ordinary things are treated quite differently in different places, councils, regions and countries. This then is the government you don’t realise is all around you. Increasingly, it seems, ordinary, unremarkable stuff carries with it requirements for correct action and behaviour. Can we call this “government by stealth”? This description rather too easily implies a form of conspiracy theory; it suggests concerted and coherent strategies on the part of faceless bureaucrats eager to control the unknowing populous. Instead, our observations of mundane governance in practice reveal a striking degree of mess and muddle. So instead of a coherent system of government conspiracy, we find a chaotic amalgam of shifting uncertainties and complexity. Regulation in relation to ordinary things is, at best, a mess. To understand this we need a different approach to politics. Politics can no longer be thought of as simply antecedent to objects which are fixed and known; instead, we need a conception of politics which recognises the crucial importance of understanding how ordinary objects and things come to seem what they are.

June 8, 17.00-18.15, Kjell Hårnqvist Hall AK 2155  
and telecasted in AK 2136

## Karrie Karahalios

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### **Understanding and Encouraging Communication with Visualization**

Face-to-face communication requires a complex orchestration of various communicative channels that include gaze, gesture, expression, and vocalization. Visualization can highlight this invisible dance; it can also encourage and discourage specific communicative behaviors.

In this talk, I will present a trajectory of visualization work starting with the visualization of vocalization and moving towards the visualization of coordinated communicative behavior. In doing so, I will discuss the challenges faced when aggregating disparate streams of data, discuss when visualization is helpful, and pose the question: how does visualization translate to cognition?

June 9, 08.45-10.00, Kjell Härnqvist Hall AK 2155  
and telecasted in AK 2136

## Yvonne Rogers

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### **Suspense Matters**

Piaget is often cited for writing that when you teach children something you take away forever their chance of discovering it for themselves. This observation is profound in view of the modern academe's push towards ever more personalized learning, where the focus of much technology development is on measuring, rectifying and rewarding activity completion. How can we bring back the 'not knowing' in learning where suspense is what matters?

In my talk, I will consider how new technologies and interfaces can be designed to enable children to discover for themselves, through mindful engagement, awareness, conversation and reflection.

June 10, 08.30-09.45, Kjell Härnqvist Hall AK 2155  
and telecasted in AK 2136

## WORKSHOPS & TUTORIALS 08.30–17.00

### Doctoral Consortium

Cindy Hmelo-Silver (co-chair), Heisawn Jeong (co-chair), Erno Lehtinen (co-chair), Jan van Aalst (mentor), Kai Hakkarainen (mentor), Rebecca Cober, Suzanne Rhodes, Jennifer K. Olsen, Aditi Kothiyal, Ruth Boelens, Lorenzo Lucignano, Melanie Erkens, Mina Shirvani Boroujeni, Sven Heimbuch, Abigail C. Evans, Sania Zahra Zaidi, Lenka Schnaubert

A1 334

### Early Career Workshop

Ulrike Cress (co-chair), Nancy Law (co-chair), Jianwei Zhang (co-chair), Gerry Stahl (mentor), Alyssa White (mentor), Jennifer Pei-Ling Tan, Alan Hackbarth, Margarida Romero, Mike Tissenbaum, Michael Tan, Matthew Gaydos, I-Han (Sharon) Hsiao, Melanie E. Pepper, Michael M. Rook, Oliver Ferschke, Bodong Chen, Ning'er Zhou, Jason C. Yip

A1 311

### Mid-Career Workshop

Sean Goggins (co-chair), Kristine Lund (co-chair), Susan Yoon (co-chair), Eleni Kyza (mentor), Carolyn Penstein Rosé (mentor), Sadhana Puntambekar (mentor), Hanni Muukkonen, Steve Rutherford, Dimitra Tsovaltzi, Jakita O. Thomas

A1 332

### The Orchestrated Collaborative Classroom: Designing and Making Sense of Heterogeneous Ecologies of Teaching and Learning Resources

Luis P. Prieto, Yannis Dimitriadis, Andreas Harrer, Marcelo Milrad, Miguel Nussbaum, James D. Slotta

A1 316

### Designing Futures for Learning in the Crowd: New Challenges and Opportunities for CSCL

Marisa Ponti, Niclas Hagen, Thomas Hillman, Dick Kasperowski, Christopher Kullenberg, Igor Stankovic

A1 314

### Tutorial on CSCL in Vocational Education and Training (VET): The Current Critical State and Future Solutions

Raija Hämäläinen, Beat A. Schwendimann, Alberto Cattaneo

A1 318

### Crowd-Sourced Learning and Assessment in MOOCs

Sandra Milligan, Ulla Lunde Ringtved

A1 330

## WORKSHOPS & TUTORIALS 08.30–12.00

### Doctoral Consortium

Cindy Hmelo-Silver (co-chair), Heisawn Jeong (co-chair), Erno Lehtinen (co-chair), Jan van Aalst (mentor), Kai Hakkarainen (mentor), Rebecca Cober, Suzanne Rhodes, Jennifer K. Olsen, Aditi Kothiyal, Ruth Boelens, Lorenzo Lucignano, Melanie Erkens, Mina Shirvani Boroujeni, Sven Heimbuch, Abigail C. Evans, Sania Zahra Zaidi, Lenka Schnaubert

A1 334

### Early Career Workshop

Ulrike Cress (co-chair), Nancy Law (co-chair), Jianwei Zhang (co-chair), Gerry Stahl (mentor), Alyssa White (mentor), Jennifer Pei-Ling Tan, Alan Hackbarth, Margarida Romero, Mike Tissenbaum, Michael Tan, Matthew Gaydos, I-Han (Sharon) Hsiao, Melanie E. Pfeffer, Michael M. Rook, Oliver Ferschke, Bodong Chen, Ning'er Zhou, Jason C. Yip

A1 312

### Changing Teaching and Learning Practices in Schools with Tablet-Mediated Collaborative Learning (#TMCL15): Nordic, European and International Views

Isa Jahnke, Teresa Cerratto-Pargman, Anniken Furberg, Sanna Järvelä, Barbara Wasson

A1 338

### Supporting Synchronous Collaboration in K-12: Initial Experiences Using The WeCollabrify App Suite

Cathie Norris, Elliot Soloway

A1 330

### The Learning Sciences and CSCL: Past, Present, and Future

Keith Sawyer

A1 318

### Verbal Data Analysis Workshop: Introducing Geisler's Systematic Coding of Text, Talk, and Other Verbal Data

Lixiao Huang, Michael A. Evans

A1 314

### Maker Movement in Formal Education: Workshop for Research Design, Practices, and Technologies

Eric Hamilton, Hiroo Kato, Kim Welch, Sandra Sarmonpal, Traci Garff, Helen Teague, Antha Holt, George Foe-Aman, Lynette Foe-Aman, Joseph Carilus Ateng' Ogwel

A1 336

REGISTRATION 12.00–16.15

Entrance Floor

Entrance Hall Pedagogen A

ISLS MEETINGS 12.00–16.00

Closed – ISLS Education Committee Meeting (12.00–13.00)	A1 314
Closed – CSCL Committee Meeting (12.00–13.00)	A1 334
Closed – ISLS Technology Committee Meeting (12.00-13.00)	A1 338
Closed – JLS Board Meeting (13.00–14.00)	A1 314
Open – ISLS Technology Committee Meeting (13.00–13.30)	A1 338
Open – CSCL Community Meeting (14.00-15.00)	AK 2316
Open – NAPLES Meeting (15.00-16.00)	A1 338
Open – ISLS New Members Session (15.00-16.00)	AK 2136

OPENING SESSION 16.15–17.00

Oskar Lindwall, Sten Ludvigsen, Conference Chairs  
Roger Säljö, Dean of Faculty, Head of LinCS, University of Gothenburg  
Kjell Härnqvist Hall AK2 155 and telecasted in AK 2136

KEYNOTE LECTURE 17.00–18.15

Mundane Governance – Government by Stealth?  
Steve Woolgar, Linköping University, Sweden and Saïd Business School, University of Oxford, UK  
Kjell Härnqvist Hall AK 2155 and telecasted in AK 2136

WELCOME RECEPTION 18.45–20.00

Informal gathering sponsored by the City of Gothenburg, see page 10  
Restaurang Valand

Monday

## REGISTRATION 08.00–08.45

Entrance Floor

Entrance Hall Pedagogen A

## KEYNOTE LECTURE 08.45–10.00

### Understanding and Encouraging Communication with Visualization

Karrie Karahalios, University of Illinois, USA

Kjell Härnqvist Hall AK2 155 and telecasted in AK2 136

## COFFEE BREAK 10.00–10.30

Café area

Pedagogen BE

## PARALLEL SESSIONS 10.30–12.00

### ►SYMPOSIUM◀

#### Artefacts Mediating Practices across Time and Space: Sociocultural Studies of Material Conditions for Learning and Remembering

Åsa Mäkitalo (chair), Erno Lehtinen (discussant)

#### Building Space-Time Frames and Shared Understanding in a Media Design Task

Giuseppe Ritella, Beatrice Ligorio, Kai Hakkarainen

#### Learning in a Material World: Reflection in Science Education as Embodied Practice

Hans Christian Arnseth, Alfredo Jornet Gil, Ingeborg Krange

#### “I was Shocked and Embarrassed by the Results”: Carbon Footprint Calculators as Mediators of Tangible Information and as Resources for Knowing and Reasoning about Emissions

Géraldine Fauville, Annika Lantz-Andersson, Roger Säljö

#### Documentary Practices in Transformation: Follow-Up Consultations with Patients and Health Care Staff in Hypertension Care

Mona Lundin, Åsa Mäkitalo

BE 036

### ►SYMPOSIUM◀

#### Technology-Enhanced Learning Communities on a Continuum between Ambient to Designed: What Can We Learn by Synthesizing Multiple Research Perspectives?

Yael Kali (co-organizer), Adi Kidron (co-organizer), Paul A. Kirschner (chair), Christopher Hoadley (discussant)

#### The Role of Social Network Tools in the Integration of Immigrant Students into Academic Life

Meital Amzalag, Nelly Elias, Yael Kali

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## **Designing Future Learning Spaces Based on Ambient Analysis of Epistemic Socialization**

Uzi Brami, Iris Tabak

## **Designing Network Support for Online Discourse Based on Ambient Group Communication Studies**

Carmel Kent, Esther Laslo, Sheizaf Rafaeli, Ayelet Baram-Tsabari

## **Scientific Literacy in Public Media Reader Comments as Interpreted Using Curricular Lenses**

Esther Laslo, Ayelet Baram-Tsabari

## **Promoting Teacher Professional Growth for Technology-Enhanced Outdoor Inquiry Teaching**

Keren S. Levy, Yael Kali, Tali Tal

## **Tracing the Emergence and Growth of Epistemic Norms in a Designed TEL Community**

Sarit Barzilai, Dani Ben-Zvi, Oshra Duek

## **Dimensions of Collaboration on a Tabletop Interface for Children with Autism Spectrum Disorder**

Patrice L. (Tamar) Weiss

AK 2134 and AK 2135

### **► MOOCs: PAPER SESSION, TRADITIONAL FORMAT ◀**

## **Materiality of Online Students' Peer-Review Activities in Higher Education**

Teresa Cerratto-Pargman, Ola Knutsson, Petter Karlström

## **Looking AT versus looking THROUGH: A Dual Eye-tracking Study in MOOC Context**

Kshitij Sharma, Daniela Caballero, Himanshu Verma, Patrick Jermann, Pierre Dillenbourg

## **Resource Usage in Online Courses: Analyzing Learner's Active and Passive Participation Patterns**

Sabrina Ziebarth, German Neubaum, Elias Kyewski, Nicole Krämer, Ulrich Hoppe, Tobias Hecking, Sabrina Eimler

## **Fostering Discussion across Communication Media in Massive Open Online Courses**

Oliver Ferschke, Iris Howley, Gaurav Tomar, Diyi Yang, Yu Liu and Carolyn Penstein Rosé

BE 015

### **► DATA SESSION ◀**

## **Bodily-Material Resources in CSCL: Children's Embodied and Multimodal Collaborative Learning of Scale around Touchscreens**

Jacob Davidsen, Thomas Ryberg

BE 026

## LUNCH 12.00–13.30

Café area

Pedagogen BE

## ISLS MEETING 12.15–13.30

Closed – ISLS Board Meeting

B1 114

## PARALLEL SESSIONS 13.30–15.00

### ► INVITED SYMPOSIUM ◀

#### Research Trends on Design and Computational Aspects of CSCL Environments

Yannis Dimitriadis (chair), Carolyn Penstein Rosé (discussant)

##### Architectural and Design for Learning Facets of CSCL Environments

Yannis Dimitriadis

##### Learning Analytics in CSCL

H. Ulrich Hoppe, Andreas Harrer

##### Current Trends and Directions in Design of Mobile CSCL

Chee-Kit Looi, Lung-Hsiang Wong

##### Collaborative Learning, Orchestration, and new Ways of Distributing Technologies in the Classroom

Yvonne Rogers

##### Synthesis and Discussion

Carolyn Penstein Rosé

BE 036

### ► SYMPOSIUM ◀

#### Researching and Designing for the Orchestration of Learning in the CSCL Classroom

Emma Mercier (chair), Nikol Rummel (discussant)

##### Learning Analytics and Teachers' Awareness in the CSCL Classroom

Roberto Martinez-Maldonado

##### Live Content Updates and Teacher Intervention in Collaborative Groups

Emma Mercier

##### The 3R Orchestration Cycle: Fostering Inquiry Discourse in a CSCL Classroom

Cresencia Fong, Rebecca Cober, Richard Messina, Tom Moher, Julia Murray, Ben Peebles, James D. Slotta

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### **Exploring Teacher Behaviour Prior to the Initiation of Mini-Plenaries During Collaborative Group Work**

Andrew Joyce-Gibbons

### **Supporting Collaborative Interactions during Computing in K-5 Classrooms**

Maya Israel

### **Ready, Able, and Willing to Adopt CSCL Practices**

Karin S. Forssell

### **Teachers' Reflections on Implementing Collaborative Learning in Classrooms**

Saadeddine Shehab

BE 014

## **►KNOWLEDGE BUILDING 1: PAPER SESSION, TRADITIONAL FORMAT ◀**

### **A Multivocality Approach to Epistemic Agency in Collaborative Learning**

Jun Oshima, Ritsuko Oshima, Wataru Fujita

### **Examining the Real and Perceived Impacts of a Public Idea Repository on Literacy and Science Inquiry**

Camillia Matuk, Marcia C. Linn

### **Fostering Sustained Knowledge Building through Metadiscourse Aided by the Idea Thread Mapper**

Jianwei Zhang, Mei-Hwa Chen, Dan Tao, Yanqing Sun, Jiyeon Lee, Darlene Judson

### **“That’s What Everyone Else Is Saying...”: Collaborative Reflection-in-Action during Creative Activities**

Michael P. Downton

BE 015

## **►SOCIAL MEDIA: PAPER SESSION, INTERACTIVE FORMAT◀**

### **Connected Biology: A Usability Study of Web 2.0 Tools**

Silvia d'Apollonia, Suzanne Kunicki, Murray Bronet

### **Playing with Gameful Activities and Assessments: Avatars and Experience Points in a Graduate Course**

Beaumie Kim

### **Investigating Collaborative Reflection with Peers in an Online Learning Environment**

Qiyun Wang, Choon Lang Quek

### **Navigating Connected Inquiry Learning with ScienceKit**

Daniel Pauw, Tamara Clegg, June Ahn, Elizabeth Bonsignore, Jason Yip, Judith Uchidiuno

BE 016

Best Design  
Paper Nominee

Tuesday

## ►DATA SESSION◀

### Overcoming Limited Access to Assessables at a Game Award: Jurors Envisioning of Limitations of a Potential Nominee for “Best Innovation”

Ulrika Bennerstedt

BE 026

## COFFEE BREAK 15.00–15.30

Café area

Pedagogen BE

## PARALLEL SESSIONS 15.30–17.00

### ►SYMPOSIUM◀

#### A Multimodal Approach to the Analysis of Complex Collaborative Learning Environments: Using Complementary Methods of Analysis to Synthesize New Trends in Scaffolding Research

Kate Thompson (co-organizer), Lucila Carvalho (co-organizer)

##### Background and Framework

Kate Thompson, Lucila Carvalho

##### Analysis of Scaffolding Using a Discursive Psychology Approach

Michael A. Evans, Lixiao Huang

##### Conversation Analysis and the Impact of Position on Social Interactions

Maryam Khosronejad, Peter Reimann, Anindito Aditomo

##### Multimodal Interaction Analysis (MIA) of the Role of Inscriptions in Design

Dewa Wardak, Kate Thompson, Lucila Carvalho, Peter Goodyear

##### Synthesis

Kate Thompson, Lucila Carvalho, Gregory Dyke, Michael A. Evans, Lixiao Huang, Maryam Khosronejad, Peter Reimann, Anindito Aditomo, Dewa Wardak, Peter Goodyear

##### Reflections on the process

Entire Panel

BE 036

### ►NEGOTIATION: PAPER SESSION, TRADITIONAL FORMAT◀

#### Dialogism: A Framework for CSCL and a Signature of Collaboration

Mihai Dascalu, Stefan Trausan-Matu, Philippe Dessus, Danielle S. McNamara

#### Learning about Team Members' Preferences: Computer-Supported Preference Awareness in the Negotiation Preparation of Teams

Daniel Thiemann, Tanja Engelmann, Friedrich W. Hesse

»»»

## **Emergent Roles and Collaborative Discourse Over Time**

Catherine Dornfeld, Sadhana Puntambekar

Best Student  
Paper Nominee

## **Meaning-Making in Collaborative Activity: Effort toward Coherent, but Not Shared, Interpretations of the Problem**

Lisa Hardy, Tobin White

BE 014

### **►KNOWLEDGE BUILDING 2: PAPER SESSION, TRADITIONAL FORMAT◀**

Best Paper  
Nominee

## **Grappling with the Not-Yet-Known**

Christoph Richter, Heidrun Allert, Julia Albrecht, Elisa Ruhl

## **How Did a Grade 5 Community Formulate Progressive, Collective Goals to Sustain Knowledge Building Over a Whole School Year?**

Dan Tao, Jianwei Zhang, Yue Huang

Best Paper  
Nominee

## **The Development of Productive Vocabulary in Knowledge Building: A Longitudinal Study**

Bodong Chen, Leanne Ma, Yoshiaki Matsuzawa, Marlene Scardamalia

## **Scaffolding Scientific Epistemologies through Knowledge-Building Discourse and Epistemic Reflection**

Feng Lin, Carol K.K. Chan

BE 015

### **►TABLET-BASED COLLABORATION: PAPER SESSION, INTERACTIVE FORMAT◀**

## **Orchestration Challenges Raised by Transposing a Paper-Based Individual Activity into a Tablet-Based CSCL Activity: An Example**

Patrick Wang, Pierre Tchounikine, Matthieu Quignard

## **How Learners Employ Semiotic Resources for Collaborative Meaning-Making in Outdoor Mobile Learning**

Esther Tan, Hyo-Jeong So

## **Tarzan and Jane Share an iPad**

Jochen Rick, Daniel Kopp, Lara Schmitt, Armin Weinberger

## **Promoting Interaction by Integrating a Question and Answer Forum with a Digital Textbook**

Erin Walker, Rohit Chakravarthi, James Rodriguez, Ruth Wylie

BE 016

### **►DUAL LAYER MOOCs (1/2): INTERACTIVE EVENT◀**

## **Challenges and Opportunities of Dual-Layer MOOCs: Reflections from an edX Deployment Study**

Carolyn P. Rosé, Oliver Ferschke, Gaurav Tomar, Diyi Yang, Iris Howley, Vincent Aleven, George Siemens, Matthew Crosslin, Dragan Gasevic, Ryan Baker

B1 114

**ISLS MEETING 17.15–18.00****Open – ISLS Business Meeting**

BE 036

**POSTER SESSION 1 18.00–19.30**

Pedagogen BE

**Visualization of Progressive Idea Development in a Knowledge Building Community**

Derya Kici

**The Teacher's Conception of Technology and Its Impact on the Possibilities for Inclusion**

Laura Emtoft

**Tracing the Change in Discourse in a Collaborative Dynamic Geometry Environment: From Visual to More Mathematical**

Diler Oner, Gerry Stahl

**Towards Using Influence Diagram on Social-Network Based Analysis for Managing Students' Collaborations**

Antonio R. Anaya, Jesús G. Boticario, Emilio Letón, Félix Hernández-del-Olmo

**Mapping Wiki User Contribution Types to Motivations for Participation: a Case Study**

Oluwabunmi Adewoyin, Kewen Wu, Julita Vassileva

**Conceptualizing, Analyzing, and Visualizing Massive Data on Student Engagement in MOOCs: A Literature Review**

Shiyan Jiang, Ji Shen, Yu Sun

**The Evolution of TrACE: Integration of a Collaborative Learning Platform in Flipped Classrooms**

Suzanne L. Dazo, Adam Stankiewicz, Robert M. Gibbs, Brian Dorn

**How Collaborative Successes and Failures Become Productive: An Exploration of Emerging Understanding and Misunderstanding Turning Points in Model-Based Learning with Productive Failure**

Alisha Portolese, Lina Markauskaite, Polly K. Lai, Michael J. Jacobson

**The Development of Collaborative Practices in Introductory Engineering Courses**

Emma Mercier, Saadeddine Shehab, Jingjing Sun, Natasha Capell

**Exploring the Interplay of Various Support Forms in CSCL Settings**

Irina Engeness, Anniken Furberg

**University Students as Networked Learners? Evaluation of a cMOOC in Higher Education**

Nina Kahnwald, Daniela Pscheida

### **Use of a CSCW Platform in Reunion Island University**

Jean Simon

### **Paper-Based Tabletop Application for Collaborative Chinese Character Learning**

Yun Wen, Luis P. Prieto, Pierre Dillenbourg

### **Individual Preparation and Argumentation Scripts in Social Networking Sites**

Dimitra Tsovaltzi, Raluca Judele, Thomas Puhl, Armin Weinberger

### **Characterizing the Identity of Three Innovative Teachers Engaging in Sustained Knowledge Building**

Barbara M. Vokatis, Jianwei Zhang

### **Examining Teachers' Support of Students' Learning of Dynamic Geometry in a CSCL Environment**

Arthur B. Powell, Muteb M. Alqahtani, Stephen Weimar

### **Investigating the Relations between the Learning Styles, the Collaborative Roles and the Learning Outcomes of the Students Playing a Mobile-Assisted Chinese Character Game**

Lung-Hsiang Wong, Ting-Chia Hsu, WenLi Chen, Ching-Kun Hsu

### **Assessing the Quality of Students' Arguments in Yammer**

Yann Shiou Ong, Marcela Borge

### **A Study of Developing Students' Scientific Argumentation Skills in a Computer-Assisted Project-Based Learning Environment**

Pi-Sui Hsu, Margot Van Dyke, Yan Chen, Thomas J. Smith

### **The Theoretical Products of Design Research**

Matthew W. Easterday, Daniel Rees Lewis, Elizabeth M. Gerber

### **Exploring the Role of Social Media and Knowledge Management Processes in Organizational Learning**

Cong Qi, Ho Ching Leung

### **SSRL Scripts to Facilitate Student Regulation of Collaborative Learning**

Jun Oshima, Ritsuko Oshima, Jin Michael Splichal

### **What Are Zombies Teaching Our Children? Video Games and Moral Reasoning in the Dialogical Classroom**

Filipa De Sousa

### **Engaging Parents as Creative Learning Partners in Computing**

Ricarose Roque, Karina Lin, Richard Liuzzi

### **Designing for Collaborative Learning Expeditions by Using Wearable Technology and Smart Glasses**

Eva Mårell-Olsson, Thomas Mejtoft, Isa Jahnke

### **Engaging Citizen Scientists in Model-Based Reasoning**

Cindy E. Hmelo-Silver, Rebecca C. Jordan, Whitney E. Novak, Joey Huang, David Mellor, Steven Gray, Alycia Crall, Greg Newman

### **Embracing Cultural Diversity: A CSCL Inspired by an Internally Persuasive Discourse**

Yifat Ben-David Kolikant, Sarah Pollack

### **CSCL Opportunities with Digital Fabrication through Learning Analytics**

Daniel Spikol, Katerina Avramides, Eva-Sophie Katterfeldt, Emanuele Ruffaldi, David Cuartielles

### **Appropriation of Tablet PCs by Non-Tech Savvy Seniors: Options and Obstacles of Sustainable, Practice-Based Learning in the Elderly**

Claudia Müller, Dominik Hornung, Theodor Hamm, Volker Wulf

### **Using Epistemic Synchronization Index (ESI) to Capture the Knowledge Elaboration Process Students' in CSCL**

Ning Ding

### **Using Persuasive Design and Social Learning to Support Adult Learners' Metacognitive Development**

Kathryn Wozniak, José Zagal

### **Science Classroom Inquiry (SCI) Simulations for Generating Group-Level Learner Profiles**

Melanie E. Pepper, Maggie Renken

### **Exploring How Students Construct Scientific Explanations During a Classroom Discussion after Implementation of an Immersive Virtual Environment**

Kelly Mills, Diane Jass Ketelhut, Uma Natarajan

### **“What Would Experts Say About This?”: An Analysis of Student Interactions outside MOOC Platform**

Hiroki Oura, Yuki Anzai, Wakako Fushikida, Yuhei Yamauchi

### **An Emerging Educational Technologist Role in Changing Organizational Structures**

David Woo, Nancy Law

### **Drawing on Interactive Tables: Examining Students' Flow, Collaborative Process and Learning Outcomes**

Hannie Gijlers, Lars Bollen, Hanna Järvenoja, Arttu Mykkänen, Sanna Järvelä

### **The Potential of Collaborative Mobile Learning: Experiences from a Design-Based Research Cycle in Singapore Schools**

Ivica Boticki, Mia Carapina, Jelena Baksa, Peter Seow, Chee-Kit Looi

### **The Effect of Task and Collaboration Support on Learning Processes and Learning Results in a CSCL Environment**

Angelique Egberink, Hannie Gijlers, Nadira Saab

**Exploring the Limits of Priority Awareness for Improving Performance in Integrative Negotiations**

Richard Kolodziej, Friedrich W. Hesse, Tanja Engelmann

**Computer-Supported Collaborative Word Acquisition for Language Learners**

Haoran Xie, Di Zou, Fu Lee Wang, Tak-Lam Wong

**Learning Analytics to Support Teachers: Theoretical and Empirical Findings**

Anouschka van Leeuwen, Jeroen Janssen, Gijsbert Erkens, Mieke Brekelmans

**Developing an Interactive Tabletop Application for 'Creative Interpretation' in Art Museums**

Raquel Barros Pinto, Palmyre Pierroux, Nelson Zagalo, Lia Oliveira

**Exploring the Relationships Between Group's Self-Regulative Behaviors and Its Collective Performance during Computer-Supported Collaborative Lesson Design Activities**

Han-Ju Tsai, Huang-Yao Hong, Ching Sing Chai, I-Ting Yang

**Reconsidering the Value of Gamers' Experience in the Mathematics Classroom: A perspective of Game Transfer Phenomena**

Tieh-huai Chang, Fei-Ching Chen

**Towards a Teaching and Learning Model for Transition in the Pre-Service Teaching Community**

Paul Flynn, Tony Hall

**Gaze Awareness in Collaborative Problem Solving: An Approach for Gaze Sensitive Interaction and Analysis**

Philipp Schlieker-Steens, Christian Schlösser, Andreas Harrer, Andrea Kienle

**University Students' Learning Culture Concerning Collaborative Tools in the Net**

Norbert Erdmann, Mirjamaija Mikkilä-Erdmann

**Relating Entrainment, Grounding, and Topic of Discussion in Collaborative Learning Dialogues**

Nichola Lubold, Erin Walker, Heather Pon-Barry

**A Learning Analytics Framework for Practice-Based Learning**

Giacomo Dabisias, Daniel Spikol, Emanuele Ruffaldi

**Young Adults' Use of Semiotics in Science News Infographics**

Engida Gebre, Joseph L. Polman

**BARBEQUE 19.00–20.30**

Nefertiti and Faculty Yard, see page 11

Pedagogen C

## REGISTRATION 08.00–08.30

Entrance Floor

Pedagogen A

## KEYNOTE LECTURE 08.30–09.45

### Suspense Matters

Yvonne Rogers, University College London, UK

Kjell Härnqvist Hall AK2 155 and telecasted in AK2 136

## COFFEE BREAK 09.45–10.15

Café area

Pedagogen BE

## PARALLEL SESSIONS 10.15–11.45

### ►SYMPOSIUM◀

#### Knowledge Construction in the Instrumented Classroom: Supporting Student Investigations of Their Physical Learning Environment

Tom Moher (co-chair), James D. Slotta (co-chair), Kylie Peppler (discussant)

##### Location Matters: The Use of Classroom Space in RoomQuake

Tom Moher, Alessandro Gnoli, Brenda López Silva

##### Expanding the Pedagogical Design Space with Indoor Spatial Technologies

Anthony Perritano, Alessandro Gnoli, Tom Moher

##### Spatial Mapping of Inquiry Discourse in the Classroom Through Knowledge Visualization

Cresencia Fong, Rebecca M. Cober, Tom Moher, James D. Slotta

##### Using Maps to Support Investigations of Animal Behavior in our Schoolyard

Rebecca M. Cober, Alisa Acosta, Tom Moher, James D. Slotta

##### Consideration of the Physical Environment when Selecting and Instrumenting Sites for Field Investigations

Alexandra Silva, Chandan Dasgupta, Brenda López Silva, Tom Moher

BE 036

### ►SCRIPTING: PAPER SESSION, TRADITIONAL FORMAT◀

#### A Long-Term View on Learning to Argue in Facebook: The Effects of Group Awareness Tools and Argumentation Scripts

Thomas Puhl, Dimitra Tsovaltzi, Armin Weinberger

Wednesday

Best Student  
Paper Nominee

»»»



## **Enhancing Teacher Education Students' Collaborative Problem-Solving and Shared Regulation of Learning**

Piia Näykki, Johanna Pöysä-Tarhonen, Sanna Järvelä, Päivi Häkkinen

## **Internalization of Physics Concepts and Relationships Based on Teacher Modeling of Collaborative Prompts**

Amanda L. Evenstone, Sadhana Puntambekar

## **Fostering Argumentation Skills in Mathematics with Adaptable Collaboration Scripts: Only Viable for Good Self-Regulators?**

Freydis Vogel, Ingo Kollar, Stefan Ufer, Elisabeth Reichersdorfer, Kristina Reiss, Frank Fischer

BE 014

### **► CSCL FOUNDATIONS: PAPER SESSION, TRADITIONAL FORMAT ◀**

## **Beyond Pedagogical Challenges: Addressing the Social Aspects around the Use of Digital Resources in University Education**

Chiara Rossitto, Patrik Hernwall, Jonas Collin

## **Research Questions and Research Methods in CSCL Research**

Heisawn Jeong, Cindy E. Hmelo-Silver

## **Social Interaction, Constructivism and their Application within (CS)CL Theories**

Christian Hartmann, Jennifer Angersbach, Nikol Rummel

## **Activity Design Models to Support the Development of High Quality Collaborative Processes in Online Settings**

Marcela Borge, Yann Shiou Ong, Carolyn Penstein Rosé

BE 015

### **► GAMES 1: PAPER SESSION, INTERACTIVE FORMAT ◀**

## **Algebra Learning through Digital Gaming in School**

Jan Arild Dolonen, Anders Kluge

## **AutBlocks: Using Collaborative Learning to Develop Joint Attention Skills for Children with Autism Spectrum Disorder**

Bryan Boyle, Inmaculada Arnedillo-Sanchez, Aejaz Zahid

## **Students' Design Decisions in Collaborative Design of Location-Based Games for Learning**

Jo Dugstad Wake, Frode Guribye, Barbara Wasson

## **Design in Game-Based Learning**

Matthew Gaydos, Mingfong Jan

BE 016

►DUAL LAYER MOOCs (2/2): INTERACTIVE EVENT (continued)◀

## Challenges and Opportunities of Dual-Layer MOOCs: Reflections from an edX Deployment Study

Carolyn P. Rosé, Oliver Ferschke, Gaurav Tomar, Diyi Yang, Iris Howley, Vincent Alevén, George Siemens, Matthew Crosslin, Dragan Gasevic, Ryan Baker

B1 114

## LUNCH 11.45–13.00

Café area

Pedagogen BE

## ISLS MEETINGS 11.45–13.00

Closed – CSCL Editorial Board Meeting

B1 115

Closed – ISLS Membership Committee Meeting

BE 026

## PARALLEL SESSIONS 13.00–14.30

►INVITED SYMPOSIUM◀

### Learning Analytics of and in Meditational Processes of Collaborative Learning

Dan Suthers (organizer), Alyssa Friend Wise, Bertrand Schneider, David Williamson Shaffer, H. Ulrich Hoppe, George Siemens

BE 036

►GAMES 2: PAPER SESSION, TRADITIONAL FORMAT◀

### Concept Mapping Narratives to Promote CSCL and Interdisciplinary Studies

Reneta D. Lansiquot, Candido Cabo

### From Lurking to Participatory Spectatorship: Understanding Affordances of the Dota 2 Noob Stream

Chris Georgen, Sean C. Duncan, Lucas Cook

### Learning Resilience in the Face of Bias: Online Gaming, Protective Communities and Interest-Driven Digital Learning

Gabriela T. Richard, Christopher Hoadley

### Impacts on Student Understanding of Scientific Practices and Crosscutting Themes through an NGSS–Designed Computer-Supported Curriculum and Instruction Project

Susan A. Yoon, Jessica Koehler-Yom, Emma Anderson, Murat Oztok, Eric Klopfer, Ilana Schoenfeld, Daniel Wendel, Josh Sheldon, Hal Scheintaub

BE 014

►ORCHESTRATED LEARNING 1: PAPER SESSION, TRADITIONAL FORMAT◀

**Design Features for Computer-Supported Complex Systems Learning and Teaching in High School Science Classrooms**

Susan A. Yoon, Emma Anderson, Jessica Koehler-Yom, Eric Klopfer, Josh Sheldon, Daniel Wendel, Ilana Schoenfeld, Hal Scheintaub, Murat Oztok, Chad Evans

**The Burden of Facilitating Collaboration: Towards Estimation of Teacher Orchestration Load using Eye-Tracking Measures**

Luis P. Prieto, Kshitij Sharma, Yun Wen, Pierre Dillenbourg

**Mixing In-Class and Online Learning: Content Meta-Analysis of Outcomes for Hybrid, Blended, and Flipped Courses**

Lauren E. Margulieux, W. Michael McCracken, Richard Catrambone

**Peer Scaffolding to Learn Science in Symmetrical Groups Collaborating Over Time**

Nicole D. Martin, Dana Gnesdilow, Sadhana Puntambekar

BE 015

►EMBODIMENT: PAPER SESSION, INTERACTIVE FORMAT◀

**Boundary Interactions: Resolving Interdisciplinary Collaboration Challenges Using Digitized Embodied Performances**

Virginia J. Flood, Michael Neff, Dor Abrahamson

**Science Through Technology Enhanced Play: Designing to Support Reflection Through Play and Embodiment**

Joshua A. Danish, Noel Enyedy, Asmalina Saleh, Christine Lee, Alejandro Andrade

**Assessing Young Children's Cognition through Multi-Modal Interviews**

Asmalina Saleh, Joshua A. Danish, Noel Enyedy, Christine Lee

**"This Is the Size of One Meter": Children's Bodily-Material Collaboration and Understanding of Scale around Touchscreens**

Jacob Davidsen, Thomas Ryberg

BE 016

►DATA SESSION◀

**Tracing Sequential Video Production**

Kathrin Otrell-Cass, Saifuddin Khalid

BE 026

**COFFEE BREAK 14.30–15.00**

Café area

Pedagogen BE

## PARALLEL SESSIONS 15.00–16.30

### ►SYMPOSIUM◀

#### **CSCL and Learning Analytics: Opportunities to Support Social Interaction, Self-Regulation and Socially Shared Regulation**

Alyssa Friend Wise (co-chair), Roger Azevedo (co-chair), Frank Fischer (discussant)

#### **Collective and Individual Discussion Analytics: Connecting Learning Intentions, Discourse Patterns and Responsive Action**

Alyssa Friend Wise

#### **A script theory of guidance perspective on learning analytics for CSCL**

Karsten Stegmann, Carolyn Penstein Rosé, Jin Mu

#### **Do collaborative groups benefit from a shared regulation tool? Sequential analysis of actualized regulation in social interaction**

Jonna Malmberg, Hanna Järvenoja, Sanna Järvelä

#### **Do learners benefit from socially-regulated learning provided by artificial pedagogical agents? Implications for data analytics in supporting social interactions during complex learning**

Roger Azevedo, Nicholas Mudrick, Michelle Taub, Seth A. Martin, Jesse Farnsworth

#### **Discourse analytics to support persistent participation in MOOCs**

Carolyn Penstein Rosé, Miaomiao Wen, and Diyi Yang

BE 036

### ►ARGUMENTATION: PAPER SESSION, TRADITIONAL FORMAT◀

#### **The Development of Situational-Misconceptions in Math Problem Solving**

Rotem Abdu

#### **Designing Automated Assessment FOR Collaborative Argumentation in Science Classroom: A Pilot Study**

Wenli Chen, Chee Kit Looi, Wenting Xie, Yun Wen

#### **The Use of Visual Evidence for Planning and Argumentation**

Rebecca Cober, Alisa Acosta, Michelle Lui, Tom Moher, Alex Kuhn, Chris Quintana, Jim Slotta

#### **Dragging as a Referential Resource for Mathematical Meaning Making in a Collaborative Dynamic-Geometry Environment**

Murat Perit Çakır, Gerry Stahl

BE 014

Best Student  
Paper Nominee

Best Paper  
Nominee

Wednesday

►COMMUNITIES OF PRACTICE: PAPER SESSION, TRADITIONAL FORMAT◀

**Co-construction of Knowledge Objects in Computer Engineering Education**

Crina Damşa

**Constructing Knowledge: A Community of Practice Framework for Evaluation in the VMT Project**

Michael Khoo, Gerry Stahl

**Epistemography and Professional CSCL Environment Design**

Golnaz Arastoopour, David Williamson Shaffer

**Using Situated-Action Networks to Visualize Complex Learning**

Alejandro Andrade

BE 015

►ORCHESTRATED LEARNING 2: PAPER SESSION, INTERACTIVE FORMAT◀

**The 3R Orchestration Cycle: Fostering Multi-Modal Inquiry Discourse in a Scaffolded Inquiry Environment**

Cresencia Fong, Rebecca M. Cober, Richard Messina, Tom Moher, Julia Murray, Ben Peebles, James D. Slotta

**Principle-Based Guidance to Foster Adaptive Teaching Practice**

Huang-Yao Hong, Ching Sing Chai, Guo-Tsai Hung

**Beyond and Within Classroom Walls: Designing Principled Pedagogical Tools for Student and Faculty Uptake**

Elizabeth S. Charles, Nathaniel Lasry, Chris Whittaker, Michael Dugdale, Kevin Lenton, Sameer Bhatnagar, Jonathan Guillemette

**'Re-mediating' Learning**

Kemi Jona, Lauren Penney, Reed Stevens

BE 016

►DATA SESSION◀

**Examining Power Relations in an All-Girl Robotics Learning Environment**

Florence R. Sullivan, P. Kevin Keith, Nicholas C. Wilson

BE 026

**POSTER SESSION 2 16.45–18.15**

**Promoting Sustainability: Learning New Practices through ICT**

Tarja Susi, Jessica Lindblom, Beatrice Alenljung

**Student Experiences with Social Annotation Tools in a MOOC Environment**

Selen Turkey, Tiffany L. Wong, Michael Friedman, Meghan Morrissey, Junjie Liu

## **Bedside Manner Experience Development (BedMED): Supporting the Development of Bed-side Manner through Game Design**

Jakita O. Thomas, Jaycee Holmes

## **Changing Patterns of Knowledge Compartmentalization, Social Organization and Power Structures to Promote Interdisciplinary Learning**

Adi Kidron, Yael Kali

## **Obstacles Supporting Expansive Learning**

Sara Willermark

## **Investigating Recognition Systems in a Collaborative, Programming-Oriented Affinity Space**

Sean C. Duncan, Joey Huang, Chris Georgen, Lucas Cook

## **Supporting Transition between Personal and Collective Activity through a Tablet-Based CSCL System**

Hideyuki Suzuki, Hideo Funaoi, Yoshihiko Kubota

## **Bridging the Cultural and Pedagogical Gap with Seaweed**

Murray Bronet, Petra Turkewitsch, Silvia d'Apollonia

## **Lernanto: An Ambient Display to Support Differentiated Instruction**

Erik van Alphen, Saskia Bakker

## **Collaboration in the Age of Personalised Mass(ive) Education**

Vivien Hodgson, Thomas Ryberg

## **Maps, Mobile Tools, and Media Boards: Digital Technologies for Learning About Pawnshops**

Laurie Rubel, Vivian Lim, Maren Hall-Wieckert, Sarah Williams

## **Knowledge Community and Inquiry about Big Data among High School Students with Interactive Orchestrated Learning Space**

Einat Gil, James D. Slotta

## **Peer Feedback Content Quality: The Added Value of Structuring Peer Assessment**

Mario Gielen, Bram De Wever

## **Pioneer Valley Citizen Science Collaboratory: A CSCL Approach to Designing Citizen Science Projects**

Timothy D. Zimmerman, Hedieh Najafi, Alisa Acosta, James D. Slotta, Meagan O'Hara, Armin Krauss

## **Enculturating Enculturation: A Meta-Synthesis of the Learning Sciences' Discourse and Designs**

Yotam Hod, Ornit Sagy

## **Developing a Framework to Enhance Creativity and Creative Collaboration via Video Self-Reflection**

Dani Ben-Zvi, Yotam Hod, Patrice L. (Tamar) Weiss

## **Automating Detection of Good Reflective Responses in Discourse**

Jenny Saucerman, Michael Tscholl, David Williamson Shaffer

## **Learning with Friends: Exploring Socially Motivated Participation in a MOOC**

Gabriela T. Richard, Christopher Hoadley

## **It Is Not (Only) Personal: Technology Enhanced Collaborative Reflection Processes**

Shiri Mor-Hagani, Dani Ben-Zvi

### **It's My Turn: Using Rotating Leadership to Visualize Collective Cognitive Responsibility in a Knowledge Building Community**

Leanne Ma, Yoshiaki Matsuzawa

### **Retrospective Tagging in Online Discussions as a Method for Collaborative Reflection and Learning**

Patrik Lilja, Johan Lundin

### **Exploring Constructive Learning Activity in Online Programming Discussion Forums**

I-Han (Sharon) Hsiao, Piyush Awasthi

### **Youth Posting Behavior and Metacognitive Acts: Using Social Network Forums to Enhance Metacognition in Design-based Science-learning Environments**

Lixiao Huang, Michael A. Evans

### **Orchestrating Visualization Tools for Supporting Collaborative Problem Solving in the Classroom: A Case Study**

Huiying Cai, Xiaoqing Gu, James D. Slotta

### **Collaborative Learning in Online and Offline Makerspaces**

Parisa Khanipour Roshan, Kayla DesPortes, Rebecca Grinter, Betsy DiSalvo

### **Thinking Within and Between Levels: Exploring Reasoning with Multi-Level Linked Models**

Arthur Hjorth, Corey Brady, Bryan Head, Uri Wilensky

### **Young Children Reading iPad App Books Together: Reading Approaches, Meaning Making, and Changes Over Time**

Tanya Christ, X. Christine Wang

### **Exploring the Effect of Technology-Supported Collaborative Writing on Individual Learning of the Italian Language**

Eftychia Xerou, Eleni A. Kyza

### **Measuring Group Progress through a Complex Computer-Supported Design Task: Identifying the Effects of Scaffolds on Learners' Activity**

Kate Thompson

### **Implementing a Digital Learning Environment in the Middle School: Lessons Learned from the Pilot Study**

Mirjamaija Mikkilä-Erdmann, Angelos Emmanouilidis, Norbert Erdmann

### **The Emergence of Norms in a Technology Enhanced Learning Community**

Jacqueline Basil-Shachar, Yotam Hod, Dani Ben-Zvi

### **Interactive Visible Light Communications: Using Human-Light Interaction in Learning Contexts**

Jari Laru, Marcos Katz, Sanna Järvelä, Juha Häkkinen

### **Visualising Socio-Material Practices in Knowledge Creation**

Natalie Spence

### **Trust, Technology Affordances and Feedback in Peer Assessment Frameworks in MOOCs**

Ulla Lunde Ringtved, Sandra Milligan

### **Temporal and Material Conditions for Instruction in Simulation-Based Maritime Training**

Charlott Sellberg, Hans Rystedt

### **A MOOC for Teachers: Network Connections that Facilitate Collaboration and Dialogue for Learning?**

Niklas Karlsson, Anna-Lena Godhe

### **Monoplant: Developing an Innovative CSCL Application for Teaching Photosynthesis Using Multiple Representations**

Hani Murad, Anders I. Mørch, Jo Herstad, Sjur Seibt, Morten Kjelling

### **Using Students' Speech to Characterize Group Collaboration Quality**

Cynthia M. D'Angelo, Jeremy Roschelle, Harry Bratt

### **Finding Productive Talk Around Errors in Intelligent Tutoring Systems**

Jennifer K. Olsen, Nikol Rummel, Vincent Alevén

### **Collaborative Media-Making as Agent for Identity and Learning**

Eric Hamilton, Sandra Sarmonpal, Traci Garff, Kip Glazer, Antha Holt, Hiroo Kato, Janice Samuels, Helen Teague, Kim Welch

### **Active Learning Spaces: Blending Technology and Orchestration**

Elizabeth S. Charles, Chris Whittaker

### **Broken Windows in Online Public Spaces: A Challenge to Literacy Educators**

Francesco Caviglia, Manuela Delfino

### **Through the Looking Glass: Using a Classroom Discourse Visualizer to Support Teacher Reflection on Practice**

Sherice N. Clarke, Gaowei Chen, Donna DiPrima Bickel, Jennifer Zoltners Sherer, Lauren B. Resnick

### **Using Real-time Trace Data to Predict Collaboration Quality and Creative Fluency in Design Teams**

Ninger Zhou, Lorraine Kisselburgh, Senthil Chandrasegaran, S. Karthik Badam, Niklas Elmqvist, Kylie Peppler, Karthik Ramani

### **Designing PyTutor: A Social Tutor to Support Computer Science Education Through Collaborative Study**

Matthew X. Curinga, Katy Auchter

### **Coordinating Tools and Talk in a Tangible Tabletop Game**

Amanda G. (Hall) Willis, Alyssa Friend Wise, Alissa Nicole Antle

### **Creative Collaboration and Flow: Validating the Use of Trace Data to Measure Dynamics of Creative Flow in Collaborative Design Teams**

Lorraine Kisselburgh, Ninger Zhou, Senthil Chandrasegaran, S. Karthik Badam, Niklas Elmqvist, Kylie Peppler, Karthik Ramani

### **Proposing an Alternative Framework for the Assessment of Collaborative Problem Solving**

Hajime Shirouzu, Sayaka Tohyama, Masayuki Yamada, Takeshi Kitazawa, Hiroyuki Masukawa

## **CONFERENCE DINNER 19.30–22.00**

Busses from Pedagogen (between the buildings, see page 4) leaves at 19.00.

River Restaurant on the Pier



## REGISTRATION 08.00–08.30

Entrance Floor

Pedagogen A

## PARALLEL SESSIONS 08.30–10.00

### ►INVITED SYMPOSIUM◀

#### **Regulated Learning in CSCL: Theoretical Progress for Learning Success**

Sanna Järvelä (organizer, chair), Paul A. Kirschner (organizer, discussant), Allyson Hadwin (discussant)

#### **Socially Shared Regulation of Learning in CSCL: Understanding and Prompting Individual and Group Level Shared Regulatory Activities**

Sanna Järvelä, Allyson Hadwin, Hanna Järvenoja, Jonna Malmberg

#### **Should the Script Theory of Guidance Become more Social?**

Ingo Kollar, Karsten Stegmann, Frank Fischer

#### **Shared Workspaces and Multimedia for Regulating Learning in CSCL**

Jeroen Janssen, Femke Kirschner, Anouschka van Leeuwen, Gijsbert Erkens, Mieke Brekelmans

#### **Computer Supported Tools for Co-Regulation: Supporting Teachers and Learners in Problem Based Learning Activities**

Susanne P. Lajoie, Lila Lee, Eric Poitras, Cindy Hmelo-Silver and Peter Hogaboam

BE 036

### ►ASSESSMENT ISSUES: PAPER SESSION, TRADITIONAL FORMAT◀

#### **Assessment and Collaborative Inquiry: A Review of Assessment-Based Interventions in Technology-Enhanced K-14 Education**

Yuejin Yang, Jan van Aalst

#### **The Mediating Role of Interactive Learning Activities in CSCL: An INPUT-PROCESS-OUTCOME Model**

Anne Deiglmayr, Nikol Rummel, Katharina Loibl

#### **Assessing Collaborative Problem Solving with Simulation Based Tasks**

Jiangang Hao, Lei Liu, Alina von Davier, Patrick Kyllonen

#### **Collaborative or individual Learning within Productive Failure: Does the Social Form of Learning Make a Difference?**

Claudia Mazzotti, Katharina Loibl, Nikol Rummel

BE 014

Thursday

Best Student  
Paper Nominee

### ►LEARNING ANALYTICS: PAPER SESSION, TRADITIONAL FORMAT◀

#### **Online Knowledge Communities as Student-Centered Open Learning Environments: How Likely Will They Be to Integrate Learners as New Members?**

Nicolae Nistor, Mihai Dascălu, Christian Tarnai, Nicolas Bresser, Ștefan Trăușan-Matu

#### **Using Differences to Make a Difference: A Study on Heterogeneity of Learning Groups**

Sven Manske, Tobias Hecking, Angelica Chounta, Sören Werneburg, H. Ulrich Hoppe

#### **Modeling Performance in Asynchronous CSCL: An Exploration of Social Ability, Collective Efficacy and Social Interaction**

Wanli Xing, So Mi Kim, Sean Goggins

#### **Tools for Tracing the Development of Concepts through Discussions Mediated by a CSCL Environment: A Case Study**

Gülğün Afacan Adanır, Murat Perit Çakır

BE 015

### ►TANGIBLES 1: PAPER SESSION, INTERACTIVE FORMAT◀

#### **Common Ground and Individual Accountability in Literature Selection of Groups: Three Different Group Learning Techniques**

Michael Schubert, Jürgen Buder, Roman Rädle, Friedrich W. Hesse

#### **Comparing the Benefits of a Tangible User Interface and Contrasting Cases as a Preparation for Future Learning**

Bertrand Schneider, Paulo Blikstein

#### **Fostering and Reflecting on Diverse Perspective-Taking in Role-Play Utilizing Puppets as the Catalyst Material under CSCL**

Toshio Mochizuki, Ryoya Hirayama, Takehiro Wakimoto, Hiroshi Sasaki, Yoshihiko Kubota, Hideyuki Suzuki

#### **Discovery Versus Direct Instruction: Learning Outcomes of Two Pedagogical Models Using Tangible Interfaces**

Bertrand Schneider, Engin Bumbacher, Paulo Blikstein

BE 016

### ►DATA SESSION◀

#### **The Dialogic Construction of Knowledge in Science Education: Cultural Resources and Topical Orientation in Interaction**

Hans Christian Arnseth, Anniken Furberg, Ingvill Rasmussen

BE 026

COFFEE BREAK 10.00–10.30

Café area

Pedagogen BE

PARALLEL SESSIONS 10.30–12.00

►CSCL 2015 PRESIDENTIAL SESSION◄

Grand Challenges in Technology-Enhanced Learning

Eleni A. Kyza (chair), Carolyn Penstein Rosé, Cindy Hmelo-Silver, Cynthia D'Angelo, Katherine Maillet, Ben du Boulay, Beverly Woolf, Dragan Gasevic, Christopher Hoadley (commentator)

Kjell Härnqvist Hall, AK 2155

►MOTIVATION: PAPER SESSION, TRADITIONAL FORMAT◄

The Role of Time, Engagement, and Self-Perceived Leadership on Peer-Nominated Emergent Leadership in Small Group Online Collaborative Learning

Kui Xie, Zhiru Sun, Lin Lu

Maximizing Benefit of Peer-Feedback to Increase Feedback Uptake in Academic Writing

Astrid Wichmann, Alexandra L. Funk, Nikol Rummel

Designing Simple Tools for Socially Shared Regulation: Experiences of Using Google Docs and Mobile SRL Tools in Mathematics Education

Jari Laru, Jonna Malmberg, Hanna Järvenoja, Vesa-Matti Sarenius, Sanna Järvelä

Immersive Simulation on Collaborative Learning about a Complex Dynamic System

Fengfeng Ke, Peter Carafano

BE 014

►TANGIBLES 2: PAPER SESSION, INTERACTIVE FORMAT◄

Learning about Collaborative Design for Learning in a Multi-Surface Design Studio

Roberto Martinez-Maldonado, Peter Goodyear, Yannis Dimitriadis, Kate Thompson, Lucila Carvalho, Luis Pablo Prieto, Martin Parisio

3D Tangibles Facilitate Joint Visual Attention in Dyads

Bertrand Schneider, Kshitij Sharma, Sébastien Cuendet, Guillaume Zufferey, Pierre Dillenbourg, Roy Pea

What Kind of World Do You Want to Live In? Positive Interdependence and Collaborative Processes in the Tangible Tabletop Land-Use Planning Game Youtopia

Alyssa Friend Wise, Alissa Nicole Antle, Jillian Warren, Aaron May, Min Fan, Anna Macaranas

BE 016

Thursday

Best Design  
Paper Nominee

►CLASSROOM IMAGING: INTERACTIVE EVENT◀

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**ClassroomImaging: A Tool to Code and Visualize Complex Classroom Learning Processes**

Ingo Kollar, Andreas Harrer

B1 114

**CLOSING SESSION 12.10–12.40**

Oskar Lindwall, Sten Ludvigsen (conference chairs)

Kjell Härnqvist Hall, AK 2155

**LUNCH 12.40–14.00**

Café area

Pedagogen BE



