



**RUB**

**9<sup>TH</sup> INTERNATIONAL  
COGNITIVE LOAD THEORY  
CONFERENCE**

**JUNE 22<sup>ND</sup> TO 24<sup>TH</sup>, 2016  
BOCHUM, GERMANY**

**PROGRAM**

## PROGRAM AT A GLANCE

	Wednesday June 22nd, 2016	Thursday June 23rd, 2016	Friday June 24th, 2016
time		time	time
10:00	Registration	9:00 Cognitive Load Theory in authentic learning / Gender	9:00 Cognitive Load Theory in language learning
11:00	Opening Ceremony	10:40 Coffee Break	10:40 Coffee Break
11:30	Keynote	11:00 Poster presentation 2	11:00 Feedback and Outlook
12:30	Lunch Break	12:00 Junior Researchers' Keynote	12:00 Keynote
13:30	Cognitive Load Theory and regulation	13:00 Lunch Break	13:00 Lunch Break
15:10	Coffee Break	14:00 Measuring Cognitive Load	14:00 World Heritage Zollverein Tour
15:30	Worked examples	15:40 Coffee Break	
17:10	Poster presentation 1	16:00 Gestures and Motion	
18:00	Issues in Cognitive Load research	17:40 Coffee Break	
		18:00 Cognitive Load Theory and testing	
		20:00 Gala dinner	

## Wednesday, June 22<sup>nd</sup>, 2016

### 11:30 to 12:30: Keynote

Chair: Roland Brünken

**Tina Seufert**

*Self-Regulation and Cognitive Load in Multimedia Learning*

### 13:30 to 15:10: Cognitive Load Theory and regulation

Chair: Detlev Leutner

**Jimmie Leppink, Tamara van Gog, Liesbeth Kester, Fred Paas, Paul Chandler, Jeroen Van Merriënboer**

*Effects of metacognitive checklists on self-regulated learning skills*

**Gertjan Rop, Peter Verhoeijen, Tamara Van Gog**

*The redundancy effect disappears because people learn to ignore the content of irrelevant information*

**Alexander Eitel, Katharina Scheiter**

*Implementation intentions to process pictures early foster comprehension – for those who follow them*

**Tim Köhl, Alexander Bertrams**

*The influence of ego depletion on learning with inference prompts vs. no prompts*

### 15:30 to 17:10: Worked examples

Chair: Alexander Renkl

**Matthias Schwaighofer, Markus Bühner, Frank Fischer**

*Executive functions as moderators of the worked example effect: when shifting is more important than working memory capacity*

**Bing Ngu, Huy Phan**

*Learning to solve trigonometry problems: A comparative study of the analogical problem-solving, worked example and problem-solving approaches*

**Ouhao Chen, Yan She, Slava Kalyuga, Siqing Lian, John Sweller**

*The isolated-element effect, the worked example effect and the generation effect*

**Milou van Harsel, Peter Verhoeijen, Tamara van Gog**

*Sequencing example study and practice problem solving in higher technical education*

**Katrin Schuessler, Jenna Koenen, Elke Sumfleth**

*Segmenting or self-explanation prompts – the impact on learning with non-algorithmic worked examples*

### 17:10 to 18:00: Poster presentation 1

1. **Martine Baars, Tamara Van Gog, Anique De Bruin, Fred Paas**  
*Self-regulated learning when solving problems and studying worked examples: the relationship between mental effort and judgements of learning*
2. **Roman Abel, Martin Haenze**  
*Arranging solution steps and solving subtasks. Which kind of guidance do learners really need?*
3. **Jaewon Jung, Dongsik Kim, Chungsoo Na**  
*Effects of WOE presentation types used in pre-training on the Cognitive Load and comprehension of content in animation-based learning environments*
4. **Brendan Bentley, Gregory C.R. Yates**  
*Cognitive Load and calculators, a classroom study*
5. **Vincent Hoogerheide, Margot van Wermeskerken, Sofie Loyens, Tamara van Gog**  
*Testing the model-observer similarity hypothesis with video modeling examples*
6. **Maria Wirzberger, Maik Beege, Sascha Schneider, Steve Nebel, Günter Daniel Rey**  
*CLT meets WMU: Simultaneous experimental manipulation of load factors in a basal working memory task*
7. **Thilo Joachim Ketschau**  
*Cognitive Load as criterion for item difficulty in case of complex problem solving – a quantitative approach with standardized test items*
8. **Yuan Gao, Yuling Hsu, Tzu-Chien Liu, John Sweller**  
*Effects of instructional guidance with varying details of representations and learning procedures on learning with computer simulations for novices*
9. **Siti Nurma Hanim Hadie, Asma' Hassan, Saiful Bahri Talip, Zul Izhar Mohd Ismail, Ahmad Fuad Abdul Rahim**  
*Evaluation of students' performance after a Cognitive Load Theory-based gross anatomy lecture*
10. **Paul Blayney**  
*Improving adaptive instruction with a limited item speed test*

### 18:00 to 19:00: Issues in Cognitive Load research

Chair: Ferdinand Stebner

**Sébastien Puma, Nadine Matton, Pierre-Vincent Paubel, André Tricot**

*Taking time into account for studying Cognitive Load Theory: using the time based resource sharing model*

**Huei-min Wu, K.H. Lei, T.Y. Tso, H.C. Huang, C.J. Lin**

*Element interactivity: How many interacting elements are students able to handle?*

**Tamara van Gog, Tim van Marlen, Margot van Wermeskerken**

*Look at you! Natural and artificial gaze guidance in video modeling examples*



## Thursday, June 23<sup>rd</sup>, 2016

### 09:00 to 10:40: Cognitive Load Theory in authentic learning / Gender

Chair: Roland Brünken

**Klaus Stiller, Annamaria Köster**

*Cognitive Loads and training success in a video-based online training course*

**Gerry Sozio, Shirley Agostinho, Sharon Tindall-Ford**

*Investigating product-oriented versus process-oriented worked examples to support understanding of quality teaching principles*

**Thomas Dickmann, Maria Opfermann, Stefan Rumann**

*It's all about visualizations: the relation between visual model comprehension, cognitive load and knowledge for learning chemistry at university.*

**Andy Bevilacqua, Fred Paas, Genomary Krigbaum**

*Effect of motion in the far peripheral visual field on cognitive test performance and Cognitive Load*

**Mona Wong, Juan Cristobal Castro-Alonso, Paul Ayres, Fred Paas**

*Solving the gender difference in instructional animation researches*

### 11:00 to 12:00: Poster presentation 2

1. **Dayu Jiang, Slava Kalyuga, John Sweller**

*Studies in the expertise reversal effect in teaching foreign language listening skills*

2. **Charly Eielts, Tamara Van Gog, Fred Paas**

*The effect of finger tracing on chinese character learning*

3. **Daniel Choi, Kim Ouwehand, Fred Paas**

*Effects of eliciting gestures during task performance on Cognitive Load.*

4. **Alexandra Stümmler, Matthias Wilde**

*Effects of scaffolds on motivation and learning success in experimental tasks in biology lessons*

5. **Julia Ollesch, Markus Vogel, Tobias Dörfler**

*Multimedia-based teaching of mathematics - also a question of Cognitive Load*

6. **Huy Phan, Bing Ngu, Alexander Yeung**

*Achieving optimal best: The use of Cognitive Load Theory in mathematical problem solving*

7. **Margina Ruiter, Fred Paas, Sofie Loyens**

*Effect of cycling action on lecture retention, attention and mood*

8. **Alexander F. Koch**

*Why cognitive load may indicate you teach competently: new ideas in Cognitive Load Theory research.*

**9. Tugce Durgut, Bianca Böhm, Svenja Schmidt, Yonca Kaya, Kübra Kenger**

*Shorter learning time and better performance through predetermined learning time*

**10. Christian Kißler, Meryem Göcer, Nurgül Emlikli**

*How does a test announcement affect the learning performance and cognitive load of students mediated by test anxiety and motivation?*

**12:00 to 13:00: Junior Researchers' Keynote**

Chair: Slava Kalyuga

**Jimmie Leppink**

*Current trends and future directions in research inspired by Cognitive Load Theory*

**14:00 to 15:40: Measuring Cognitive Load**

Chair: Ferdinand Stebner

**Carmen Candel, Raquel Cerdán, Cristina Candel**

*Cognitive Load when reading from different sources, a matter of interactivity.*

**Babette Park, Andreas Korbach, Roland Brünken**

*Differentiating measurement of Cognitive Load factors in multimedia learning: a comparison of different measures*

**Muhamad Saiful Bahri Yusoff, Siti Nurma Hanim Hadie**

*Assessing validity of Cognitive Load scale in a problem-based learning setting*

**Sabrina Navratil, Tim Kühl, Ferdinand Stebner, Benedict Fehringer, Stefan Münzer**

*The index of cognitive activity – a promising objective measure of Cognitive Load when learning with different visualization formats*

**16:00 to 17:40: Gestures and Motion**

Chair: Detlev Leutner

**Nadine Marcus, Paul Ayres, Niloufar Lajevardi**

*Does gesturing improve the learning of human motor skills for children, when learning from instructional animation and statics?*

**Paul Ayres, Ruth Mierowsky, Nadine Marcus**

*The impact of gesturing when learning to play piano clips from animations*

**Steffi Zander, Stefanie Wetzels, Sven Bertel**

*Effects of using touch-gestures on mobile devices on elementary school children`s solving of spatial tasks*

**Alexander Skulmowski, Günter Daniel Rey**

*Embodied Cognitive Load Theory: costs, benefits and resources determine embodied learning outcomes*

**Andreas Korbach, Paul Ginns, Roland Brünken, Babette Park**

*Effects of tracing gestures: an eye-tracking study*

**18:00 to 19:00: Cognitive Load Theory and testing**

Chair: Alexander Renkl

**Tino Endres, Shana Carpenter, Alf Martin, Alexander Renkl**

*Constructive retrieval by prompted recall*

**Julian Roelle, Kirsten Berthold**

*Test-based learning: Inconsistent effects between higher and lower level test questions*

**Barbara Frank, Merle Lau, Annette Kluge**

*The effect of testing for complex cognitive skill retention in a fixed sequence task, a dual task and a decision making task*



## Friday, June 24<sup>th</sup>, 2016

### 09:00 to 10:40: Cognitive Load Theory in language learning

Chair: Roland Brünken

**Stéphanie Roussel, André Tricot, John Sweller**

*Is learning content and a second language simultaneously a good idea?*

**Dominik Rumlich, Ferdinand Stebner**

*Cognitive Load Theory in the context of bilingual education: exploring uncharted territory*

**Claudia Leopold, Nina Fröde, Stephan Dutke**

*Seductive details in foreign language learning*

**Olga Ignatova, Slava Kalyuga, John Sweller**

*The imagination effect when learning auditory linguistic material*

**You-Hsuan Chang, Tzu-Chien Liu, Yi-Chun Lin**

*Effects of computer-mediated dictionaries assisted learning with checking-meaning function on vocabulary learning and reading comprehension*

### 12:00 to 13:00: Keynote

Chair: Detlev Leutner

**Ralf Rummel**

*Text modality, cognitive load, and desirable difficulties*