

Tuesday, June 29

9:00 AM - 5:30 PM, Monday, June 28

Doctoral Consortium

Salon 4

Organizers: Hmelo-Silver, Cindy, Rutgers University; Organizers: Andriessen, Jerry, Wise & Munro Learning Research; Participants: Barth-Cohen, Lauren, University of California Berkeley; Participants: Damsa, Crina, University of Oslo; Participants: Fields, Deborah, University of California Los Angeles; Participants: Goncalves, Celso, University of Grenoble; Participants: Hackbarth, Alan J., University of Wisconsin-Madison; Participants: Magnifico, Alecia Marie, University of Wisconsin-Madison; Participants: Mulder, Yvonne, University of Twente; Participants: Rajala, Antti, University of Helsinki; Participants: Schwendimann, Beat, University of California Berkeley; Participants: Sinha, Suparna, Rutgers University; Participants: Tang, Kenneth, University of Michigan; Participants: Vath, Richard, University of Michigan; Participants: Wawro, Megan, San Diego State University; Participants: Wendell, Kristen B., Tufts University; Participants: Zhao, Naxin, OISE University of Toronto

Early Career Workshop

Salon 3

Organizers: Yoon, Susan A., University of Pennsylvania; Organizers: Kirschner, Paul, Open University of the Netherlands; Participants: Anderson, Janice, University of North Carolina at Chapel Hill; Participants: Baram-Tsabari, Ayelet, Technion; Participants: Bouwma-Gearhart, Jana, University of Kentucky; Participants: Bricker, Leah A., Loyola University Chicago; Participants: Cohen, Cheryl, Michigan Technological University; Participants: Dieterle, Edward, SRI International; Participants: Jan, Mingfong, University of Wisconsin-Madison; Participants: Kam, Matthew, Carnegie Mellon University; Participants: Kehrwald, Ben, Massey University; Participants: Kollar, Ingo, University of Munich; Participants: Lee, Victor, Utah State University; Participants: Phipps, Molly, Science Museum of Minnesota; Participants: Plummer, Julia, Arcadia University; Participants: Reedy, Gabriel, King's College London; Participants: Romero, Margarida, Universitat Autònoma de Barcelona; Participants: Russell, Cianan, Georgia Institute of Technology; Participants: Shen, Ji, University of Georgia; Participants: Tzou, Carrie, University of Washington Bothell; Participants: van de Sande, Carla, Arizona State University; Participants: Zimmerman, Heather Toomey, Pennsylvania State University

Workshop 1: Productive multivocality in the analysis of collaborative learning

Salon 12

Organizers: Law, Nancy, University of Hong Kong; Organizers: Lund, Kristine, University of Lyon; Organizers: Rosé, Carolyn, Carnegie Mellon University; Organizers: Suthers, Daniel, University of Hawaii; Organizers: Teplov, Christopher, University of Toronto

Workshop 2: Three perspectives on technology support in inquiry learning - Personal inquiry, mobile laboratories and emerging learning objects

Salon 2

Organizers: Wichmann, Astrid, University of Duisberg-Essen; Organizers: Spikol, Daniel, Linnaeus University; Organizers: Anastopoulou, Stamatina, University of Nottingham; Organizers: Hoppe, Ulrich, University of Duisberg-Essen; Organizers: Milrad, Marcelo, Linnaeus University; Organizers: Pea, Roy, Stanford University; Organizers: de Jong, Ton, University of Twente; Organizers: Maldonado, Heidy, Stanford University; Organizers: Sharples, Mike, University of Nottingham

Workshop 3: It's about time - Purpose, methods and challenges of temporal analyses of multiple data streams

Salon 6

Organizers: Cheng, Britte, SRI International; Organizers: Molenaar, Inge, University of Amsterdam; Organizers: Chiu, Ming Ming, State University of New York Buffalo; Organizers: Svihla, Vanessa, University of California Berkeley; Organizers: Wise, Alyssa, Simon Fraser University; Organizers: Peters, Vanessa, University of Toronto; Organizers: Zourou, Katerina, University of Luxembourg

Workshop 5: Engineering Learning

Salon 9

Organizers: Johri, Aditya, Virginia Tech; Organizers: Olds, Barbara, Colorado School of Mines

Workshop 6: Collaborative learning with interactive surfaces - An interdisciplinary agenda

Salon 7

Organizers: Evans, Michael, Virginia Tech; Organizers: Rick, Jochen, Open University

Tuesday, June 29

9:00 AM - 12:30 PM, Tuesday, June 29

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University of Munich; Participants: Lee, Victor, Utah State University; Participants: Phipps, Molly, Science Museum of Minnesota; Participants: Plummer, Julia, Arcadia University; Participants: Reedy, Gabriel, King's College London; Participants: Romero, Margarida, Universitat Autònoma de Barcelona; Participants: Russell, Cianan, Georgia Institute of Technology; Participants: Shen, Ji, University of Georgia; Participants: Tzou, Carrie, University of Washington Bothell; Participants: van de Sande, Carla, Arizona State University; Participants: Zimmerman, Heather Toomey, Pennsylvania State University

Workshop 1: Productive multivocality in the analysis of collaborative learning Salon 12

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Workshop 7: Striking a Balance Between Free and Guided Exploration - Conceptualizing Support in Exploratory Environments (ISEE'10) Salon 9

Organizers: Roll, Ido, University of British Columbia; Organizers: Mavrikis, Manolis, University of London; Organizers: Gutierrez Santos, Sergio, University of London

Workshop 8: Growing the Learning Sciences - Brand or Big Tent? Implications for graduate education Salon 7

Organizers: Nathan, Mitchell, University of Wisconsin-Madison; Organizers: Rummel, Nikol, Ruhr University Bochum; Organizers: Hay, Kenneth, Indiana University

Workshop 9: Hands-on introduction to creating intelligent tutoring systems without programming using the Cognitive Tutor Authoring Tools Salon 2

Organizers: Aleven, Vincent, Carnegie Mellon University; Organizers: Sewall, Jonathan, Carnegie Mellon University

4:00 PM - 5:30 PM, Tuesday, June 29

Keynote 1 and Opening Session Red Lacquer Ballroom

Chair: Pellegrino, James, University of Illinois at Chicago; Keynote: Weiman, Carl, University of Colorado and University of British Columbia; Reactor: Duschl, Richard, Pennsylvania State University

5:30 PM - 7:00 PM, Tuesday, June 29

Poster Session 1 and Reception Salons 4-9

Children Learning Science through Engineering: An Investigation of Four Engineering-Design-Based Curriculum Modules

Kristen B. Wendell, Kathleen G. Connolly, Christopher G. Wright, Linda Jarvin, Chris Rogers

Expertise in Engineering Learning: Examining Engineering Students' Collaborative Inquiry of Computer Systems

Yuen-Yan Chan

Robot Diaries: Encouraging and Enabling Technological Creativity

Debra Bernstein

Incorporating Affect in an Engineering Student's Epistemological Dynamics

Brian A. Danielak, Ayush Gupta, Andrew Elby

Reflection Tools in Modeling Activities

Nora Siewiorek, Mary Besterfield-Sacre, Eric Hamilton, Larry J. Shuman

Development of Engineering Design Modules for Middle School Students: Design principles and Some initial Results

James Van Haneghan, Susan Pruet, Rhonda Waltman

Learning in mathematics: Effects of procedural and conceptual instruction on the quality of student interaction

Dejana Diziol, Nikol Rummel, Hans Spada, Stephanie Haug

Mapping topological relationships between contexts

Jonathan Boxerman, Bruce Sherin

Math Anxiety in Middle School Math Teachers: Implications for Teacher Practice and Professional Development

Nicole Shechtman

Virtual Math Teams: An Online Tool for Collaborative Learning in the Mathematics Disciplines

Baba Kofi Weusijana, Jimmy Xiantong Ou, Gerry Stahl, Stephen Weimar

Student Understandings of Solutions

Stephanie Ryan, Donald Wink, Susan Goldman, James Pellegrino

Students' Plausibility Perceptions of Human-Induced Climate Change

Doug Lombardi, Gale M. Sinatra

Finding the "Learning" in Biology Students' Use of Learning Management Systems

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- Steven Lonn
Analyzing People's Views of Science Through Their Categorization of Television Science Programs
Pryce Davis
Coordination and contextuality: Revealing the nature of emergent mathematical understanding by means of a clinical interview
Mariana Levin, Rozy Brar
A Photograph-Based Measure of Students' Beliefs About Math
Lee Martin, Pamela Gourley-Delaney
The Role of Definition in Supporting Mathematical Activity
Marta Kobiela, Rich Lehrer
NetLogo HotLink Replay: A Tool for Exploring, Analyzing and Interpreting Mathematical Change in Complex Systems
Michelle Wilkerson-Jerde, Uri Wilensky
Units of length: A notational system for conceptual understanding of size and scale
Cesar Delgado
Mathematics at Play
Osvaldo Jimenez, Kristen Pilner Blair, Indigo Esmonde, Shelley Goldman, Lee Martin, Roy Pea
Students' Investigations with Physical Activity Data Devices
Victor Lee, Maneksha DuMont
Learning to Categorize Word Problems: Effects of Practice Schedules
Brian Gane, Richard Catrambone
Anomalous Graph Data and Claim Revision During Argumentation
Leema Berland, Victor Lee
Facilitation, Teaching, and Assistance at the Intersection of the Learning Sciences and Informal Science Education
Lisa Bouillion Diaz, Jean Creighton, Catherine Eberbach, Dean Grosshandler, Leslie Herrenkohl, Sandra Toro Martell
Reasoning about the Seasons: Middle School Students' Use of Evidence in Explanations
Julia Plummer, Lori Agan
Student Progress in Understanding Energy Concepts in Photosynthesis using Interactive Visualizations
Kihyun (Kelly) Ryoo, Marcia Linn
Using the Activity Model of Inquiry to develop undergraduate students' views of the scientific inquiry process
Sara Marchlewicz, Donald Wink
Argumentation at the table-talk level of middle school students participating in scientific caf es
Gerald P. Niccolai, Zeynab Badreddine, Christian Buty
The Use of Animations and Online Communication Tools to Support Mathematics Teachers in the Practice of Teaching
Chieu Vu Minh, Patricio Herbst, Michael Weiss
What makes a "good" scientific question? Supporting independent student-driven inquiry
Julia Svoboda, Cynthia Passmore
The Effect of Curricular Elements on Student Interest in Science
Su Swarat
Using Design Personas to Inform Refinements to Software for Science Learning
Patrik Lundh, Britte Cheng, William R. Penuel, Aasha Joshi, Hannah Lesk

Wednesday, June 30

7:30 AM - 8:30 AM, Wednesday, June 30

JLS Board Meeting (closed)

Crystal Ballroom

Continental Breakfast

Red Lacquer
Ballroom

8:30 AM - 10:00 AM, Wednesday, June 30

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Symposium 1: Fostering the Acquisition and Application of Domain-Specific Knowledge through Concept Mapping

Salon 2

Fostering the Acquisition and Application of Domain-Specific Knowledge through Concept Mapping

Carmela Aprea, Hermann G. Ebner, Bert Slof, Gijsbert Erkens, Paul Kirschner, Baerbel Fuerstenau, Jeannine Ryssel, Janet Kunath

Concept Mapping versus Summary Writing as Instructional Devices for Understanding Complex Business Problems

Baerbel Fuerstenau, Jeannine Ryssel, Janet Kunath

Matching Representational Tools' Ontology to Part-task Demands to Foster Problem-solving in Business Economics

Bert Slof, Gijsbert Erkens, Paul Kirschner

Direct and Indirect Means of Scaffolding the Effective Use of Student-generated CMs in Economics Education

Carmela Aprea, Hermann G. Ebner

Paper Session 1: Dynamics of collaborative group interactions

Salon 9

Group Awareness of Social and Cognitive Behavior in a CSCL Environment

Chris Phielix, Frans Prins, Paul Kirschner

Coordinating Collaborative Problem-solving Processes by Providing Part-task Congruent Representations

Bert Slof, Gijsbert Erkens, Paul Kirschner

Fostering Online Search Competence and Domain-Specific Knowledge in Inquiry Classrooms: Effects of Continuous and Fading Collaboration Scripts

Christof Wecker, Ingo Kollar, Frank Fischer, Helmut Prechtl

Using collaborative activity as a means to explore student performance and understanding

Marcela Borge, John M. Carroll

Symposium 2: Developing Students' Disciplinary Historical Thinking - The Role of Textual and Instructional Resources

Salon 3

Developing Students' Disciplinary Historical Thinking: The Role of Textual and Instructional Resources

Darin Stockdill, Byeong-Young Cho, Avishag Reisman, Amy A. Wilson

The Teen Empowerment through Reading, Research, and Action (TERRA) Project

Darin Stockdill

Historical reasoning on the Internet: How do students read and learn about socially controversial issues in new literacy environments?

Byeong-Young Cho

Reading Like a Historian: A Document-Based History Curriculum Intervention with Adolescent Struggling Readers

Avishag Reisman

Constructing History in Middle Schools: A Social Semiotic Analysis of Texts Used in Three History Classrooms

Amy A. Wilson

Paper Session 2: Trajectories of early childhood science learning

Salon 4

Chair: Bell, Philip, University of Washington

Dispositions, disciplines, and marble runs: A case study of resourcefulness

Margaret Carr, Jane McChesney, Bronwen Cowie, Robert Miles-Kingston, Lorraine Sands

Scaffolding Children's Understanding of the Fit Between Organisms and their Environment In the Context of the Practices of Science

Kathleen Metz, Stephanie Sisk-Hilton, Eric Berson, Uyen Ly

Kindergarten and First-Grade Students' Representational Practices While Creating Storyboards of Honeybees Collecting Nectar

Joshua Danish, David Phelps

Interactional Arrangements for Learning about Science in Early Childhood: A Case Study Across Preschool and Home Contexts

Siri Mehus, Reed Stevens, Linda Grigholm

Poster Symposium 1: The Educative and Scalable Functions of Authoring Tools to Support Inquiry-based Science Learning

Salon 6

Chair: Tabak, Iris, Ben Gurion University of the Negev

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The Educative and Scalable Functions of Authoring Tools to Support Inquiry-based Science Learning

Itay Asher, Iris Tabak, Vassilis Kollias, Eleni Kyza, Iolie Nicolaidou, Andreas Redfors, Lena Hansson, Sascha Schanze, Ulf Saballus

Knowledge of prior implementations leverages authoring tool efficacy: The case of the Cyprus University of Technology team (CUT)

Eleni Kyza, Iolie Nicolaidou, F. Terzian, A. Hadjichambis, D. Kafouris

Using STOCHASMOS to scaffold students in discussing key issues while retaining ownership of their learning processes: The case of the Kristianstad team (HKr)

Andreas Redfors, M. Rosberg, Lena Hansson, I. Lundh

Specialized authoring tool as boundary object: The case of the Ben Gurion team (BGU)

Iris Tabak, Itay Asher, S. Nasser, Lina Gnaim, M. Fried, I. Katz, M. Weinstock

Design foreclosure and the proliferation of offline activities: The case of the Leibniz Universität Hannover team (LUH)

Sascha Schanze, Ulf Saballus, A. Neumann, M. Manske, B. Sieve, M. Söhlke, O. Jansen

The case of the University of Thessaly team (UTH)

Vassilis Kollias, A. Matos, A. Davaris, A. Karnavas, A. Daropoulos, K. Zaganas, V. Christodouloupoulos, Th. Tsaknia

Paper Session 3: Science teachers' learning - Multiple perspectives

Salon 7

Chair: Krajcik, Joseph, University of Michigan

Transformative professional development: Cultivating concern with others' thinking as the root of teacher identity

Rachel E. Scherr, Hunter G. Close

Activity-Theoretical Research on Science Teachers' Expertise and Learning

Cory Forbes, Cheryl Madeira, James D. Slotta

Teacher Learning about Teacher-Parent Engagement: Shifting Narratives and a Proposed Trajectory

Corey Drake, Angela Calabrese Barton

Appropriating Conceptual Representations: A Case of Transfer in a Middle School Science Teacher

Suparna Sinha, Steven Gray, Cindy Hmelo-Silver, Rebecca Jordan, Sameer Honwad, Catherine Eberbach, Spencer Rugaber, Swaroop Vattam, Ashok Goel

Paper Session 4: Home-school connections for math and science learning

Salon 8

Chair: Bouillion Diaz, Lisa, University of Illinois Extension

The Impact of a Media-Rich Science Curriculum on Low-Income Preschoolers' Science Talk at Home

William R. Penuel, Lauren Bates, Shelley Pasnik, Eve Townsend, Lawrence P. Gallagher, Carlin Llorente, Naomi Hupert

Math Engaged Problem Solving in Families

Shelley Goldman, Roy Pea, Kristen Pilner Blair, Osvaldo Jimenez, Angela Booker, Lee Martin, Indigo Esmonde

Micros and Me: Leveraging home and community practices in formal science instruction

Carrie Tzou, Philip Bell

Playing with Food: Moving from Interests and Goals into Scientifically Meaningful Experiences

Tamara Clegg, Christina Gardner, Janet Kolodner

Poster Symposium 2: Terra Nova Toward Terra Firma - Data On Games For Science Learning

Salon 12

Discussant: Kafai, Yasmin, University of Pennsylvania

Terra Nova Toward Terra Firma: Data On Games For Science Learning

Douglas Clark, Noel Enyedy, Constance Steinkuehler, Daniel Hickey, Brian C. Nelson, Kurt Squire, Eric Klopfer, Jody Clarke-Midura, Diane J. Ketelhut, Mingfong Jan

The Role of Embodiment and Symbolization in Supporting Physics Learning with Games and Virtual Worlds for Young Children

Noel Enyedy

Model Based Reasoning & Use in Massively Multiplayer Online Games

Constance Steinkuehler

Current Evidence of Engagement, Understanding, and Achievement in the Taiga Curriculum in Quest Atlantis

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Daniel Hickey, Eun Ju Kwon, Michael K. Filsecker
SURGE: Intended and Unintended Science Learning in Games
Douglas Clark, Mario Martinez-Garza, Brian C. Nelson, Cynthia M. D'Angelo, Kent Slack
Learning Argumentation through a Role-playing Game-based Curriculum
Mingfong Jan, Kurt Squire
Virtual Environment-based Assessments of Science Content and Inquiry: The SAVE Science Project
Brian C. Nelson, Younsu Kim, Cecile Foshee, Diane J. Ketelhut, Catherine Schifter, Deepti Mudegowder, David Majerich, Melanie Wills, Angela Shelton, Patrick McCormack, Tera Kane, Zoe Freeman
GameBuilder: Does Reduced Software Complexity Allow More Time on Task?
Eric Klopfer, Chuan Zhang, Judy Perry, Josh Sheldon
MUVes and Meta-Knowledge
Jody Clarke-Midura, Eugenia Garduno

10:00 AM - 10:20 AM, Wednesday, June 30

Morning Break

10:20 AM - 11:50 AM, Wednesday, June 30

Paper Session 5: Knowledge-building communities across contexts and disciplines Salon 6

Chair: Stevens, Reed, Northwestern University
Social Software and Knowledge Building: Supporting Co-Evolution of Individual and Collective Knowledge
Joachim Kimmerle, Ulrike Cress, Christoph Held, Johannes Moskaliuk
Teacher-education students' views about knowledge building theory and practice
Huang-Yao Hong, Fei-Ching Chen, Ching Sing Chai, Wen-Ching Chan
Making Knowledge Building Moves: Toward Cultivating Knowledge Building Communities in Classrooms
Katerine Bielaczyc, John Ow
Gaining an Insider Perspective on Learning physics in Hong Kong
Jan van Aalst

ISLS Presidential Session: ISLS Advances and Future Opportunities Crystal Ballroom

Chair: Linn, Marcia, University of California Berkeley; Respondents: Tabak, Iris, Ben Gurion University of the Negev; Respondents: Kirschner, Paul, Open University of the Netherlands

Poster Symposium 3: Using Visualization to Link Abstract Science and Everyday Experience Salon 12

Chair: Linn, Marcia, University of California Berkeley; Discussant: Fischer, Frank, University of Munich
Using Visualization to Link Abstract Science and Everyday Experience
Ji Shen, Hsin-Yi Chang, Jennifer Chiu, Douglas Clark, Kevin McElhaney, Keisha Varma, Eric Wiebe, Helen Zhang, Marcia Linn
Investigating the Role of Physical and Virtual Experiments in Developing Integrated Understanding of Thermal Conductivity and Equilibrium
Hsin-Yi Chang, Kun-Chen Tsai
Promoting Links and Developing Students' Criteria for Visualizations by Prompting Judgments of Fidelity
Jennifer Chiu
SURGE: Intended and Unintended Learning in Digital Games
Douglas Clark, Brian C. Nelson, Cynthia M. D'Angelo, Kent Slack, Mario Martinez-Garza
How Do Interactive Graphing Tools Help Students Interpret Virtual Experiments about Car Collisions?
Kevin McElhaney
Transformative Modeling in Learning Current Electricity: A Case Study of Preservice Teachers
Ji Shen, Rutchelle Enriquez
Using Interactive Models to Support Content Learning through Scientific Reasoning
Keisha Varma
Abstraction and Re-representation in Visualizations: Understanding Where the Learning Occurs
Eric Wiebe, Mike Carter, James Minogue, Lauren Madden, John Bedward

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Exploring Drawing and Critique to Enhance Learning from Visualizations

Helen Zhang

Symposium 3: Social construction of mathematical meaning through collaboration and argumentation

Salon 2

Social construction of mathematical meaning through collaboration and argumentation

Baruch Schwarz, Shirley Atzmon, Rina Hershkowitz, Chris Rasmussen, Gerry Stahl, Megan Wawro, Michelle Zandieh

Computer Mediation of Collaborative Mathematical Exploration

Gerry Stahl

Brokering as a Mechanism for the Social Production of Meaning

Chris Rasmussen, Michelle Zandieh, Megan Wawro

Distinctiveness of teachers' discourse patterns and their impact on students' emergent and subsequent argumentative activities

Rina Hershkowitz, Baruch Schwarz, Shirley Atzmon

Paper Session 6: Engineering education - What is this thing called Engineering?

Salon 3

Chair: Blikstein, Paulo, Stanford University

Disciplinary Knowledge, Identity, and Navigation: The Contributions of Portfolio Construction

Jennifer Turns, Brook Sattler, Deborah Kilgore

Contingent Identification in a Biomedical Engineering Classroom

Vanessa Svihla

Knowledge Transmission and Engineering Teaching

Sili Zhang, Monica Cardella

Cross-disciplinary practice in engineering contexts - a developmental phenomenographical perspective

Robin Adams, Tiago Forin, Saranya Srinivasan, Llewellyn Mann

Paper Session 7: Learning progressions - The state of the field

Salon 4

Chair: Duncan, Ravit Golan, Rutgers University

Validation of a Learning Progression: Relating Empirical Data to Theory

Nicole Shea, Ravit Golan Duncan

Designing Assessments to Track Student Progress

Namsuo Shin, Shawn Stevens, Joseph Krajcik

Discourse as a lens for reframing consideration of learning progressions

Alicia C. Alonzo

A critique of how learning progressions research conceptualizes sophistication and progress

Tiffany-Rose Sikorski, David Hammer

Symposium 4: Integrating Philosophy into Learning Sciences Research on Epistemic Cognition

Salon 8

Discussant: Blachowicz, James, Loyola University Chicago

Integrating Philosophy into Learning Sciences Research on Epistemic Cognition

Clark Chinn, Luke Buckland, Ala Samarapungavan

Broadening the Scope of Research on Epistemic Cognition: Implications from Epistemology and Philosophy of Science

Clark Chinn

Implications of Philosophy for Assessing Epistemic Cognition

Luke Buckland

Underdetermination in Philosophy of Science and Science Education

Ala Samarapungavan

Symposium 5: Qualitative, Quantitative, and Data Mining Methods for Analyzing Log Data to Characterize Students' Learning Strategies and Behaviors

Salon 7

Discussant: van Joolingen, Wouter, University of Twente

Qualitative, Quantitative, and Data Mining Methods for Analyzing Log Data to Characterize Students' Learning Strategies and Behaviors

Ryan Baker, Janice Gobert, Roger Azevedo, Ido Roll, Wouter van Joolingen

Studying the interaction between learner characteristics and inquiry skills in microworlds

Janice Gobert, Michael São Pedro, Juelaila Raziuddin, Nathan Krach

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Educational Data Mining Methods For Studying Student Behaviors Minute by Minute Across an Entire School Year

Ryan Baker, Adriana M.J.B. de Carvalho, Jay Raspat, Vincent Aleven, Albert T. Corbett, Kenneth R. Koedinger, Mihaela Cocea, Arnon Hershkovitz

Deciphering the complex nature of log-file data collected during self-regulated learning with MetaTutor

Roger Azevedo, Amy Witherspoon, Amber Chauncey, Mihai Lintean, Zhiqiang Cai, Vasile Rus, Arthur Graesser

Analysis of students' actions during online invention activities - seeing the thinking through the numbers

Ido Roll, Vincent Aleven, Kenneth R. Koedinger

12:00 PM - 1:15 PM, Wednesday, June 30

ISLS Board Meeting (closed)

Red Lacquer Ballroom

Field Trip to YouMedia: Field Trip to YOUMedia

You Media

Lunch (on your own in downtown Chicago!)

1:30 PM - 3:00 PM, Wednesday, June 30

Invited 2: Challenges in Professional Disciplinary Preparation

Crystal Ballroom

Presenter: Sheppard, Sherri, Stanford University; Presenter: Wink, Donald, University of Illinois Chicago; Presenter: Gomez, Louis, University of Pittsburgh; Discussant: Pellegrino, James, University of Illinois Chicago

Paper Session 8: Designed artifacts to support collaboration and learning

Salon 7

Chair: Rick, Jochen, Open University

Representational Technology For Learning Mathematics: An Investigation of Teaching Practices in Latino/a Classrooms

Phil Vahey, Teresa Lara-Meloy, Judit Moschkovich, Griselda Velazquez

A Tempest in a Teapot Is but a Drop in the Ocean: Action-Objects in Analogical Mathematical Reasoning

Dor Abrahamson

The Effects of Physical and Virtual Manipulatives on Students' Conceptual Learning About Pulleys

Elizabeth Gire, Adrian Carmichael, Jacquelyn J. Chini, Amy Rouinfar, Sanjay Rebello, Garrett Smith, Sadhana Puntambekar

Space And Time In Classroom Networks: Mapping Conceptual Domains In Mathematics Through Collective Activity Structures

Tobin White, Corey Brady

Paper Session 9: Classroom discourse processes - Roles, authority, and argumentation

Salon 2

Chair: Berland, Leema, University of Texas Austin

'I study features; believe me, I should know!': The mediational role of distributed expertise in the development of student authority

Jennifer Langer-Osuna, Randi Engle

Talking with your mouth full: The role of a mediating tool in shaping collective positioning

Kate Anderson, Melissa Gresalfi

Fostering meaningful scientific argumentation practices through ongoing classroom interactions

Xiaowei Tang, Janet Coffey

Listen to each other: How the building of norms in an elementary science classroom fosters participation and argumentation

Suna Ryu, William Sandoval

Symposium 6: The Learning Sciences as a Setting for Learning

Salon 3

Chair: Larreamendy, Jorge, UNIANDÉS; Discussant: Sawyer, R. Keith, Washington University in St. Louis

The Learning Sciences as a Setting for Learning

Michael Evans, Martin Packer, Reed Stevens, Cody Maddox, R. Keith Sawyer, Jorge Larreamendy

Mapping the Network of the Learning Sciences

Michael Evans

The History and Micro-Genesis of the Learning Sciences

Reed Stevens

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The Constitution of a Learning Scientist

Martin Packer, Cody Maddox

Paper Session 10: Scaffolding argumentation and shared reasoning

Salon 4

Chair: Shapiro, R. Benjamin, Morgridge Institute for Research

Assessing Change in Learner's Causal Understanding Using Sequential Analysis and Causal Maps

Allan Jeong

Effects of On-line Collaborative Argumentation Processes on Justifications

Jingyan Lu, Ming Ming Chiu, Nancy Law

Arguing with Peers: Examining Two Kinds of Discourse and Their Cognitive Benefits

David Shaenfield

When Students Speak, Who Listens? Constructing Audience in Classroom Argumentation

Leema Berland, Andrea Forte

Symposium 7: A Cognitive Apprenticeship for Science Literacy Based on Journalism

Salon 6

Chair: Polman, Joseph, University of Missouri-St. Louis; Discussants: Leander, Kevin, Vanderbilt University; Discussants: Penuel, William R., SRI International

A Cognitive Apprenticeship for Science Literacy Based on Journalism

Joseph Polman, E. Wendy Saul, Alan Newman, Cathy Farrar, Nancy Singer, Eric Turley, Laura Pearce, Jen Hope, Glenda McCarty, Cynthia Graville

Toward an Articulation of Standards for Science Literacy Based on Journalism

Alan Newman, E. Wendy Saul, Nancy Singer, Eric Turley, Laura Pearce, Joseph Polman

Designing Transfer Tasks to Measure Science Literacy

Cathy Farrar, Joseph Polman, E. Wendy Saul, Alan Newman

Reframing and Measuring Engagement with Science and Technology

Jen Hope, Glenda McCarty, Joseph Polman

Building an Apprenticeship Community of Practice for Science Journalism

Joseph Polman, E. Wendy Saul, Alan Newman, Laura Pearce, Cynthia Graville

Symposium 8: Wherever you go, there you are - Examining the development and integration of identity across multiple domains and contexts

Salon 8

Discussant: Nasir, Na'ilah Suad, University of California Berkeley

Wherever you go, there you are: Examining the development and integration of identity across multiple domains and contexts

Cynthia Carter Ching, Emily Evans, Elizabeth Faber, Deborah Fields, Na'ilah Suad Nasir

Trail guide self-perception and domain-expert identity at an environmental reserve

Emily Evans

Life maps and the multi-contextual development of undergraduate leadership identity

Elizabeth Faber

Identity confusion among teachers as professional development participants and novice bloggers

Cynthia Carter Ching

From Home to School and Back Again: Intersecting Trajectories of Identification in a Student's Development as a Writer

Deborah Fields

Paper Session 11: Spatial reasoning - Issues for teaching and learning

Salon 9

Chair: Fischer, Frank, University of Munich

Spatial Intelligence and the Research - Practice Challenge

Moshe Krakowski, Kristin Ratliff, Louis Gomez, Susan Levine

What counts as scientific practice? A taxonomy of scientists' ways of thinking and doing

Lori Takeuchi

Students' Use of Multiple Strategies for Spatial Problem Solving

Mike Stieff, Minjung Ryu, Bonnie Dixon

Spatial and Temporal Embedding for Science Inquiry: An Empirical Study of Student Learning

Tom Moher, Jennifer Wiley, Allison Jaegar, Brenda Lopez Silva, Francesco Novellis, Deborah Kilb

ICLS 2010

3:10 PM - 4:40 PM, Wednesday, June 30

Paper Session 12: Learning to write and writing to learn

Salon 2

Chair: Gomez, Kimberley, University of Pittsburgh

"Ideas First" in Collaborative Second Language (L2) Writing: An Exploratory Study

Yun Wen, Wenli Chen, Chee-Kit Looi

Romantic beats "classic": New insights on the effects of self-regulation on learning by writing

Isabel Braun, Susanne Philippi, Matthias Nückles

Children Learning Literate Practices in Spriting

Tara Rosenberger Shankar

Getting Others' Perspectives: A Case Study of Creative Writing Environments and Mentorship

Alecia Marie Magnifico

Symposium 9: Understanding a future with multiple pasts - Projects on metahistorical understanding

Salon 3

Chair: O'Neill, D. Kevin, Simon Fraser University; Discussant: Goldman, Susan, University of Illinois Chicago

Understanding a future with multiple pasts: Projects on metahistorical understanding

D. Kevin O'Neill, Yifat Ben-David Kolikant, Joseph Polman, Josh Radinsky

"Compassionate Canada?"

D. Kevin O'Neill

"Doing history together": A collaborative investigation by Israeli Jewish and Arab students of their shared past of conflict

Yifat Ben-David Kolikant

Narrative metacognition and story diagrams as scaffolds for the critique and construction of history narratives

Joseph Polman

Building nuanced historical narratives around geographic data

Josh Radinsky

Poster Symposium 4: Energy across the Curriculum - Cumulative Learning Using Embedded Assessment Results

Salon 12

Energy across the Curriculum: Cumulative Learning Using Embedded Assessment Results

Vanessa Svihla, Libby Gerard, Kihyun (Kelly) Ryoo, Elissa Sato, Tammie Visintainer, Hillary Swanson, Marcia Linn, Hee-Sun Lee, Ou Lydia Liu, Chad Dorsey

Promoting Cumulative Learning

Marcia Linn, Chad Dorsey

Teacher Perspectives on Cumulative Learning

Libby Gerard

Eliciting Energy Ideas in Thermodynamics

Hillary Swanson

Redesigning Plate Tectonics for Cumulative Learning

Elissa Sato

Redesigning Global Climate Change for Cumulative Learning

Tammie Visintainer, Vanessa Svihla

New Assessments of Cumulative Learning in Photosynthesis

Kihyun Ryoo

Measuring Cumulative Understanding: Item Formats

Hee-Sun Lee, Ou Lydia Liu

Measuring Cumulative Learning Across Disciplines

Vanessa Svihla

Paper Session 13: Examining and evaluating the use of CSCL tools

Salon 6

Chair: Stahl, Gerry, Drexel University

Teachers Collaborating with Wiki: The Impact of Professional Status, Language, and Age

Yael Poyas

Preparing for the Long Tail of Teaching and Learning Tools

Charles Severance, Stephanie D. Teasley

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An Overview of CSCL Methodologies

Heisawn Jeong, Cindy Hmelo-Silver

A Visualization of Group Cognition: Semantic Network Analysis of A CSCL Community

Li Sha, Christopher Teplovs, Jan van Aalst

Paper Session 14: Fostering classroom inquiry

Salon 7

Changes in Teachers' Ability to Design Inquiry-Based Lessons During a Two-Year Preparation Program

Augusto Macalalag Jr, Ravit Golan Duncan

Eliciting and Developing Students' Ideas and Questions in a Learner-Centered Environmental Biology Unit

Christopher J. Harris, Rachel S. Phillips, William R. Penuel

Implementing a Lesson Plan Vs. Attending to Student Inquiry: The Struggle of a Student-Teacher During Teaching Science

Loucas T. Louca, Maria Santis, Dora Tzialli

Fostering Mathematical Inquiry: Focus on Teacher's Interventions

Mara Martinez, Wenjuan Li

Paper Session 15: Instructional design in higher education

Salon 8

Stressed yet Motivated: Web-Based Peer Assessed Competition as an Instructional Approach in Higher Education

Ronen Hammer, Miky Ronen, Dan Kohen-Vacs

Distributed Creativity Within a Community of Student Instructional Designers

Richard West

The Role of Concretization in Acquiring Design Knowledge

Tamar Ronen-Fuhrmann, Yael Kali

Sharing Educational Scenario Designs in Practitioner Communities

Astrid Wichmann, Jan Engler, Ulrich Hoppe

Symposium 10: On the Process and Outcomes of Inquiry Learning - Changing Approaches to Assessment

Salon 4

On the Process and Outcomes of Inquiry Learning: Changing Approaches to Assessment

Shaaron Ainsworth, Ton de Jong, Cindy Hmelo-Silver, Pascal Wilhelm, Daniel Hickey, Michael Filsecker, Eun Ju Kwon, Stamatina Anastopoulou, Mike Sharples, Charles Crook

Participatory Assessment: Supporting Engagement, Understanding, and Achievement in Scientific Inquiry

Daniel Hickey, Michael Filsecker, Eun Ju Kwon

Engaging students with assessment: Inquiry cartoons

Shaaron Ainsworth, Stamatina Anastopoulou, Mike Sharples, Charles Crook, Claire O'Malley

Measuring Inquiry: New Methods, Promises & Challenges

Jody Clarke-Midura, Michael Mayrath, Chris Dede

Invited 3: Representational Practices and Modeling in the Disciplines

Crystal Ballroom

Presenter: Lemke, Jay, University of Michigan; Presenter: Hall, Rogers, Vanderbilt University; Presenter: Nakleh, Mary, Purdue University; Discussant: DiSessa, Andrea, University of California Berkeley

4:40 PM - 5:00 PM, Wednesday, June 30

Afternoon Break

5:00 PM - 6:30 PM, Wednesday, June 30

Symposium 11: Transformative Play - Games as 21st Century Curriculum

Salon 4

Transformative Play: Games as 21st Century Curriculum

Sasha Barab, Melissa Gresalfi, Anna Arici, Adam Ingram-Goble, Patrick Pettyjohn

Paper Session 16: Scaffolding scientific reasoning and explanations

Salon 7

Chair: Stieff, Mike, University of Illinois at Chicago

Explaining across contrasting cases for deep understanding in science: An example using interactive simulations

Catherine C. Chase, Jonathan T. Shemwell, Daniel L. Schwartz

Scaffolding students in evaluating the credibility of evidence using a reflective web-based inquiry environment on Biotechnology

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Iolie Nicolaidou, Eleni Kyza, Frederiki Terzian, Andreas Hadjichambis, Dimitris Kafouris
Tracing knowledge re-organization - a fine grain analytical framework for looking at students' developing explanations

Orit Parnafes

The impact of web-based collaborative inquiry for science learning in secondary education

Annelies Raes, Tammy Schellens, Bram De Wever

Symposium 12: Internationalizing the Learning Sciences from Formal to Informal Learning Environments

Salon 8

Chair: Rosé, Carolyn, Carnegie Mellon University; Chair: Kam, Matthew, Carnegie Mellon University; Discussant: Hoadley, Christopher, New York University

Symposium: Internationalizing the Learning Sciences from Formal to Informal Learning Environments

Carolyn Rosé, Matthew Kam, Therese Laferriere, Nancy Law, Neema Moraveji, Ravi Vatrappu, Christopher Hoadley

LearnLab India: Towards "In Vivo" International Comparative Education Research

Carolyn Rosé, Matthew Kam

Knowledge Building International Project (KBIP): a Nested Network of Learning and Knowledge Creation

Therese Laferriere, Nancy Law

Supporting and Measuring Global Information Literacy Through Cross-cultural Studies of Web Search

Neema Moraveji

Comparative Informatics: Investigating Cultural and Linguistic Influences in Computer Supported Collaborative Learning

Ravi Vatrappu

Language and Literacy Learning in Developing Communities via Cellphones

Matthew Kam

IJCSSL Editorial Board Meeting (closed)

Crystal Ballroom

Paper Session 17: Embodied learning processes

Salon 12

Chair: Danish, Joshua, Indiana University

The use of a digital dance mat for training kindergarten children in a magnitude comparison task

Ulrike Cress, Ursula Fischer, Moeller Korbinian, Sauter Claudia, Nuerk Hans-Christoph

Using conceptual blending to describe emergent meaning in wave propagation

Michael Wittmann

Embodied Experiences within an Engineering Curriculum

Molly Bolger, Marta Kobiela, Paul Weinberg, Rich Lehrer

Made by Hand: Gestural Practices for the Building of Complex Concepts in Face-to-Face, One-on-One Learning Arrangements

Stephanie Scopelitis, Siri Mehus, Reed Stevens

Paper Session 18: Learning to read - and reading to learn from - informational texts

Salon 2

Chair: Gomez, Kimberley, University of Pittsburgh

The Influence of Presentation Format and Subject Complexity on Learning from Illustrated Texts in Biology

Mareike Florax, Rolf Ploetzner

Delinquent or criminal? - How to foster conceptual understanding of technical terms in computer-mediated collaborative learning.

Elisabeth Paus, Gisela M. Gerhards, Regina Jucks

A Web-based Reading Environment Designed to Fundamentally Extend Readers' Interaction with Informational Texts

Khusro Kidwai

The Effectiveness of Reading Comprehension Strategies in High School Science Classrooms

Phillip Herman, Kristen Perkins, Martha Hansen, Louis Gomez, Kimberley Gomez

Symposium 13: Increasing Rigor and Generativity in Learning: Connections Between the Disciplines, Children's Lived Experience and Everyday Knowledge

Salon 3

Chair: Bang, Megan, American Indian Center; Discussant: Warren, Beth, TERC

Increasing Rigor and Generativity in Learning: Connections Between the Disciplines,

ICLS 2010

Children's Lived Experience and Everyday Knowledge

Megan Bang, Christopher G. Wright, Eli Tucker-Raymond, Folashade Solomon Cromwell

Learning to "see" sound: Meaning-making about sound through architectural diagrams among elementary school Black boys

Christopher G. Wright

History in Schools, Teachers, and Students: Identities and Meaning Making in Middle School Social Studies

Eli Tucker-Raymond, Maria Rosario

A Writer's Way: One Teacher's Experience Learning to See Her Students' Intellectual Strengths

Folashade Solomon Cromwell

Paper Session 19: Making students' thinking visible for reflection and learning

Salon 6

Chair: Alonzo, Alicia C., Michigan State University

Measuring Transformative Modeling: A Framework of Formatively Assessing Students' Deep Conceptual Understanding in Physical Sciences

Ji Shen, Ou Lydia Liu, Hsin-Yi Chang

Student learning through journal writing in a natural science course for pre-elementary education majors

Michael Dianovsky, Donald Wink

Using Knowledge Space Theory to Analyze Concept Maps

Laura Cathcart, Mike Stieff, Gili Marbach-Ad, Ann Smith, Kenneth Frauwirth

Conceptual Change and Epistemic Growth Through Reflective Assessment in Computer-Supported Knowledge Building

Carol KK Chan, IvanCK Lam

Symposium 14: Content Analysis of Collaboratively Constructed Knowledge Artifacts: Issues and Opportunities for Research

Salon 9

Content Analysis of Collaboratively Constructed Knowledge Artifacts: Issues and Opportunities for Research

Bram De Wever, Hilde Van Keer, Vanessa Peters, James D. Slotta, Elizabeth Charles, Nathaniel Lasry, Chris Whittaker, Crina Damsa, Patrick Sins, Bert Reijnen

Development of a Content Analysis Approach for Collaboration in a Wiki Environment

Bram De Wever, Hilde Van Keer

Analyzing Student Collaborations in a Wiki-based Science Curriculum

Vanessa Peters, James D. Slotta

Does Scale Matter: Using Different Lenses to Understand Collaborative Knowledge Building

Elizabeth Charles, Nathaniel Lasry, Chris Whittaker

Learning Through Collaborative Creation of Shared Knowledge Objects: Technological Support and Analytic Challenges

Crina Damsa, Patrick Sins, Bert Reijnen

6:30 PM - 8:00 PM, Wednesday, June 30

Poster Session 2 and Reception

Red Lacquer
Ballroom

Aggregation in the blog-o-sphere

Richard Alterman, Johann Larusson

Oh god, please don't let me hurt them!: Assessing Self-Regulated Learning in Medical School Education

Ted Hanss, Stephanie D. Teasley

Cutting the Distance in Distance Learning: Perspectives on Effective Online Learning Environments

Erica Boling, Mary Hough, Hindi Krinsky, Hafiz Saleem, Maggie Stevens

Understanding Formative Instruction By Design

R. Benjamin Shapiro, Peter Wardrip

Community knowledge advancement and individual learning

Nancy Law, Johnny Yuen, Jing Leng, Wing O W Wong

Facilitation of reform based teacher identity development in pre-service teachers using post-activity reflection debriefs

Michael Occhino, April Lynn Luehmann

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Structural validation of a feedback perceptions questionnaire

Jan-Willem Strijbos, Ron J. Pat-El, Susanne Narciss

Designing Environments to Encourage Collaborative Creativity: Two Case Studies in Higher Education

Richard West, Geoff Wright, Isaku Tateishi, Dan Randall

Robotics and environmental sensing for low-income populations: design principles, impact, technology, and results

Arnan Sipitakiat, Paulo Blikstein

Model-Evidence Link Diagrams: A Scaffold for Model-Based Reasoning

Luke Buckland, Clark Chinn

Predicting Social Influence and Project Influence in Online Communities of Creators

Elisabeth Sylvan

Effects of Case-Based Professional Development on Teacher Technological Pedagogical Content Knowledge

Chrystalla Mouza

Beyond epistemological deficits: Incorporating flexible epistemological views into fine-grained cognitive dynamics

Ayush Gupta, Andrew Elby

Investigating teacher growth in the context of content innovation

Sao-Ee Goh, Susan A. Yoon

Impasses to innovation in the development and design of new media curriculum

Kimberly Richards, Kimberley Gomez

From Visualization to Logical Necessity Through Argumentative Design

Naomi Prusak, Rina Hershkowitz, Baruch Schwarz

Improvising in music: A learning biography study to reveal skill acquisition

Iwan Wopereis, Jeroen van Merriënboer, Paul Kirschner

The Video Mosaic: Design and Preliminary Research

Cindy Hmelo-Silver, Carolyn Maher, Grace Agnew, Marjory Palius, Sharon Derry

From Gettysburg to the Cuban Missile Crisis: Designing for historical reenactments with Twitter

Tom Caswell, Marion Jensen, Victor Lee, Brett Shelton

The CORDTRA Analysis Tool in Action: Experiences and Suggestions

Andri Ioannou-Nicolaou, Agni Stylianou-Georgiou

Using Video-Based Examples of Peers' Performance on a Task to Support Prospective Educators' Interpersonal Skill Development

Joan Walker, Benjamin Dotger

Explanation as a guide to learning

Cristine Legare, Tania Lombrozo

The role of explanation in discovery and generalization: evidence from category learning

Joseph Williams, Tania Lombrozo

Teachers' Pedagogical Content Knowledge of Students' Science Writing and Talk

Katherine McNeill, Amanda Knight

Toward an emphasis on evidence and explanation in K-5 science teaching

Carla Zembal-Saul

Disentangling conceptual and epistemic influences on scientific explanation

William Sandoval, Jarod Kawasaki, Tina Stanford, Sara Carriere, Bladimir Lopez-Predo

Towards a Taxonomy of Explanations in Science Education

Barbara White, Jennifer L. Chiu, Lauren Barth-Cohen, Beat Schwendimann, Eric Berson, Jennifer King Chen, Hillary Swanson

Connecting Brain and Learning Sciences: An Optical Brain Imaging Approach to Monitoring Development of Expertise in UAV Piloting

Murat Cakir, Hasan Ayaz, Justin Menda, Kurtulus Izzetoglu, Banu Onaral

Activating childhood expertise to engage with disciplinary concepts

Sasha Palmquist

Knowledge eCommons: Merging Computer Conferencing and Wikis

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- Jim Hewitt, Earl Woodruff
21st Century Assessment: Redesigning to Optimize Learning
Vanessa Svihla, Drue Gawel, Nancy Vye, Megan Brown, Allison Moore, John Bransford
Unpacking the Design Process in Design-based Research
Mingfong Jan, Yam San Chee, Ek Ming Tan
The elusive link between emotion and self-regulated learning: How does emotion affect metacognition, study-time, and performance during multimedia learning?
Amber Chauncey, Roger Azevedo
Validity Evidence for Games as Assessment Environments
Girliie C. Delacruz, Gregory K.W.K. Chung, Eva L. Baker
Learning inter-related concepts in mathematics from videogames
Hee Seung Lee, Belinda Thompson, Keith Holyoak, James Stigler
Rhythm Games and Learning
Matthew Gaydos
Neighborhood Investigations and Game Design Using Mobile Media
James Mathews, Mark Wagler
Sources of Evidence for Embedded Assessment in Immersive Games
Brian C. Nelson, Benjamin Erlandson, Andre Denham
Improving the Language Ability of Deaf Signing Children through an Interactive American Sign Language-Based Video Game
Kimberly A. Weaver, Harley Hamilton, Zahoor Zafrulla, Helene Brashear, Thad Starner, Peter Presti, Amy Bruckman
Building Creativity: Collaborative Learning and Creativity in a Virtual Gaming Environment
Kylie Peppler, Maria Solomou
Identity Supportive Games as a Tool to Learn about Asian-American Stereotypes and Self-Concept
Joey Lee
Small Groups, Big Mistakes: The Emergence of Faulty Rules During a Collaborative Board Game
Matthew Berland, Victor Lee, Maneksha DuMont
Student Conceptions of Number in Solutions Chemistry
Stephanie Ryan, Donald Wink

Thursday, July 1

7:30 AM - 8:30 AM, Thursday, July 1

CSCL 2011 Program Committee Meeting

Crystal Ballroom

Continental Breakfast

Red Lacquer
Ballroom

8:30 AM - 10:00 AM, Thursday, July 1

Keynote 2

Red Lacquer
Ballroom

Chair: Castro-Superfine, Alison, University of Illinois at Chicago; Keynote: Gravemeijer, Koeno, Eindhoven University of Technology; Reactor: Martin, Danny B., University of Illinois Chicago

10:00 AM - 10:15 AM, Thursday, July 1

Morning Break

10:15 AM - 11:45 AM, Thursday, July 1

Paper Session 20: Scripts, prompts, and feedback as scaffolds for learning

Salon 4

Chair: Halverson, Erica Rosenfeld, University of Wisconsin-Madison

Known Knowns and Unknown Knowns: Multiple Memory Routes to Improved Numerical Estimation

Dav Clark, Michael Ranney

Representational Scripting to Support Students' Online Problem-solving Performance

Bert Slof, Gijsbert Erkens, Paul Kirschner

Fading Instructional Scripts: Preventing Relapses into Novice Strategies by Distributed Monitoring

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- Christof Wecker, Frank Fischer
Promoting Learning in Complex Systems: Effect of Question Prompts versus System Dynamics Model Progressions as a Cognitive-Regulation Scaffold in a Simulation-Based Inquiry-Learning Environment
Deniz Eseryel, Victor Law
- Paper Session 21: Knowledge construction and online inquiry** Salon 6
Group Micro-creativity in Online Discussions: Effects of New Ideas and Social Metacognition
Gaowei Chen, Ming Ming Chiu, Zhan Wang
Analyzing Collaborative Knowledge Construction in Secondary School Biology
Vanessa Peters, James D. Slotta
Analyzing Equality of Participation in Collaborative Inquiry: Toward a Knowledge Community
Hedieh Najafi, James D. Slotta
- Paper Session 22: Learning to attend to students' thinking** Salon 7
Chair: Duncan, Ravit Golan, Rutgers University
Exploring how novice teachers learn to attend to students in analyzing case studies of classroom teaching and learning
Daniel Levin, Jennifer Richards
Using changes in framing to account for differences in a teacher's classroom behavior
Jennifer Lineback, Fred Goldberg
Examining Preservice Teachers' Ability to Attend and Respond to Student Thinking
Vicky Pilitsis, Ravit Golan Duncan
Dynamics of disciplinary understandings and practices of attending to student thinking in elementary teacher education
Janet Coffey, Ann Edwards, Carla Finkelstein
- Paper Session 23: Methodological issues and challenges for the Learning Sciences** Salon 8
Chair: Penuel, William R., SRI International
Where to Find the Mind: Identifying the Scale of Cognitive Dynamics
Luke Conlin, Ayush Gupta, David Hammer
Adapting Workflow Technology to Design-Based Research: Development of a Method for Organizing the "Messiness" of Research in Technology-Rich Online Learning Environments
Alan J. Hackbarth, Sharon Derry, Brendan R. Eagan, Julia Gressick
Finding Transactive Contributions in Whole Group Classroom Discussions
Hua Ai, Marietta Sionti, Yi-Chia Wang, Carolyn Rose
Arts and Learning: A Review of the Impact of Arts and Aesthetics on Learning and Opportunities for Further Research
Kylie Pepler, Heidi Davis
- Invited 4: Identity as a Lens on Learning in the Disciplines** Crystal Ballroom
Chair: Radinsky, Josh, University of Illinois Chicago; Presenter: Nasir, Na'ilah Suad, University of California Berkeley; Presenter: Stevens, Reed, Northwestern University; Presenter: Kaplan, Avi, Temple University; Discussant: Wortham, Stanton, University of Pennsylvania
- Symposium 15: A New Age in Tangible Computational Interfaces for Learning** Salon 12
Chair: Blikstein, Paulo, Stanford University; Discussant: Ackermann, Edith, Massachusetts Institute of Technology School of Architecture
A New Age in Tangible Computational Interfaces for Learning
Paulo Blikstein, Leah Buechley, Michael Horn, Hayes Raffle
Topobo: programming by example to create complex behaviors
Hayes Raffle
LilyPad Arduino: rethinking the materials and cultures of educational technology
Leah Buechley
Connecting the science classroom and tangible interfaces: the Bifocal Modeling framework
Paulo Blikstein
Tangible Programming in Formal and Informal Educational Environments
Michael Horn
- Symposium 16: Are We Managing Learning with Learning Management Systems?** Salon 3
Chair: Teasley, Stephanie D., University of Michigan; Discussant: Laffey, James, University of Missouri

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Are We Managing Learning with Learning Management Systems?

Stephanie D. Teasley, Tanya Cleveland Solomon, Andrew E. Krumm, Steven Lonn, Kara Makara, Diana Perpich, James Laffey

A Multi-Institutional Analysis of Interactions Supported by a LMS

Andrew E. Krumm, Steven Lonn

Commuter vs. Residential: LMS Perceptions & Use on Two Campuses

Steven Lonn, Andrew E. Krumm

How Does LMS Use Affect Instructional Time?

Tanya Cleveland Solomon, Kara Makara

The Gifts We Give Ourselves: Embedding Disciplinary Tools in LMS

Diana Perpich

11:45 AM - 1:00 PM, Thursday, July 1

ISLS Education Committee Meeting (closed) Crystal Ballroom

ISLS Conference Committee Meeting (closed) Salon 3

ISLS Membership Committee Meeting (closed) Salon 6

Lunch (on your own in downtown Chicago!)

1:10 PM - 2:40 PM, Thursday, July 1

Invited 5: Geography Education Reform: A Cinderella Story in the Making? Crystal Ballroom

Chair: Edelson, Daniel, National Geographic Society; Presenter: Uttal, David, Northwestern University; Presenter: Radinsky, Josh, University of Illinois Chicago; Presenter: Rutherford, David, University of Mississippi; Discussant: Brooks, Clare, University of London

Paper Session 24: Learning in video game authoring, design, training, and play Salon 12

Chair: Abrahamson, Dor, University of California Berkeley

"Let the Players Play!" and Other Earnest Remarks about Videogame Authorship

Paul Teske, Teale Fristoe

Leading to Win: The Influence of Leadership Styles on Team Performance during a Computer Game Training

Anna Siewiorek, Andreas Gegenfurtner

First-Year Engineering Students' Environmental Awareness and Conceptual Understanding with Participatory Game Design as Knowledge Elicitation

Melissa Dyehouse, Nicole Weber, Jun Fang, Constance Harris, Annette Tomory, Johannes Strobel

Reading in the Context of Online Games

Constance Steinkuehler, Catherine Compton-Lilly, Elizabeth King

10:15 AM - 11:45 AM, Thursday, July 1

Paper Session 25: Processes of co-construction in groups Salon 2

Chair: Uttal, David, Northwestern University

Exploring Convergence of Science Ideas through Collaborative Concept Mapping

Dana Gnesdilow, Anushree Bopardikar, Sarah Sullivan, Sadhana Puntambekar

What Are They Talking About? Findings from an Analysis of the Discourse in Peer-Led Team Learning In General Chemistry

Patrick Brown, R. Keith Sawyer, Regina Frey, Daniel Gealy, Sarah Luesse

Multiple Conceptual Coherences in the Speed Tutorial: Micro-processes of Local Stability

Brian Frank

Science Learning as the Objectification of Discourse

Valerie Otero

1:10 PM - 2:40 PM, Thursday, July 1

Paper Session 26: Disciplinary lenses and epistemologies shaping conceptual learning Salon 3

Chair: Berland, Leema, University of Texas Austin

Conceptual Confusion in the History Classroom

Chava Shane-Sagiv

Perceptions of the relationship between evolutionary theory and biblical explanations of the origins of life and their effects on the learning of evolution among high school students

Pratchayapong Yasri, Rebecca Mancy

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Which science disciplines are pertinent? -Impact of epistemological beliefs on students' choices

Torsten Porsch, Rainer Bromme

Discipline-specific Socialization: A Comparative Study

Iris Tabak, Michael Weinstock, Hilla Zviling-Beiser

Symposium 17: Scaling Practices of Spatial Analysis and Modeling

Salon 2

Chair: Hall, Rogers, Vanderbilt University; Discussant: Stevens, Reed, Northwestern University

Scaling Practices of Spatial Analysis and Modeling

Rogers Hall, Jasmine Ma, Kevin Leander, Katie Taylor, Nathan Phillips

Shifting Between Person, Structure and Settlement Scales in Anthropological Field Work

Jasmine Ma, Rogers Hall, Kevin Leander

Changing the Structure of Planning Participation by Moving Across Scales

Katie Taylor, Rogers Hall, Kevin Leander

Modality and Scale at AirMed

Nathan Phillips, Kevin Leander

Symposium 18: Understanding Families' Educational Decision-Making Along Extended Learning Pathways

Salon 4

Discussant: Barron, Brigid, Stanford University

Understanding Families' Educational Decision-Making Along Extended Learning Pathways

Leah A. Bricker, Heather Toomey Zimmerman, Suzanne Reeve, Philip Bell

Negotiating Identity and Expertise in a Vietnamese Immigrant Family

Leah A. Bricker, Heather Toomey Zimmerman, Suzanne Reeve, Philip Bell

Orienting Children Towards Science: Influences of Parental Values and Family History on How Parents Arrange Children's Educational Experiences

Leah A. Bricker, Heather Toomey Zimmerman, Suzanne Reeve, Philip Bell

Examining the Complex Ecologies Associated with Immigrant Youth and Family Educational Decision Making

Leah A. Bricker, Heather Toomey Zimmerman, Suzanne Reeve, Philip Bell

Symposium 19: Adaptive human guidance of computer-mediated group work

Salon 6

Chair: Schwarz, Baruch, Hebrew University of Jerusalem; Discussant: Palincsar, Annemarie, University of Michigan

Adaptive human guidance of computer-mediated group work

Baruch Schwarz, Christine Wang, Ming Ming Chiu, Cynthia Ching, Kenneth Koedinger, Erin Walker, Nikol Rummel, Baruch Schwarz, Christa Asterhan, Michael Baker

Statistical Discourse Analysis of Young Children's Peer Tutoring at Computers

Christine Wang, Ming Ming Chiu, Cynthia Ching

Automated Adaptive Support for Peer Tutoring in High-School Mathematics

Erin Walker, Nikol Rummel, Kenneth Koedinger

Human guidance of synchronous discussions: A nascent school practice

Baruch Schwarz, Christa Asterhan

Buds, flowers and fruit: potentialities for guidance in collaborative argumentation-based learning

Michael Baker

Paper Session 27: Exploring learning possibilities with handheld technologies

Salon 7

Chair: Hooper, Paula, Exploratorium

Facilitating Group Learning in Science Laboratory Courses Using Handheld Devices

Chen-Wei Chung, Wang-Hsin Kuo, Chen-Chung Liu

Students' Meaning Making in a Mobile Assisted Chinese Idiom Learning Environment

Lung-Hsiang Wong, Chee-Kuen Chin, Chee-Lay Tan, May Liu, Cheng Gong

Extending Students' learning Spaces: Technology-Supported Seamless Learning

Wenli Chen, Peter Sen Kee Seow, Hyo-Jeong So, Yancy Toh, Chee-Kit Looi

Quiet Captures: A Tool for Capturing the Evidence of Seamless Learning with Mobile Devices

Ivica Boticki, Hyo-Jeong So

Symposium 20: Learning about Dynamic Systems by Drawing

Salon 9

Learning about Dynamic Systems by Drawing

ICLS 2010

Shaaron Ainsworth, Mitchell Nathan, Peggy van Meter, Helen Zhang, Marcia Linn, Arzoo Buksh, Chelsea Johnson, Wouter van Joolingen, Lars Bollen, Frank Leenaars

How can selection and drawing support learning from dynamic visualizations?

Helen Zhang, Marcia Linn

Can self-explanation help learners draw to learn?

Shaaron Ainsworth, Arzoo Buksh

Drawing Inferences about Students' Mental Models of Dynamic Processes Depicted in Scientific Drawings: The Role of Gestures and Speech

Mitchell Nathan, Chelsea Johnson

Interactive drawing tools to support modeling of dynamic systems

Wouter van Joolingen, Lars Bollen, Frank Leenaars

2:40 PM - 3:00 PM, Thursday, July 1

Afternoon Break

3:00 PM - 4:30 PM, Thursday, July 1

Symposium 21: The Design Framework: An Organizing Artifact for Enhancing the Fidelity of Educational Research, Implementation, and Assessment

Salon 6

Discussant: Gomez, Louis, University of Pittsburgh

The Design Framework: An Organizing Artifact for Enhancing the Fidelity of Educational Research, Implementation, and Assessment

Richard Halverson, Erica Rosenfeld Halverson, Dana Gnesdilow, Jen Scott Curwood, Michelle Bass, Anne Karch

A Modest Proposal: A Design Framework to Unify Educational Discourse

Richard Halverson, Erica Rosenfeld Halverson

Using the Design Framework as a Metarepresentation to Facilitate Teacher-Researcher Collaboration

Dana Gnesdilow, Jen Scott Curwood

Artifact Families: An Affordance of the Design Framework

Michelle Bass

Branching Up, Out or Off: How Features Become Affordances

Anne Karch

Paper Session 28: Knowledge-building communities and collaborative discourse

Salon 2

Chair: Schaenfield, David, Teachers College Columbia University

An invisible preference for intrinsic motivation in Computer-Mediated Communication

Bart Rienties, Dirk Tempelaar, Bas Giesbers, Mien Segers, Wim Gijselaers

Collaborative Productivity as Self-Sustaining Processes in a Grade 4 Knowledge Building Community

Jianwei Zhang, Richard Messina

Examining the Role of Verbal Interaction in Team Success on a Design Challenge

Xornam S. Apedoe, Kristina V. Mattis, Bianca Rowden-Quince, Christian D. Schunn

Software-Based Scaffolding: Supporting the Development of Knowledge Building Discourse in Online Courses

Nobuko Fujita, Christopher Teplovs

Paper Session 29: Professional vision as a lens on learning in the disciplines

Salon 3

Chair: Herman, Phillip, University of Pittsburgh

Assessing the Development of Expertise in an Historical-Based Science: The Case of Integrative Archeology

Inbal Flash Gvili, Jeff Dodick

Tension resolution as pattern for practice transformation in interdisciplinary teamwork in professional development

Patrick Sins

The Many Dimensions of Having a Good Eye: A Methodological Reflection of Metaphors in Visual Cognition Analysis

Andreas Gegenfurtner, Anna Siewiorek

The Epistemography of Journalism 335: Complexity in developing journalistic expertise

David Hatfield, David Williamson Shaffer

ICLS 2010

Paper Session 30: Trajectories of math and science learning

Salon 4

Centering a Professional Learning Community on a Learning Progression for Natural Selection: Transforming Community, Language, and Instructional Practice

Erin Marie Furtak, Deborah Morrison, Kathleen Henson, Sarah A. Roberts

A Longitudinal Approach to Appropriation of Science Ideas: A Study of Students' Trajectories in Thermodynamics

Olivia Levrini, Paola Fantini, Barbara Pecori, Marta Gagliardi, Mariateresa Scarongella, Giulia Tasquier

The Construction, Refinement, and Early Validation of the Equipartitioning Learning Trajectory

Alan Maloney, Jere Confrey

Magnetism as a Size Dependent Property: A Cognitive Sequence for Learning about Magnetism as an Introduction to Nanoscale Science for Middle and High School Students

David Sederberg, Lynn Bryan

Poster Symposium 5: Technologies and Tools to Support Informal Science Learning

Salon 12

Chair: Zimmerman, Heather Toomey, Pennsylvania State University; Discussant: Hsi, Sherry, Lawrence Hall of Science; Discussant: Smith, Brian K., Rhode Island School of Design

Technologies and Tools to Support Informal Science Learning

Heather Toomey Zimmerman, David E. Kanter, Kirsten Ellenbogen, Leilah Lyons, Steven J. Zuiker, Tom Satwicz, Sandra Toro Martell, Sherry Hsi, Brian K. Smith, Matthew Brown

Using the demand for data in a project-based science curriculum to bridge high school biology classrooms and an informal science center

David E. Kanter

Rain Table: Visualization technology using complex datasets that allows learners to control and follow water flow across the Earth's surface

Kirsten Ellenbogen, Molly Phipps

Mobile devices transforming the museum experience: Opportunistic user interfaces to exhibits

Leilah Lyons

Cyber-stretching: The Taiga biome around kids' worlds

Steven J. Zuiker

Understanding the pieces of knowledge in informal learning environments

Tom Satwicz

Using digital photography on an Internet portal to extend and enrich outdoors learning experiences

Heather Toomey Zimmerman, Robert Jordan, Jennifer Weible, Chris Gamrat

Innovative Tools and Student Perceptions of Technology: Owl Tracking and GIS Mapping with Fifth and Sixth Graders

Sandra Toro Martell

Take a Stand: Creating an immersive social experience with people tracking, 3D game technology, and interactive storytelling

Matthew Brown, Ben Loh

Symposium 22: Using Digital Video to Investigate Teachers' In-the-Moment Noticing

Salon 7

Discussant: Hall, Rogers, Vanderbilt University

Using Digital Video to Investigate Teachers' In-the-Moment Noticing

Bruce Sherin, Miriam Sherin, Adam Colestock, Rosemary Russ, Melissa Luna, Martha Mulligan, Janet Walkoe, Rogers Hall

Freezing Time: What Mathematics and Science Teachers "See" While Teaching

Bruce Sherin, Miriam Sherin

Science and Mathematics Teachers' In-The-Moment Noticing: Attending to Student Thinking Within a Lesson and Beyond

Adam Colestock, Rosemary Russ

Supporting Video Club Conversations Using Teacher-Selected Video Clips

Melissa Luna, Martha Mulligan, Miriam Sherin, Janet Walkoe

Symposium 23: Learning about Complexity and Beyond - Theoretical and Methodological Implications for the Learning Sciences

Salon 8

Organizer: Jacobson, Michael, University of Sydney; Chair: Wilensky, Uri, Northwestern University; Discussant: Reimann, Peter, University of Sydney

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Learning about Complexity and Beyond: Theoretical and Methodological Implications for the Learning Sciences

Michael Jacobson, Uri Wilensky, Peter Reimann, Pratim Sengupta, Michelle Wilkerson-Jerde, Manu Kapur

The Role of Perceptual Signatures and Agent-Level Mechanisms in Understanding Emergence: An Example in Learning Electricity

Pratim Sengupta, Uri Wilensky

Seeing Change in the World from Different Levels: Understanding the Mathematics of Complex Systems

Michelle Wilkerson-Jerde, Uri Wilensky

Learning as an Emergent Phenomenon: Methodological Implications

Manu Kapur, Michael Jacobson

Ontologies as Scale Free Networks: Implications for Theories of Conceptual Change

Michael Jacobson, Manu Kapur

Symposium 24: Understanding the Role of Place in Environmental Education across Settings

Salon 9

Understanding the Role of Place in Environmental Education across Settings

Giovanna Scalone, Philip Bell, Shari Rose, Angela Calabrese Barton, Carrie Tzou

Ideological dimensions of place: (re)creating an urban area

Giovanna Scalone, Philip Bell

"The Coal Plant Could Give People Jobs, But at the Same Time, It could Pollute the Air": Science learning as participation with and in a place

Shari Rose, Angela Calabrese Barton

"My Place in Puget Sound": Leveraging youths' sense of place in ocean sciences education

Carrie Tzou

4:45 PM - 6:00 PM, Thursday, July 1

Paper Session 31: Representational practices of learners

Salon 6

Chair: Shapiro, R. Benjamin, Morgridge Institute for Research

Representational practices in the activity of student-generated representations (SGR) for promoting conceptual understanding

Orit Parnafes

Learning physics as coherently packaging multiple sets of signs

Kristine Lund, Karine Becu-Robinault

Digital art-making as a representational process

Erica Rosenfeld Halverson

Paper Session 32: Multi-media resources for learning environments

Salon 3

Chair: Pinkard, Nichole, University of Chicago

Pictorial illustrations in intelligent tutoring systems: Do they distract or elicit interest and engagement?

Ulrike Magner, Rolf Schwonke, Alexander Renkl, Vincent Alevan, Octav Popescu

Digital Video Tools in the Classroom: Empirical Studies on Constructivist Learning with Audio-visual Media in the Domain of History

Carmen Zahn, Karsten Krauskopf, Roy Pea, Friedrich W. Hesse

From Show, To Room, To World: A Cross-Context Investigation of How Children Learn from Media Programming

Therese E. Dugan, Reed Stevens, Siri Mehus

Paper Session 33: Mathematics instruction: Innovations and challenges

Salon 4

Chair: Vahey, Phil, SRI International

Interactional Achievement of Shared Mathematical Understanding in a Virtual Math Team

Murat Cakir, Gerry Stahl, Alan Zemel

Free, open, online, mathematics help forums: The good, the bad, and the ugly

Carla van de Sande

Effects of Instructional Design Integrated With Ethnomathematics: Attitudes And Achievement

Melike Kara, Aysenur Yontar Togrol

Paper Session 34: Teachers' epistemologies and science

Salon 7

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Chair: Polman, Joseph, University of Missouri St. Louis

Investigating pre-service elementary teachers' epistemologies when talking about science, enacting science and reflecting on their enactment

Loucas T. Louca, Dora Tzialli, Zacharias C. Zacharia

Interpreting Elementary Science Teacher Responsiveness Through Epistemological Framing

April Cordero Maskiewicz, Victoria Winters

Personal beliefs about learning and teaching: Comparison of student teachers in the sciences and humanities at different stages of their studies

Natalia Schlichter, Rainer Watermann, Matthias Nückles

Paper Session 35: Learning sciences research at scale

Salon 2

Chair: Gomez, Louis, University of Pittsburgh

Equity in Scaling Up SimCalc: Investigating Differences in Student Learning and Classroom Implementation

Jeremy Roschelle, Jessica Pierson, Susan Empson, Nicole Shechtman, Margie Dunn, Deborah Tatar

Large Scale Analysis of Student Workbooks: What Can We Learn About Learning?

Nicole Shechtman, Jeremy Roschelle

Complexity, Robustness, and Trade-Offs in Evaluating Large Scale STEM Education Programs

Susan A. Yoon, Lei Liu

6:00 PM - 7:30 PM, Thursday, July 1

Poster Session 3 and Reception

Red Lacquer
Ballroom

The identity formation of youth with disabilities across academic disciplines and social contexts

AnnMarie Baines, Philip Bell

Designing an online environment for all teachers: Supporting teachers in learning to learn online

Rebecca Schneider

SURGE: Integrating Vygotsky's Spontaneous and Instructed Concepts in a Digital Game?

Douglas Clark, Brian C. Nelson, Cynthia M. D'Angelo, Kent Slack, Mario Martinez-Garza

Multi-Touch Tabletop Computing for Early Childhood Mathematics: 3D Interaction with Tangible User Interfaces

Michael A. Evans, Elisabeth Drechsel, Eric Woods, Guoqiang Cui

Impact of the distribution of social skills within learning groups in a CSCL- setting: An empirical pilot study

Michele Notari, Adrian Baumgartner

Pre-Implementation Technology Acceptance Model in the Case of a University-Based Electronic Portfolio System

Jeng-Yi Tzeng

Investigating youth's identity trajectories through positioning within the dialectic interstices of online and offline worlds

Azilawati Jamaludin

Broadening Participation through Scaffolding

Shelley Stromholt, Andrew Shouse, Philip Bell

An Analysis of the Interactional Patterns in One-to-One and One -to- Many Collaborative Concept Mapping Activities

Chiu-Pin Lin, Lung-Hsiang Wong, Tzu-Chien Liu, Yin-Juan Shao

Finding Essential Complexity for Learning in Virtual Worlds

Benjamin Erlandson, Brian C. Nelson, Andre Denham

Overherd: Designing Information Visualizations to Make Sense of Student's Online Discussions

Libby Hemphill, Stephanie D. Teasley

Out-of-School Virtual Worlds Based Programs: A Cross-Case Analysis

Constance Steinkuehler, Esra Alagoz

Formative Feedback Handheld Tools for Teachers

Suzanne Rhodes

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Moving Towards Learning with One-to-One Laptop: A Longitudinal Case Study on Tools, People, and Institutions

Arnan Sipitakiat

The Design and Evaluation of Educative Just-In-Time Teacher Supports in a Web-Based Environment

Hebbah El-Moslimany, Ravit Golan Duncan, Janice McDonnell, Sage Lichtenwalner

Reviving Dewey's Reflective Thinking Framework for the Design of Problems in Virtual Learning Environment based Assessments of Content and Inquiry

David Majerich, Diane J. Ketelhut, Brian Nelson, Catherine Schifter, Younsu Kim

Using a designed, online games based affinity space as a quasi-natural ethnographic context and experiment lab

Constance Steinkuehler, Elizabeth King, Esra Alagoz, Yoonsin Oh, Sarah Chu, Bei Zhang, Aysegul Bakar, Crystle Martin

A dual-level approach for investigating design in online affinity spaces

Sean Duncan

Identity in Informal Game-based Learning Environments

Benjamin DeVane

Exploring Intersections Between Online and Offline Affinity Space Participation

Elizabeth King

FormulaT Racing: Combining Gaming Culture and Intuitive Sense of Mechanism for Video Game Design

Nathan Holbert, Uri Wilensky

DevInfo GameWorks: Supporting inquiry-based game design

Jeff Kupperman, Beth Robertson, Shawn Baglin

Learning as mediated by a nodal ecology: Findings from studies of Gamestar Mechanic and Quest to Learn

Robert J Torres, Valerie Shute

The Impact of Video Games and Virtual Environments in Pre-Service Elementary Teacher Science Education

Janice Anderson

Designing for an Informal Learning Environment: Towards a Participatory Simulation Design Process for Public Policy Planning

Chandan Dasgupta, Leilah Lyons, Moira Zellner, Andrew Greenlee

Social Network Environments as Third Spaces for Merging Everyday and Formalized Practices

Priya Sharma, Susan Land, Robert Jordan, Jeff Swain, Brian K. Smith

Using Social Network Analysis to Understand Homeschool Network Interactions

Christopher Steinmeier, Susan A. Yoon

The "Other" curriculum: Constructing success and failure in a game-based learning environment

Asmalina Saleh, Steven J. Zuiker

Teachers' concepts of spatial scale. An intercultural comparison between Austrian, Taiwanese, and US-American teachers.

M. Gail Jones, Manuela Paechter, Grant Gardner, Iris Yen, Amy Taylor, Thomas Tretter

Developing and validating a web-based learning environment for helping 6th grade students appreciate subjectivity and uncertainty in science

Georgia Michael, Nicos Papadouris, Eleni Kyza, Constantinos Constantinou

The Effect of Teachers' Beliefs and Curricular Enactments on Student Learning in High School Science

Katherine McNeill, Diane Pimentel, Eric Strauss

Leveraging Multiple Representations to Support Knowledge Integration in Plate Tectonics

Elissa Sato, Marcia Linn

Investigating the Nature of Evidence 6th Grade Students Use When Constructing Scientific Explanations in Biodiversity

Hayat Hokayem, Amelia Gotwals

An Investigation into Students' Interpretations of Submicroscopic Representations

Shawn Stevens, Namsu Shin

Knowledge Building for Historical Reasoning in Grade Four

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Monica Resendes, Maria Chuy

How does the use of analogical mapping as a scaffold for science learners' argumentation support their learning and talking about science?

Brandon Emig, Scott McDonald

Teachers' Understanding of Partitioning When Modeling Fraction Arithmetic

Chandra Orrill, Andrew Izsak, Erik Jacobson, Zandra de Araujo

Putting the pieces together: The challenge and value of synthesizing disparate graphs in inquiry-based science learning

Itay Asher, Samira Nasser, Lina Ganaim, Iris Tabak

Online Science Classroom Collaborations: A Comparison of Domestic and International Learning Communities

Steven Kerlin, Elizabeth Goehring, William Carlsen

The Role of Student Agency and Sustained Inquiry on Collaboration and Learning of Science Practices

Kari Shutt, Nancy Vye, John Bransford

Developing an iMVT Pedagogy for Science Learning

Baohui Zhang, Xiaoxuan Ye, Seekit Foong, Peichun Chia

I Don't Do Science: Urban Minority Girls' Science Identity Development in an Informal Authentic Science Context

April Lynn Luehmann, Rachel Chaffee, Liz Tinelli, Kimberly Fluet

The Function of Mathematical Terminology: The Case of 'Slope'

Darrell Earnest

8:00 PM - 12:00 AM, Thursday, July 1

Social Event at the Cultural Center

Chicago Cultural Center

Friday, July 2

7:30 AM - 8:30 AM, Friday, July 2

Continental Breakfast

Red Lacquer Ballroom

8:30 AM - 10:00 AM, Friday, July 2

Keynote 3

Red Lacquer Ballroom

Chair: Goldman, Susan, University of Illinois at Chicago; Keynote: Grossman, Pamela, Stanford University; Reactor: Lee, Carol D., Northwestern University

10:15 AM - 11:45 AM, Friday, July 2

Invited 6: Disciplinary Foundations of the Computational Sciences

Crystal Ballroom

Chair: Moher, Tom, University of Illinois Chicago; Presenter: Guzdial, Mark, Georgia Institute of Technology; Presenter: Hoppe, Ulrich, University of Duisburg-Essen; Presenter: Kafai, Yasmin, University of Pennsylvania; Discussant: Fincher, Sally, University of Kent at Canterbury

Paper Session 36: Control of variables: Learning scientific inquiry skills

Salon 12

Helping Students Make Controlled Experiments More Informative

Kevin McElhane, Marcia Linn

Sequential Effects of High and Low Guidance on Children's Early Science Learning

Bryan Matlen, David Klahr

Comparing Pedagogical Approaches for the Acquisition and Long-Term Robustness of the Control of Variables Strategy

Michael Sao Pedro, Janice Gobert, Juelaila Raziuddin

Paper Session 37: Apprenticeship to professional practices as a model for learning environment design

Salon 2

Chair: van Es, Beth, University of California Irvine

The Epistemography of Urban and Regional Planning 912: Appropriation in the face of resistance

Elizabeth Bagley, David Williamson Shaffer

Motivation To Transfer Revisited

Andreas Gegenfurtner, Marja Vauras, Hans Gruber, Dagmar Festner

Writing and commenting on professional procedures: In search of learning designs promoting

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articulation between school and workplace learning.

Monica Gavota, Mireille Betrancourt, Daniel Schneider

Mentor Modeling: The internalization of modeled professional thinking in an epistemic game

Padraig Nash, David Williamson Shaffer

Symposium 25: Supporting Young New Media Producers Across Learning Spaces: A Longitudinal Study of the Digital Youth Network Salon 4

Supporting Young New Media Producers Across Learning Spaces: A Longitudinal Study of the Digital Youth Network

Brigid Barron, Amber Levinson, Caitlin Martin, Veronique Mertl, Daniel Stringer, Maryanna Rogers, Kimberly Austin, Nichole Pinkard, Kimberly Richards, Kimberley Gomez

The Digital Youth Network Model

Nichole Pinkard, Kimberley Gomez

Theoretical Framework and Research Methods

Brigid Barron, Caitlin Martin

Positioning learners as creative and critical producers

Amber Levinson, Veronique Mertl, Daniel Stringer, Maryanna Rogers

Artists as Mentors and Teachers

Kimberly Richards, Kimberly Austin

Paper Session 38: Problem representations and strategies in computer-based instruction Salon 6

Extending the Self-Explanation Effect to Second Language Grammar Learning

Ruth Wylie, Kenneth Koedinger, Teruko Mitamura

A Closer Look at the Split Attention Effect: Integrated Presentation Formats for Troubleshooting Tasks

Markus Huff, Vera Bauhoff, Stephan Schwan

Concrete vs. Abstract Problem Formats: A Disadvantage of Prior Knowledge

Andrew Heckler

Paper Session 39: What does it mean to think mathematically? Salon 7

Chair: Abrahamson, Dor, University of California Berkeley

Design-based knowledge building practices in mathematics teaching

Huang-Yao Hong, Yu-Han Chang

Reconceptualizing Mathematical Learning Disabilities: A Diagnostic Case Study

Katherine Lewis

"I don't know I'm just genius!": Distinguishing Between the Process and the Product of Student Algebraic Reasoning

Jose Gutierrez

Seeing Algebraic Thinking in the Classroom: A Study of Teachers' Conceptualizations of Algebra

Janet Walkoe

Symposium 26: Motivation and affect in peer argumentation and socio-cognitive conflict Salon 8

Discussant: Sinatra, Gale M., University of Nevada Las Vegas

Motivation and affect in peer argumentation and socio-cognitive conflict

Christa Asterhan, Baruch Schwarz, Ruth Butler, Fabrizio Butera, Celine Darnon, Timothy Nokes, John Levine, Dan Belenky, Soniya Gadgil, Gale M. Sinatra

Socio-cognitive conflict and learning: past and present

Fabrizio Butera, Celine Darnon

On competitive and co-constructive dialectical argumentation

Christa Asterhan, Baruch Schwarz, Ruth Butler

Investigating the Impact of Dialectical Interaction on Engagement, Affect, and Robust Learning

Timothy Nokes, John Levine, Dan Belenky, Soniya Gadgil

Symposium 27: Learning to Understand the Tree of Life Salon 3

Learning to Understand the Tree of Life

Shaaron Ainsworth, Camillia Matuk, David Uttal, Karl Rosengren, Brenda Phillips, Laura Novick, Kefyn Catley, Jessica Saffer, Kristy Halverson

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How high school students reason about the tree of life: A developmental perspective

Brenda Phillips, Laura Novick

Inventing a representation of relatedness

Camillia Matuk, David Uttal

Can children read trees?

Shaaron Ainsworth, Jessica Saffer

Improving undergraduates' approaches to understanding tree thinking

Kristy Halverson

12:00 PM - 1:00 PM, Friday, July 2

Invited 7: Closing Ceremony and Open Business Meeting

Red Lacquer
Ballroom