

Table of Contents – Part I

Invited Talks

Can Research-Based Technology Change School-Based Learning? Perspectives from Singapore	1
<i>Chee-Kit Looi</i>	
Modeling Emotion and Its Expression	2
<i>Stacy Marsella</i>	
Active Learning in Technology-Enhanced Environments: On Sensible and Less Sensible Conceptions of “Active” and Their Instructional Consequences	3
<i>Alexander Renkl</i>	
Riding the Third Wave	4
<i>Steven Ritter</i>	
Social and Caring Tutors: ITS 2010 Keynote Address	5
<i>Beverly Park Woolf</i>	

Educational Data Mining 1

Predicting Correctness of Problem Solving in ITS with a Temporal Collaborative Filtering Approach	15
<i>Suleyman Cetintas, Luo Si, Yan Ping Xin, and Casey Hord</i>	
Detecting the Moment of Learning	25
<i>Ryan S.J.d. Baker, Adam B. Goldstein, and Neil T. Heffernan</i>	
Comparing Knowledge Tracing and Performance Factor Analysis by Using Multiple Model Fitting Procedures	35
<i>Yue Gong, Joseph E. Beck, and Neil T. Heffernan</i>	

Natural Language Interaction 1

Automatic Question Generation for Literature Review Writing Support	45
<i>Ming Liu, Rafael A. Calvo, and Vasile Rus</i>	
Characterizing the Effectiveness of Tutorial Dialogue with Hidden Markov Models	55
<i>Kristy Elizabeth Boyer, Robert Phillips, Amy Ingram, Eun Young Ha, Michael Wallis, Mladen Vouk, and James Lester</i>	

Exploiting Predictable Response Training to Improve Automatic Recognition of Children’s Spoken Responses	65
<i>Wei Chen, Jack Mostow, and Gregory Aist</i>	
ITS in Ill-Defined Domains	
Leveraging a Domain Ontology to Increase the Quality of Feedback in an Intelligent Tutoring System	75
<i>Hameedullah Kazi, Peter Haddawy, and Siriwan Suebnukarn</i>	
Modeling Long Term Learning of Generic Skills	85
<i>Richard Gluga, Judy Kay, and Tim Lever</i>	
Eliciting Informative Feedback in Peer Review: Importance of Problem-Specific Scaffolding	95
<i>Ilya M. Goldin and Kevin D. Ashley</i>	
Inquiry Learning	
Layered Development and Evaluation for Intelligent Support in Exploratory Environments: The Case of Microworlds	105
<i>Sergio Gutierrez-Santos, Manolis Mavrikis, and George Magoulas</i>	
The Invention Lab: Using a Hybrid of Model Tracing and Constraint-Based Modeling to Offer Intelligent Support in Inquiry Environments	115
<i>Ido Roll, Vincent Aleven, and Kenneth R. Koedinger</i>	
Discovering and Recognizing Student Interaction Patterns in Exploratory Learning Environments	125
<i>Andrea Bernardini and Cristina Conati</i>	
Collaborative and Group Learning 1	
Lesson Study Communities on Web to Support Teacher Collaboration for Professional Development	135
<i>Yukari Kato and Masatoshi Ishikawa</i>	
Using Problem-Solving Context to Assess Help Quality in Computer-Mediated Peer Tutoring	145
<i>Erin Walker, Sean Walker, Nikol Rummel, and Kenneth R. Koedinger</i>	
Socially Capable Conversational Tutors Can Be Effective in Collaborative Learning Situations	156
<i>Rohit Kumar, Hua Ai, Jack L. Beuth, and Carolyn P. Rosé</i>	

Intelligent Games 1

- Facial Expressions and Politeness Effect in Foreign Language Training System 165
Ning Wang, W. Lewis Johnson, and Jonathan Gratch
- Intercultural Negotiation with Virtual Humans: The Effect of Social Goals on Gameplay and Learning 174
Amy Ogan, Vincent Alevan, Julia Kim, and Christopher Jones

Gaming the System

- An Analysis of Gaming Behaviors in an Intelligent Tutoring System 184
Kasia Muldner, Winslow Bureson, Brett Van de Sande, and Kurt VanLehn
- The Fine-Grained Impact of Gaming (?) on Learning 194
Yue Gong, Joseph E. Beck, Neil T. Heffernan, and Elijah Forbes-Summers
- Squeezing Out Gaming Behavior in a Dialog-Based ITS 204
Peter Hastings, Elizabeth Arnott-Hill, and David Allbritton

Pedagogical Strategies 1

- Analogies, Explanations, and Practice: Examining How Task Types Affect Second Language Grammar Learning 214
Ruth Wylie, Kenneth R. Koedinger, and Teruko Mitamura
- Do Micro-Level Tutorial Decisions Matter: Applying Reinforcement Learning to Induce Pedagogical Tutorial Tactics 224
Min Chi, Kurt VanLehn, and Diane Litman
- Examining the Role of Gestures in Expert Tutoring 235
Betsy Williams, Claire Williams, Nick Volgas, Brian Yuan, and Natalie Person

Affect 1

- A Time for Emoting: When Affect-Sensitivity Is and Isn't Effective at Promoting Deep Learning 245
Sidney D'Mello, Blair Lehman, Jeremiah Sullins, Rosaire Daigle, Rebekah Combs, Kimberly Vogt, Lydia Perkins, and Art Graesser
- The Affective and Learning Profiles of Students Using an Intelligent Tutoring System for Algebra 255
Maria Carminda V. Lagud and Ma. Mercedes T. Rodrigo

The Impact of System Feedback on Learners' Affective and Physiological States	264
<i>Payam Aghaei Pour, M. Sazzad Hussain, Omar AlZoubi, Sidney D'Mello, and Rafael A. Calvo</i>	

Games and Augmented Reality

Investigating the Relationship between Presence and Learning in a Serious Game	274
<i>H. Chad Lane, Matthew J. Hays, Daniel Auerbach, and Mark G. Core</i>	
Developing Empirically Based Student Personality Profiles for Affective Feedback Models.....	285
<i>Jennifer Robison, Scott McQuiggan, and James Lester</i>	
Evaluating the Usability of an Augmented Reality Based Educational Application	296
<i>Jorge Martín-Gutiérrez, Manuel Contero, and Mariano Alcañiz</i>	

Pedagogical Agents, Learning Companions, and Teachable Agents

What Do Children Favor as Embodied Pedagogical Agents?	307
<i>Sylvie Girard and Hilary Johnson</i>	
Learning by Teaching SimStudent: Technical Accomplishments and an Initial Use with Students.....	317
<i>Noboru Matsuda, Victoria Keiser, Rohan Raizada, Arthur Tu, Gabriel Stylianides, William W. Cohen, and Kenneth R. Koedinger</i>	
The Effect of Motivational Learning Companions on Low Achieving Students and Students with Disabilities	327
<i>Beverly Park Woolf, Ivon Arroyo, Kasia Muldner, Winslow Burlison, David G. Cooper, Robert Dolan, and Robert M. Christopherson</i>	

Intelligent Tutoring and Scaffolding 1

Use of a Medical ITS Improves Reporting Performance among Community Pathologists	338
<i>Rebecca Crowley, Dana Grzybicki, Elizabeth Legowski, Lynn Wagner, Melissa Castine, Olga Medvedeva, Eugene Tseytlin, Drazen Jukic, and Stephen Raab</i>	
Hints: Is It Better to Give or Wait to Be Asked?	349
<i>Leena Razzaq and Neil T. Heffernan</i>	

Error-Flagging Support for Testing and Its Effect on Adaptation	359
<i>Amruth N. Kumar</i>	

Metacognition

Emotions and Motivation on Performance during Multimedia Learning: How Do I Feel and Why Do I Care?	369
<i>Amber Chauncey and Roger Azevedo</i>	
Metacognition and Learning in Spoken Dialogue Computer Tutoring . . .	379
<i>Kate Forbes-Riley and Diane Litman</i>	
A Self-regulator for Navigational Learning in Hyperspace	389
<i>Akihiro Kashihara and Ryoya Kawai</i>	

Pedagogical Strategies 2

How Adaptive Is an Expert Human Tutor?	401
<i>Micheline T.H. Chi and Marguerite Roy</i>	
Blocked versus Interleaved Practice with Multiple Representations in an Intelligent Tutoring System for Fractions	413
<i>Martina A. Rau, Vincent Aleven, and Nikol Rummel</i>	
Improving Math Learning through Intelligent Tutoring and Basic Skills Training	423
<i>Ivon Arroyo, Beverly Park Woolf, James M. Royer, Minghui Tai, and Sara English</i>	
Author Index	433

Table of Contents – Part II

Affect 2

The Intricate Dance between Cognition and Emotion during Expert Tutoring	1
<i>Blair Lehman, Sidney D’Mello, and Natalie Person</i>	
Subliminally Enhancing Self-esteem: Impact on Learner Performance and Affective State	11
<i>Imène Jraidt and Claude Frasson</i>	
Detecting Learner Frustration: Towards Mainstream Use Cases	21
<i>Judi McCuaig, Mike Pearlstein, and Andrew Judd</i>	

Educational Data Mining 2

Enhancing the Automatic Generation of Hints with Expert Seeding	31
<i>John Stamper, Tiffany Barnes, and Marvin Croy</i>	
Learning What Works in ITS from Non-traditional Randomized Controlled Trial Data	41
<i>Zachary A. Pardos, Matthew D. Dailey, and Neil T. Heffernan</i>	

Natural Language Interaction 2

Persuasive Dialogues in an Intelligent Tutoring System for Medical Diagnosis	51
<i>Amin Rahati and Froduald Kabanza</i>	
Predicting Student Knowledge Level from Domain-Independent Function and Content Words	62
<i>Claire Williams and Sidney D’Mello</i>	
KSC-PaL: A Peer Learning Agent	72
<i>Cynthia Kersey, Barbara Di Eugenio, Pamela Jordan, and Sandra Katz</i>	

Authoring Tools and Theoretical Synthesis

Transforming a Linear Module into an Adaptive One: Tackling the Challenge	82
<i>Jonathan G.K. Foss and Alexandra I. Cristea</i>	

An Authoring Tool to Support the Design and Use of Theory-Based Collaborative Learning Activities 92
Seiji Isotani, Riichiro Mizoguchi, Sadao Isotani, Olimpio M. Capeli, Naoko Isotani, and Antonio R.P.L. de Albuquerque

How to Build Bridges between Intelligent Tutoring System Subfields of Research 103
Philip Pavlik Jr. and Joe Toth

Collaborative and Group Learning 2

Recognizing Dialogue Content in Student Collaborative Conversation ... 113
Toby Dragon, Mark Floryan, Beverly Woolf, and Tom Murray

Supporting Learners’ Self-organization: An Exploratory Study 123
Patrice Moguel, Pierre Tchounikine, and André Tricot

Exploring the Effectiveness of Social Capabilities and Goal Alignment in Computer Supported Collaborative Learning 134
Hua Ai, Rohit Kumar, Dong Nguyen, Amrut Nagasunder, and Carolyn P. Rosé

Intelligent Games 2

Virtual Humans with Secrets: Learning to Detect Verbal Cues to Deception 144
H. Chad Lane, Mike Schneider, Stephen W. Michael, Justin S. Albrechtsen, and Christian A. Meissner

Optimizing Story-Based Learning: An Investigation of Student Narrative Profiles 155
Seung Y. Lee, Bradford W. Mott, and James C. Lester

Integrating Learning and Engagement in Narrative-Centered Learning Environments 166
Jonathan P. Rowe, Lucy R. Shores, Bradford W. Mott, and James C. Lester

Intelligent Tutoring and Scaffolding 2

Collaborative Lecturing by Human and Computer Tutors 178
Sidney D’Mello, Patrick Hays, Claire Williams, Whitney Cade, Jennifer Brown, and Andrew Olney

Computational Workflows for Assessing Student Learning 188
Jun Ma, Erin Shaw, and Jihie Kim

Predictors of Transfer of Experimental Design Skills in Elementary and Middle School Children	198
<i>Stephanie Siler, David Klahr, Cressida Magaro, Kevin Willows, and Dana Mowery</i>	

Young Researchers Track

Moodle Discussion Forum Analyzer Tool (DFAT)	209
<i>Palak Baid, Hui Soo Chae, Faisal Anwar, and Gary Natriello</i>	
Peer-Based Intelligent Tutoring Systems: A Corpus-Oriented Approach	212
<i>John Champaign and Robin Cohen</i>	
Intelligent Tutoring Systems, Educational Data Mining, and the Design and Evaluation of Video Games	215
<i>Michael Eagle and Tiffany Barnes</i>	
An Intelligent Debater for Teaching Argumentation	218
<i>Matthew W. Easterday</i>	
Multiple Interactive Representations for Fractions Learning	221
<i>Laurens Feenstra, Vincent Alevan, Nikol Rummel, and Niels Taatgen</i>	
An Interactive Educational Diagrammatic System for Assessing and Remediating the Graph-as-Picture Misconception	224
<i>Grecia Garcia Garcia and Richard Cox</i>	
Long Term Student Learner Modeling and Curriculum Mapping	227
<i>Richard Gluga</i>	
Student Dispositions and Help-Seeking in Collaborative Learning	230
<i>Iris K. Howley and Carolyn Penstein Rosé</i>	
Visualizing Educational Data from Logic Tutors	233
<i>Matthew Johnson and Tiffany Barnes</i>	
An Authoring Language as a Key to Usability in a Problem-Solving ITS Framework	236
<i>Jean-François Lebeau, Luc Paquette, Mikaël Fortin, and André Mayers</i>	
Towards the Creation of a Data-Driven Programming Tutor	239
<i>Behrooz Mostafavi and Tiffany Barnes</i>	
Using Expert Models to Provide Feedback on Clinical Reasoning Skills	242
<i>Laura Naismith and Susanne P. Lajoie</i>	

Algorithms for Robust Knowledge Extraction in Learning Environments	245
<i>Ifeyinwa Okoye, Keith Maull, and Tamara Sumner</i>	
Integrating Sophisticated Domain-Independent Pedagogical Behaviors in an ITS Framework	248
<i>Luc Paquette, Jean-François Lebeau, and André Mayers</i>	
Delivering Tutoring Feedback Using Persuasive Dialogues	251
<i>Amin Rahati and Froduald Kabanza</i>	
Coordinate Geometry Learning Environment with Game-Like Properties	254
<i>Dovan Rai, Joseph E. Beck, and Neil T. Heffernan</i>	
Long-Term Benefits of Direct Instruction with Reification for Learning the Control of Variables Strategy	257
<i>Michael A. Sao Pedro, Janice D. Gobert, and Juelaila J. Raziuddin</i>	
Short Papers	
Can Affect Be Detected from Intelligent Tutoring System Interaction Data? – A Preliminary Study	260
<i>Elizabeth A. Anglo and Ma. Mercedes T. Rodrigo</i>	
Comparing Disengaged Behavior within a Cognitive Tutor in the USA and Philippines	263
<i>Ma. Mercedes T. Rodrigo, Ryan S.J.d. Baker, Jenilyn Agapito, Julieta Nabos, Ma. Concepcion Repalam, and Salvador S. Reyes Jr.</i>	
Adaptive Tutorials for Virtual Microscopy: A Design Paradigm to Promote Pedagogical Ownership	266
<i>Dror Ben-Naim, Gary Velan, Nadine Marcus, and Michael Bain</i>	
The Online Deteriorating Patient: An Adaptive Simulation to Foster Expertise in Emergency Decision-Making	269
<i>Emmanuel G. Blanchard, Jeffrey Wiseman, Laura Naismith, Yuan-Jin Hong, and Susanne P. Lajoie</i>	
DynaLearn: Architecture and Approach for Investigating Conceptual System Knowledge Acquisition	272
<i>Bert Bredeweg, Jochem Liem, Floris Linnebank, René Bühling, Michael Wißner, Jorge Gracia del Río, Paulo Salles, Wouter Beek, and Asunción Gómez Pérez</i>	
Interfaces for Inspectable Learner Models	275
<i>Susan Bull, Andrew Mabbott, Rasyidi Johan, Matthew Johnson, Kris Lee-Shim, and Tim Lloyd</i>	

Conceptual Personalization Technology: Promoting Effective Self-directed, Online Learning	278
<i>Kirsten R. Butcher, Tamara Sumner, Keith Maull, and Ifeyinwa Okoye</i>	
Learning to Identify Students' Relevant and Irrelevant Questions in a Micro-blogging Supported Classroom	281
<i>Suleyman Cetintas, Luo Si, Sugato Chakravarty, Hans Aagard, and Kyle Bowen</i>	
Using Emotional Coping Strategies in Intelligent Tutoring Systems	285
<i>Soumaya Chaffar and Claude Frasson</i>	
Showing the Positive Influence of Subliminal Cues on Learner's Performance and Intuition: An ERP Study	288
<i>Pierre Chalfoun and Claude Frasson</i>	
Exploring the Relationship between Learner EEG Mental Engagement and Affect	291
<i>Maher Chaouachi and Claude Frasson</i>	
MiBoard: Creating a Virtual Environment from a Physical Environment	294
<i>Kyle Dempsey, G. Tanner Jackson, and Danielle S. McNamara</i>	
Players' Motivation and EEG Waves Patterns in a Serious Game Environment	297
<i>Lotfi Derbali and Claude Frasson</i>	
Predicting the Effects of Skill Model Changes on Student Progress	300
<i>Daniel Dickison, Steven Ritter, Tristan Nixon, Thomas K. Harris, Brendon Towle, R. Charles Murray, and Robert G.M. Hausmann</i>	
Data Mining to Generate Individualised Feedback	303
<i>Anna Katrina Dominguez, Kalina Yacef, and James R. Curran</i>	
In the Zone: Towards Detecting Student Zoning Out Using Supervised Machine Learning	306
<i>Joanna Drummond and Diane Litman</i>	
Can We Get Better Assessment from a Tutoring System Compared to Traditional Paper Testing? Can We Have Our Cake (Better Assessment) and Eat It too (Student Learning during the Test)?	309
<i>Mingyu Feng and Neil Heffernan</i>	
Using Data Mining Findings to Aid Searching for Better Cognitive Models	312
<i>Mingyu Feng, Neil T. Heffernan, and Kenneth Koedinger</i>	

Generating Proactive Feedback to Help Students Stay on Track	315
<i>Davide Fossati, Barbara Di Eugenio, Stellan Ohlsson, Christopher Brown, and Lin Chen</i>	
ITS in Ill-Defined Domains: Toward Hybrid Approaches	318
<i>Philippe Fournier-Viger, Roger Nkambou, Engelbert Mephu Nguifo, and André Mayers</i>	
Analyzing Student Gaming with Bayesian Networks	321
<i>Stephen Giguere, Joseph Beck, and Ryan Baker</i>	
EdiScenE: A System to Help the Design of Online Learning Activities	324
<i>Patricia Gounon and Pascal Leroux</i>	
Critiquing Media Reports with Flawed Scientific Findings: <i>Operation ARIES!</i> A Game with Animated Agents and Natural Language Dialogues	327
<i>Art Graesser, Anne Britt, Keith Millis, Patty Wallace, Diane Halpern, Zhiqiang Cai, Kris Kopp, and Carol Forsyth</i>	
A Case-Based Reasoning Approach to Provide Adaptive Feedback in Microworlds	330
<i>Sergio Gutierrez-Santos, Mihaela Cocca, and George Magoulas</i>	
Real-Time Control of a Remote Virtual Tutor Using Minimal Pen-Gestures	334
<i>Yonca Haciahmetoglu and Francis Quek</i>	
Theoretical Model for Interplay between Some Learning Situations and Brainwaves	337
<i>Alicia Heraz and Claude Frasson</i>	
Cultural Adaptation of Pedagogical Resources within Intelligent Tutorial Systems	340
<i>Franck Hervé Mpondo Eboa, François Courtemanche, and Esma Aïmeur</i>	
An Interactive Learning Environment for Problem-Changing Exercise . . .	343
<i>Tsukasa Hirashima, Sho Yamamoto, and Hiromi Waki</i>	
Towards Intelligent Tutoring with Erroneous Examples: A Taxonomy of Decimal Misconceptions	346
<i>Seiji Isotani, Bruce M. McLaren, and Max Altman</i>	
The Efficacy of iSTART Extended Practice: Low Ability Students Catch Up	349
<i>G. Tanner Jackson, Chutima Boonthum, and Danielle S. McNamara</i>	

Expecting the Unexpected: Warehousing and Analyzing Data from ITS Field Use	352
<i>W. Lewis Johnson, Naveen Ashish, Stephen Bodnar, and Alicia Sagae</i>	
Developing an Intelligent Tutoring System Using Natural Language for Knowledge Representation	355
<i>Sung-Young Jung and Kurt VanLehn</i>	
A Network Analysis of Student Groups in Threaded Discussions	359
<i>Jeon-Hyung Kang, Jihie Kim, and Erin Shaw</i>	
A New Framework of Metacognition with Abstraction/Instantiation Operations	362
<i>Michiko Kayashima and Rūchiro Mizoguchi</i>	
Expansion of the xPST Framework to Enable Non-programmers to Create Intelligent Tutoring Systems in 3D Game Environments	365
<i>Sateesh Kumar Kodavali, Stephen Gilbert, and Stephen B. Blessing</i>	
A Computational Model of Accelerated Future Learning through Feature Recognition	368
<i>Nan Li, William W. Cohen, and Kenneth R. Koedinger</i>	
Automated and Flexible Comparison of Course Sequencing Algorithms in the LS-Lab Framework	371
<i>Carla Limongelli, Filippo Sciarrone, Marco Temperini, and Giulia Vaste</i>	
Correcting Scientific Knowledge in a General-Purpose Ontology	374
<i>Michael Lipschultz and Diane Litman</i>	
Learning to Argue Using Computers – A View from Teachers, Researchers, and System Developers	377
<i>Frank Loll, Oliver Scheuer, Bruce M. McLaren, and Niels Pinkwart</i>	
How to Take into Account Different Problem Solving Modalities for Doing a Diagnosis? Experiment and Results	380
<i>Sandra Michelet, Vanda Luengo, Jean-Michel Adam, and Nadine Madran</i>	
Behavior Effect of Hint Selection Penalties and Availability in an Intelligent Tutoring System	384
<i>Pedro J. Muñoz-Merino, Carlos Delgado Kloos, and Mario Muñoz-Organero</i>	
DesignWebs: A Tool for Automatic Construction of Interactive Conceptual Maps from Document Collections	387
<i>Sharad V. Oberoi, Dong Nguyen, Gahgene Gweon, Susan Finger, and Carolyn Penstein Rosé</i>	

Extraction of Concept Maps from Textbooks for Domain Modeling <i>Andrew M. Olney</i>	390
Levels of Interaction (LoI): A Model for Scaffolding Learner Engagement in an Immersive Environment <i>David Panzoli, Adam Qureshi, Ian Dunwell, Panagiotis Petridis, Sara de Freitas, and Genaro Rebolledo-Mendez</i>	393
Tools for Acquiring Data about Student Work in Interactive Learning Environment T-Algebra <i>Rein Prank and Dmitri Lepp</i>	396
Mily’s World: A Coordinate Geometry Learning Environment with Game-Like Properties <i>Dovan Rai, Joseph E. Beck, and Neil T. Heffernan</i>	399
An Intelligent Tutoring System Supporting Metacognition and Sharing Learners’ Experiences <i>Triomphe Ramandalahy, Philippe Vidal, and Julien Broisin</i>	402
Are ILEs Ready for the Classroom? Bringing Teachers into the Feedback Loop <i>James Segedy, Brian Sulcer, and Gautam Biswas</i>	405
Comparison of a Computer-Based to Hands-On Lesson in Experimental Design <i>Stephanie Siler, Dana Mowery, Cressida Magaro, Kevin Willows, and David Klahr</i>	408
Toward the Development of an Intelligent Tutoring System for Distributed Team Training through Passive Sensing <i>Robert A. Sottolare</i>	411
Open Educational Resource Assessments (OPERA) <i>Tamara Sumner, Kirsten Butcher, and Philipp Wetzler</i>	414
Annie: A Tutor That Works in Digital Games <i>James M. Thomas and R. Michael Young</i>	417
Learning from Erroneous Examples <i>Dimitra Tsovaltzi, Bruce M. McLaren, Erica Melis, Ann-Kristin Meyer, Michael Dietrich, and George Gogquadze</i>	420
Feasibility of a Socially Intelligent Tutor <i>Jozef Tvarožek and Mária Bielíková</i>	423
Agent Prompts: Scaffolding Students for Productive Reflection in an Intelligent Learning Environment <i>Longkai Wu and Chee-Kit Looi</i>	426

Identifying Problem Localization in Peer-Review Feedback	429
<i>Wenting Xiong and Diane Litman</i>	
AlgoTutor: From Algorithm Design to Coding	432
<i>Sung Yoo and Jungsoon Yoo</i>	
Adaptive, Assessment-Based Educational Games	435
<i>Diego Zapata-Rivera</i>	

Interactive Events

ITS Authoring through Programming-by-Demonstration	438
<i>Vincent Alevan, Brett Leber, and Jonathan Sewall</i>	
A Coordinate Geometry Learning Environment with Game-Like Properties	439
<i>Dovan Rai, Joseph E. Beck, and Neil T. Heffernan</i>	
Adaptive Tutorials and the Adaptive eLearning Platform	440
<i>Dror Ben-Naim</i>	
DomainBuilder – An Authoring System for Visual Classification Tutoring Systems	441
<i>Eugene Tseytlin, Melissa Castine, and Rebecca Crowley</i>	
AWESOME Computing: Using Corpus Data to Tailor a Community Environment for Dissertation Writing	443
<i>Vania Dimitriva, Royce Neagle, Sirisha Bajanki, Lydia Lau, and Roger Boyle</i>	
Collaboration and Content Recognition Features in an Inquiry Tutor . . .	444
<i>Mark Floryan, Toby Dragon, Beverly Woolf, and Tom Murray</i>	
The Science Assistments Project: Scaffolding Scientific Inquiry Skills . . .	445
<i>Janice D. Gobert, Orlando Montalvo, Ermal Toto, Michael A. Sao Pedro, and Ryan S.J.d. Baker</i>	
Incorporating Interactive Examples into the Cognitive Tutor	446
<i>Robert G.M. Hausmann, Steven Ritter, Brendon Towle, R. Charles Murray, and John Connelly</i>	
iGeom: Towards an Interactive Geometry Software with Intelligent Guidance Capabilities	447
<i>Leônidas O. Brandão, Seiji Isotani, and Danilo L. Dalmon</i>	
Acquiring Conceptual Knowledge about How Systems Behave	448
<i>Jochem Liem, Bert Bredeweg, Floris Linnebank, René Bühling, Michael Wißner, Jorge Gracia del Río, Wouter Beek, and Asunción Gómez Pérez</i>	

Learning by Teaching SimStudent	449
<i>Noboru Matsuda, Victoria Keiser, Rohan Raizada, Gabriel Stylianides, William W. Cohen, and Ken Koedinger</i>	
Authoring Problem-Solving ITS with ASTUS	450
<i>Jean-François Lebeau, Luc Paquette, and André Mayers</i>	
A Better Reading Tutor That Listens	451
<i>Jack Mostow, Greg Aist, Juliet Bey, Wei Chen, Al Corbett, Weisi Duan, Nell Duke, Minh Duong, Donna Gates, José P. González, Octavio Juárez, Martin Kantorzyk, Yuanpeng Li, Liu Liu, Margaret McKeown, Christina Protochaud, Joe Valeri, Anders Weinstein, and David Yen</i>	
Research-Based Improvements in Cognitive Tutor Geometry	452
<i>Steven Ritter, Brendon Towle, R. Charles Murray, Robert G.M. Hausmann, and John Connelly</i>	
A Cognitive Tutor for Geometric Proof	453
<i>Steven Ritter, Brendon Towle, R. Charles Murray, Robert G.M. Hausmann, and John Connelly</i>	
Multiplayer Language and Culture Training in ISLET	454
<i>Kevin Saunders and W. Lewis Johnson</i>	
PSLC DataShop: A Data Analysis Service for the Learning Science Community	455
<i>John Stamper, Ken Koedinger, Ryan S.J.d. Baker, Alida Skogsholm, Brett Leber, Jim Rankin, and Sandy Demi</i>	
A DIY Pressure Sensitive Chair for Intelligent Tutoring Systems	456
<i>Andrew M. Olney and Sidney D’Mello</i>	
Author Index	457