

# Thursday, June 30

EDM'16 Thursday, Jun 30			
Time	Room A: Oak Forest A	Room B: Oak Forest B	Room G: Governor's Room I&II
8:00 AM	Registration, light breakfast @ Hannover Ballroom		
9:00 AM	<b>Keynote: Rakesh Agrawal</b> <b>Data-Driven Education: Some opportunities &amp; Challenges</b>		
10:00 AM	Coffee Break @ Hannover Ballroom		
<b>1. Papers</b>	<b>1A: Learning processes &amp; seq. patterns</b>	<b>1B: Multi-modal &amp; affect</b>	<b>1G: MOOCs</b>
10:30 AM	<b>Best Paper Nominee</b> <b>87**-How to Model Implicit Knowledge? Similarity Learning Methods to Assess Perceptions of Visual Representations (Martina Rau, Blake Mason &amp; Robert Nowak)</b>	<b>EX 76*-Riding an emotional roller-coaster: A multimodal study of young child's math problem solving activities (Lujie Chen, Xin Li, Zhuyun Xia, Zhanmei Song, Louis-Philippe Morency &amp; Artur Dubrawski)</b>	JEDM 303-Exploring the Effect of Student Confusion in Massive Open Online Courses (Diyi Yang, Robert Kraut, Carolyn P. Rose)
11:00 AM	FULL 126- {ENTER}ing the Time Series {SPACE}: Uncovering the Writing Process through Keystroke Analyses (Laura Allen, Matthew Jacovina, Mihai Dascalu, Rod Roscoe, Kevin Kent, Aaron Likens & Danielle McNamara)	<b>EX 77*-The Affective Impact of Tutor Questions: Predicting Frustration &amp; Engagement (Alexandria Vail, Joseph Wiggins, Joseph Grafsgaard, Kristy Boyer, Eric Wiebe &amp; James Lester)</b>	FULL 63-Gauging MOOC Learners' Adherence to the Designed Learning Path Daniel Davis, Guanliang Chen, Claudia Hauff & Geert-Jan Houben
11:30 AM	FULL: 164-Sequence Matters, But How Exactly? A Methodology for Evaluating Activity Sequences from Data (Shayan Doroudi, Kenneth Holstein, Vincent Alevan & Emma Brunskill)	SHORT 139-Beyond Log Files: Using Multi-Modal Data Streams Towards Data-Driven KC Model Improvement (Ran Liu, Jodi Davenport & John Stamper)	SHORT 112-Semi-Markov model for simulating MOOC students Louis Faucon, Łukasz Kidziński & Pierre Dillenbourg
12:00 PM	<b>"State of the Industry" Panel &amp; Lunch @ Hannover Ballroom</b>		
<b>2. Papers</b>	<b>2A: Deep learning</b>	<b>2B: Peer grading &amp; assessment</b>	<b>2G: CS education</b>
1:00 PM	<b>EX 64*-LIVELINET: A Multimodal Deep Recurrent Neural Network to Predict Liveliness in Educational Videos (Arjun Sharma, Arijit Biswas, Ankit Gandhi, Sonal Patil &amp; Om Deshmukh)</b>	<b>Best Paper Nominee</b> <b>158**-Calibrated Self-Assessment (Igor Labutov &amp; Christoph Studer)</b>	<b>EX 17*-Execution Traces as a Powerful Data Representation for Intelligent Tutoring Systems for Programming (Benjamin Paaßen, Joris Jensen &amp; Barbara Hammer)</b>
1:30 PM	<b>Best Paper Nominee</b> <b>144**-How Deep is Knowledge Tracing? (Mohammad Khajah, Robert Lindsey &amp; Michael Mozer)</b>	FULL 23-Dynamics of Peer Grading: An Empirical Study (Luca de Alfaro & Michael Shavlovsky)	<b>EX 33*-Generating Data-driven Hints for Open-ended Programming (Thomas Price, Yihuan Dong &amp; Tiffany Barnes)</b>
2:00 PM	SHORT 133-Going Deeper with Deep Knowledge Tracing (Xiaolu Xiong, Siyuan Zhao, Eric Vaninwegen & Joseph Beck)	SHORT 43-Automatic Assessment of Constructed Response Data in a Chemistry Tutor (Scott Crossley, Kris Kyle, Jodi Davenport & Danielle McNamara)	SHORT 151-Seeking Programming-related Information from Large Scaled Discussion Forums, Help or Harm? (Yihan Lu & Sharon Hsiao)
2:20 PM	Transition between sessions		
<b>3. Papers</b>	<b>3A: Modeling skills; generation of skill models</b>	<b>3B: NLP for EDM</b>	<b>3G: Educational audio, videos &amp; games</b>
2:30 PM	SHORT 134- Boosted Decision Tree for Q-matrix Refinement (Peng Xu & Michel Desmarais)	SHORT 61-Deep Learning + Student Modeling + Clustering: a Recipe for Effective Automatic Answer Grading (Yuan Zhang, Rajat Shah & Min Chi)	SHORT 104-Modeling Visitor Behavior in a Game-Based Engineering Museum Exhibit with Hidden Markov Models (Mike Tissenbaum, Matthew Berland & Vishesh Kumar)
2:50 PM	SHORT 149-Data-driven Automated Induction of Prerequisite Structure Graphs (Devendra Singh Chaplot, Yiming Yang, Jaime Carbonell & Kenneth R. Koedinger)	SHORT 67-Document Segmentation for Labeling with Academic Learning Objectives (Divyanshu Bhartiya, Danish Contractor, Sovan Biswas, Bikram Sengupta & Mukesh Mohania)	SHORT 51-Classifying behavior to elucidate elegant problem solving in an educational game (Laura Malkiewich, Ryan S. Baker, Valerie Shute, Shimin Kai & Luc Paquette)
3:10 PM	SHORT 150-Tensor Factorization for Student Modeling & Performance Prediction in Unstructured Domain *Shaghayegh Sahebi, Yu-Ru Lin & Peter Brusilovsky)	SHORT 109-Topic-wise Classification of MOOC Discussions: A Visual Analytics Approach (Thushari Atapattu, Katrina Falkner & Hamid Tarmazdi)	SHORT 54-Automatic Detection of Teacher Questions from Audio in Live Classrooms (Nathaniel Blanchard, Patrick Donnelly, Andrew Olney, Borhan Samei, Sean Kelly, Xiaoyi Sun, Brooke Ward, Martin Nystrand & Sidney D'Mello)
3:30 PM	Coffee Break @ Hannover Ballroom		
<b>4. Papers</b>	<b>4A: Industry</b>	<b>4B: Doctoral Consortium I</b>	<b>4G: Doctoral Consortium II</b>
4:00 PM	IND 15-A Scalable Learning Analytics Platform for Automated Writing Feedback (Jacqueline Feild, Nicolas Lewkow, Neil Zimmerman, Mark Riedesel & Alfred Essa)	DC 179-Towards the Understanding of Gestures & Vocalization Coordination in Teaching Context (Roghayeh Barmaki)	DC 196-Towards Modeling Chunks in a Knowledge Tracing Framework for Students' Deep Learning (Yun Huang & Peter Brusilovsky)
4:20 PM	IND 41-Analysing & Refining Pilot Training (Bruno Emond, Scott Buffett, Cyril Goutte & Jaff Guo)	DC 201-Designing Interactive & Personalized Concept Mapping Learning Environments( Shang Wang)	DC 192-Predicting Off-task Behaviors for Adaptive Vocabulary Learning System (DC) (Sungjin Nam)
4:40 PM	IND 79-An Automated Test of Motor Skills for Job Selection & Feedback (Bhanu Pratap Singh Rawat & Varun Aggarwal)	DC 199-Using Case-Based Reasoning to Automatically Generate High-Quality Feedback for Programming Exercises (Angelo Kyrilov)	
5:00 PM	Dinner on your own - "Pickin' in the Plaza" Concert just in front of hotel <a href="https://www.facebook.com/events/879920838784884/">https://www.facebook.com/events/879920838784884/</a> .		

# Friday, July 1

EDM'16 Friday, July 1			
Start	Room A: Oak Forest A	Room B: Oak Forest B	Room G: Governor's Room I&II
8:00 AM	Registration, light breakfast @ Hannover Ballroom		
9:00 AM	<b>Keynote: Marcia Linn</b> <b>WISE Ways to Strengthen Inquiry Science Learning @ Hannover Ballroom</b>		
10:00 AM	Coffee Break @ Hannover Ballroom		
<b>5. Papers</b>	<b>5A: Factors Affecting Progress &amp; Behavior</b>	<b>5B: Clustering</b>	<b>5G: MOOC Short papers</b>
10:30 AM	FULL 172-Mining behaviors of students in autograding submission system logs (Jessica McBroom, Bryn Jeffries, Irena Koprinska & Kalina Yacef)	<b>EX 11* -Temporally Coherent Clustering of Student Data (Severin Klingler, Tanja Käser, Barbara Solenthaler &amp; Markus Gross)</b>	SHORT 13-Properties & Applications of Wrong Answers in Online Educational Systems (Radek Pelánek & Jiří Řihák)
11:00 AM	FULL 154-Tracing Students' Online Learning Strategies: Do Students Always Use The Same Tactics? (Kelvin H. R. Ng, Kevin Hartman, Kai Liu & Andy W H Khong)	FULL 42- A Coupled User Clustering Algorithm for Web-based Learning Systems (Ke Niu, Zhendong Niu, Xiangyu Zhao, Can Wang, Kai Kang & Min Ye)	10:50 AM SHORT: 56-A Nonlinear State Space Model for Identifying At-Risk Students in Open Online Courses (Feng Wang & Li Chen)  11:10 AM SHORT: 85-On generalizability of MOOC research (Łukasz Kidziński, Kshitij Sharma, Mina Shirvani Boroujeni & Pierre Dillenbourg)
11:30 AM	SHORT 90-Investigating Gender Difference on Homework in Middle School Mathematics (Mingyu Feng, Jeremy Roschelle, Craig Mason & Ruchi Bhanot)	SHORT 32-Association rules uncover social triggers of conceptual learning with physical & virtual representations (Martina Rau)	11:30 AM SHORT: 142-Student Emotion, Co-occurrence, & Dropout in a MOOC Context (John Dillon, Nigel Bosch, Malolan Chetlur, Nirandika Wanigasekara, G. Alex Ambrose, Bikram Sengupta & Sidney D'Mello)
12:00 PM	<b>Sponsor Lunch @ Hannover Ballroom</b>		
<b>6. Papers</b>	<b>6A: Student Modeling &amp; Support</b>	<b>6B: EDM system &amp; framework</b>	<b>6G: Multi-modal &amp; affect</b>
1:00 PM	<b>EX 46*-Effect of student ability &amp; question difficulty on duration</b> (Yijun Ma, Lalitha Agnihotri, Ryan Baker & Shirin Mojarad)	<b>EX 118*-The Apprentice Learner Architecture: Closing the loop between learning theory &amp; educational data</b> (Christopher MacLellan, Erik Harpstead, Rony Patel & Kenneth Koedinger)	<b>EX 78*-The Eyes Have It: Gaze-based Detection of Mind Wandering during Learning with an Intelligent Tutoring System</b> (Stephen Hutt, Caitlin Mills, Shelby White, Patrick J. Donnelly & Sidney K. D'Mello)
1:30 PM	FULL 89-Joint Discovery of Skill Prerequisite Graphs & Student Models (Yetian Chen, José González-Brenes & Jin Tian)	EX: 159*-Web as a textbook: Curating Targeted Learning Paths through the Heterogeneous Learning Resources on the Web (Igor Labutov & Hod Lipson)	FULL 143-Automatic Gaze-Based Detection of Mind Wandering during Film Viewing (Caitlin Mills, Robert Bixler, Xinyi Wang & Sidney D'Mello)
2:00 PM	SHORT 52- Individualizing Bayesian Knowledge Tracing Models. Are Skills More Important Than Students? (Michael Yudelson)	SHORT 18-A Contextual Bandits Framework for Personalized Learning Action Selection (Andrew Lan & Richard Baraniuk)	SHORT 110-Predicting Dialogue Acts for Intelligent Virtual Agents with Multimodal Student Interaction Data (Wookhee Min, Joseph Wiggins, Lydia Pezzullo, Alexandria Vail, Kristy Elizabeth Boyer, Bradford Mott, Megan Frankosky, Eric Wiebe & James Lester)
2:30 PM	Transition between sessions		
<b>7. Papers</b>	<b>7A: Graph mining</b>	<b>7B: Item response theory</b>	<b>7G: Collaborative learning</b>
2:40 PM	SHORT 12-On Competition for Undergraduate Co-op Placements: A Graph Mining Approach (Yuheng Jiang & Lukasz Golab)	SHORT 31-Investigating Difficult Topics in a Data Structures Course Using Item Response Theory & Logged Data Analysis (Eric Fough, Mohammed F. Farghally, Sally Hamouda, Kyu Han Koh & Clifford A. Shaffer)	SHORT 20-Collaborative Problem Solving Skills versus Collaboration Outcomes: Findings from Statistical Analysis & Data Mining (Jiangang Hao, Lei Liu, Alina von Davier, Patrick Kyllonen & Christopher Kitchen)
3:10 PM	FULL 137-Unnatural Feature Engineering: Evolving Augmented Graph Grammars for Argument Diagrams (Linting Xue, Collin Lynch & Min Chi)	SHORT 145-Back to the basics: Bayesian extensions of IRT outperform neural networks for proficiency estimation (Kevin Wilson, Yan Karklin, Bojian Han & Chaitanya Ekanadham)	SHORT 48-Transactivity as a Predictor of Future Collaborative Knowledge Integration in Team-Based Learning in Online Courses (Miaomiao Wen, Keith Maki, Xu Wang & Carolyn Rose)
3:30 PM	Coffee Break @ Hannover Ballroom		
<b>8. Papers</b>	<b>8A: Interventions, policies, optimizing learning, &amp; causal modeling</b>	<b>8B: Educational games</b>	<b>8G: Recommender systems</b>
4:00 PM	FULL 75-Student Usage Predicts Treatment Effect Heterogeneity in the Cognitive Tutor Algebra I Program (Adam Sales, Asa Wilks & John Pane)	<b>Best Paper Nominee</b> <b>100**-Measuring Gameplay Affordances of User-Generated Content in an Educational Game</b> (Andrew Hicks, Zhongxiu Liu & Tiffany Barnes)	JEDM 302-Next-Term Student Performance Prediction: A Recommender Systems Approach (Mack Sweeney, Jaime Lester, Huzefa Rangwala, Aditya Johri)
4:30 PM	SHORT 21-Using Inverse Planning for Personalized Feedback (Anna Rafferty, Rachel Jansen & Thomas Griffiths)	SHORT 131-Choosing versus Receiving Feedback: The Impact of Feedback Valence on Learning in an Assessment Game (Maria Cutumisu & Daniel L. Schwartz)	SHORT 83-Course Enrollment Recommender System (Hana Bydžovská)
4:50 PM	SHORT 135-Aim Low: Correlation-based Feature Selection for Model-based Reinforcement Learning (Shitian Shen & Min Chi)	SHORT 53-Validating Game-based Measures of Implicit Science Learning (Elizabeth Rowe, Jodi Asbell-Clarke, Michael Eagle, Andrew Hicks, Tiffany Barnes, Rebecca Brown & Teon Edwards)	SHORT 169-Course Content Analysis: An Initiative Step toward Learning Object Recommendation Systems for MOOC Learners (Yiling Dai, Yasuhiro Asano & Masatoshi Yoshikawa)
5:20 PM	Break		
6:30 PM	<b>Reception &amp; Poster Session II @ NC Museum of Natural Science, 6:30-9:30 pm (Posters 6:30-7:30)</b>		
6-9 pm	Check out Raleigh's First Friday Gallery Walk <a href="http://www.godowntownraleigh.com/first-friday-raleigh">http://www.godowntownraleigh.com/first-friday-raleigh</a>		

## Saturday, July 2

<b>EDM'16 Saturday, July 2</b>			
<b>Start</b>	<b>Room A: Oak Forest A</b>	<b>Room B: Oak Forest B</b>	<b>Room G: Governor's Room I&amp;II</b>
8:00 AM	Registration, light breakfast @ Hannover Ballroom		
9:00 AM	<b>Keynote: Judy Kay</b> Enabling people to harness & control EDM for lifelong, life-wide learning @ Hannover Ballroom		
10:00 AM	Coffee Break @ Hannover Ballroom		
<b>9. Papers</b>	<b>9A: Explorative &amp; predictive modeling</b>	<b>9B: Evaluation of EDM</b>	<b>9G: MOOCs</b>
10:30 AM	<b>EX 140*-Semantic Features of Math Problems: Relationships to Student Learning &amp; Engagement (Stefan Slater, Jaclyn Ocumpaugh, Ryan Baker, Peter Scupelli, Paul Salvador Inventado &amp; Neil Heffernan)</b>	<b>JEDM 301-Toward Data-Driven Design of Educational Courses: A Feasibility Study</b> (Rakesh Agrawal, Behzad Golshan, Evangelos Papalexakis)	FULL 121-MOOC Learner Behaviors by Country & Culture; an Exploratory Analysis (Zhongxiu Liu, Rebecca Brown, Collin Lynch, Tiffany Barnes, Ryan Baker, Yoav Bergner & Danielle Mcnamara)
11:00 AM	FULL 62-An Ensemble Method to Predict Student Performance in an Online Math Learning Environment (Martin Stapel, Zhilin Zheng & Niels Pinkwart)	<b>EX 92*-Modeling the Influence of Format &amp; Depth during Effortful Retrieval Practice (Jaclyn K. Maass &amp; Philip I. Pavlik Jr.)</b>	FULL 123-Predicting Post-Test Performance from Student Behavior: A High School MOOC Case Study (Sabina Tomkins, Arti Ramesh & Lise Getoor)
11:30 AM	SHORT 125-Exploring the Impact of Data-driven Tutoring Methods on Students' Demonstrative Knowledge in Logic Problem Solving (Behrooz Mostafavi & Tiffany Barnes)	SHORT 101-Exploring Learning Management System Interaction Data: Combining Data-driven & Theory-driven Approaches (Hongkyu Choi, Ji Eun Lee, Won-Joon Hong, Kyumin Lee, Mimi Recker & Andy Walker)	SHORT 136-Acting the Same Differently: A Cross-Course Comparison of User Behavior in MOOCs (Ben Gelman, Matt Revelle, Carlotta Domeniconi, Kalyan Veeramachaneni & Aditya Johri)
12:00 PM	<b>Lunch @ Hannover Ballroom</b>		
<b>10. Papers</b>	<b>10A: Predicting student performance</b>	<b>10B: Detecting/Modeling behaviors</b>	<b>10G: Recomender systems</b>
1:00 PM	SHORT 69-Investigating Swarm Intelligence for Performance Prediction (Mohammad Majid Al-Rifaie, Matthew Yee-King & Mark d'Inverno).	SHORT 70-Expediting Support for Social Learning with Behavior Modeling (Yohan Jo, Gaurav Singh Tomar, Oliver Fersckhe, Carolyn Rose & Dragan Gasevic..)	SHORT 27-A Comparison of Automatic Teaching Strategies for Heterogeneous Student Populations (Benjamin Clement, Pierre-Yves Oudeyer & Manuel Lopes)
1:20 PM	SHORT 22-Predicting Performance on MOOC Assessments using Multi-Regression Models (Zhiyun Ren, Huzefa Rangwala & Aditya Johri)	SHORT 166-Are Hints Linked to Procrastination? (Paul Salvador Inventado, Peter Scupelli, Eric Van Inwegen, Korinn Ostrow, Neil Heffernan Iii, Ryan Baker, Stefan Slater, Mia Almeda & Jaclyn Ocumpaugh)	SHORT 171-Does a Peer Recommender Foster Students' Engagement in MOOCs? (Hugues Labarthe, Francois Bouchet, Remi Bachelet & Kalina Yacef)
1:40 PM	SHORT 40-A Comparative Analysis of Techniques for Predicting Student Performance (Hana Bydžovská)		SHORT 175-Personalization of Learning Trajectories in Online Communities of Creators (Mingxuan Sun & Seungwon Yang)
2:00 PM	Transition between sessions		
<b>11. Papers</b>	<b>11A: Modeling skills; generation of skill models</b>	<b>11B: Assessment/Peer grading</b>	
2:10 PM	SHORT 84-Learning Curves for Problems with Multiple Knowledge Components (Brett van de Sande)	SHORT 26-Predicting Student Progress from Peer-Assessment Data (Michael Mogessie Ashenafi, Marco Ronchetti & Giuseppe Riccardi)	
2:30 PM	SHORT 152-Closing the Loop with Quantitative Cognitive Task Analysis (Kenneth Koedinger & Elizabeth Mclaughlin)	SHORT 173 -How Good Is Popularity? Summary Grading in Crowdsourcing (Haiying Li, Zhiqiang Cai & Art Graesser)	
2:50 PM	SHORT 167-Modeling Interactions Across Skills: A Method to Construct & Compare Models Predicting the Existence of Skill Relationships (Anthony F. Botelho, Seth Adjei & Neil Heffernan)	SHORT 113-Assessing Student-Generated Design Justifications in Virtual Engineering Internships (Vasile Rus, Dipesh Gautam, Zach Swiecki, David Shaffer & Art Graesser)	
3:10 PM	Coffee Break @ Hannover Ballroom		
3:40 PM	<b>EDM Community Meeting @ Oak Forest A - end at 4:40 pm</b>		