Sunday, July 15th – Buffalo Marriott HarborCenter

08:00-08:30 Breakfast

08:30-10:15 Session 1A. Workshop 1. replicate.education: A Workshop on Large Scale Education Replication – Larkin Room

08:30-10:15 Session 1B. Workshop 2. Educational Data Mining in Computer Science Education (CSEDM) – Pan-American I Room

08:30-10:15 Session 1C. Workshop 3. Policy & EDM: Norms, Risks, and Safeguards – Pan-American II Room

10:15-10:30 Coffee Break

10:30-12:00 Session 2A. Workshop 1. replicate.education: A Workshop on Large Scale Education Replication – Larkin Room

10:30-12:00 Session 2B. Workshop 2. Educational Data Mining in Computer Science Education (CSEDM) – Pan-American I Room

10:30-12:00 Session 2C. Workshop 3. Policy & EDM: Norms, Risks, and Safeguards – Pan-American II Room

12:00-13:00 Lunch Break

13:00-14:45 Session 3A. Workshop 4. Scientific Findings from the ASSISTments Longitudinal Data Competition – Larkin Room

13:00-14:45 Session 3B. Workshop 2. Educational Data Mining in Computer Science Education (CSEDM) – Pan-American I Room

13:00-14:45 Session 3C. Workshop 3. Policy & EDM: Norms, Risks, and Safeguards – Pan-American II Room

14:45-15:00 Coffee Break

15:00-16:00 Session 4A. Workshop 4. Scientific Findings from the ASSISTments Longitudinal Data Competition – Larkin Room

15:00-16:00 Session 4B. Workshop 2. Educational Data Mining in Computer Science Education (CSEDM) – Pan-American I Room

15:00-16:00 Session 4C. Workshop 3. Policy & EDM: Norms, Risks, and Safeguards – Pan-American II Room
Monday, July 16th – Templeton's Landing

08:00-08:15  Breakfast

08:15-09:15  Session 5: Keynote 1 – Grand Ballroom
s8 - Jim Larimore.

09:15-09:30  Coffee Break

09:30-10:40  Session 6A: Deep Learning - Grand Ballroom

10:00-10:20 35 - Arkar Min Aung, Anand Ramakrishnan and Jacob Whitehill: Who are they looking at? Automatic Eye Gaze Following for Classroom Observation Video Analysis


09:30-10:40  Session 6B: Bayesian Methods - Skyline
09:30-10:00 122 - Jihyun Park, Renzhe Yu, Fernando Rodriguez, Rachel Baker, Padhraic Smyth and Mark Warschauer: Understanding Student Procrastination via Mixture Models.

10:00-10:20 139 - Huy Nguyen and Chun Wai Liew: Using Student Logs to Build Bayesian Models of Student Knowledge and Skills.


10:40-10:50  Coffee Break

10:50-12:00  Session 7A: Predicting Student Performance - Grand Ballroom
10:50-11:20 60 - Shaghayegh Sahebi and Peter Brusilovsky: Student Performance Prediction by Discovering Inter-Activity Relations.
11:20-11:40  147 - Adithya Sheshadri, Niki Gitinabard, Collin Lynch, Tiffany Barnes and Sarah Heckman: *Predicting Student Performance Based on Online Study Habits: A Study of Blended Courses.*

11:40-12:00  44 - Zheng Wang, Xinning Zhu, Junfei Huang, Xiang Li and Yang Ji: *Prediction of Academic Achievement Based on Digital Campus.*

**10:50-12:00  Session 7B: Text Mining and NLP - Skyline**


11:40-12:00  132 - Gaurav Nanda, Nathan M. Hicks, David R. Waller, Kerrie Douglas and Dan Goldwasser: *Understanding Learners’ Opinion about Participation Certificates in Online Courses using Topic Modeling.*

12:00-13:00 Lunch Break

**13:00-14:10  Session 8A: Advancing Theories of Learning - Grand Ballroom**


13:30-13:50  149 - Paulo Carvalho, Min Gao, Benjamin Motz and Ken Koedinger: *Analyzing the relative learning benefits of completing required activities and optional readings in online courses.*

13:50-14:10  129 - Kenneth Koedinger, Richard Scheines and Peter Schaldenbrand: *Is the Doer Effect Robust Across Multiple Data Sets?*

**13:00-14:10  Session 8B: Multimodal Analytics - Skyline**

13:00-13:30  97 - Ahcène Boubekki, Shailee Jain and Ulf Brefeld: *Mining User Trajectories in Electronic Text Books.*


14:10-14:30 Coffee Break

**14:30-15:20  Session 9: Dimensionality Reduction – Grand Ballroom**

14:30-15:00  174 - Robert Sawyer, Jonathan Rowe, Roger Azevedo and James Lester: *Filtered Time Series Analyses of Student Problem-Solving Behaviors in Game-based Learning.*
15:00-15:20  20 - Jessica Andrews-Todd, Carol Forsyth, Jonathan Steinberg and André Rupp: Identifying Profiles of Collaborative Problem Solvers in an Online Electronics Environment.

16:00-18:00  Session 10: Poster Session - Skyline

18:30-21:30  Conference Dinner – Restaurant & Patio

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Tuesday, July 17th – Templeton’s Landing

08:00-08:15  Breakfast

08:15-09:15  Session 11: Keynote 2 - Grand Ballroom

s9 - Jodi Forlizzi.

09:15-09:30  Coffee Break

09:30-10:40  Session 12A: Bayesian Knowledge Tracing - Grand Ballroom

09:30-10:00  158 - David Halpern, Shannon Tubridy, Hong Yu Wang, Camille Gasser, Pamela Osborn Popp, Lila Davachi and Todd Gureckis: Knowledge Tracing Using the Brain

10:00-10:20  208 - Shirly Montero, Akshit Arora, Sean Kelly, Brent Milne and Michael Mozer: Does Deep Knowledge Tracing Model Interactions Among Skills?


09:30-10:40  Session 12B: Enrollment Analytics – Skyline I

09:30-10:00  121 - R Wes Crues, Nigel Bosch, Carolyn Anderson, Michelle Perry, Suma Bhat and Najmuddin Shaik: Who they are and what they want: Understanding the reasons for MOOC enrollment.

10:00-10:20  159 - Benjamin Motz, Thomas Busey, Martin Rickert and David Landy: Finding Topics in Enrollment Data

10:20-10:40  136 - Ahmad Slim, Don Hush, Tushar Ojha and Terry Babbitt: Predicting Student Enrollment based on Student and College Characteristics.

09:30-10:40  Session 12C: Industry Track Session I – Skyline II

09:30-09:50  22 - Jeffrey Matayoshi, Umberto Granziol, Christopher Doble, Hasan Uzun and Eric Cosyn: Forgetting curves and testing effect in an adaptive learning and assessment system.
09:50-10:10  19 - Rebecca Kantar, Keith McNulty, Erica Snow, Matthew Emery, Richard Wainess and Sonia Doshi: *Constructing Cognitive Profiles for Simulation-Based Hiring Assessments*.

10:10-10:30  14 - Deepak Agarwal, Nishant Babel and Ryan Baker: *Contextual Derivation of Stable BKT Parameters for Analysing Content Efficacy*.

10:40-10:50  Coffee Break

10:50-12:00  **Session 13A: MOOCs - Grand Ballroom**

10:50-11:20  64 - Yiqiao Xu, Collin Lynch and Tiffany Barnes: *How many friends can you make in a week?: evolving social relationships in MOOCs over time*.


11:40-12:00  146 - Niki Gitinabar, Farzaneh Khoshnevisan, Collin Lynch and Elle Yuan Wang: *Your Actions or Your Associates? Predicting Certification and Dropout in MOOCs with Behavioral and Social Features*.

10:50-12:00  **Session 13B: Course-level Analytics – Skyline I**


11:40-12:00  46 - Aurora Esteban, Amelia Zafra Gómez and Cristobal Romero: *A Hybrid Multi-Criteria approach using a Genetic Algorithm for Recommending Courses to University Students*.

10:50-12:00  **Session 13C: Industry Track Session II – Skyline II**

10:50-11:10  248 - Michael Eagle, Ted Carmichael, Jessica Stokes, Mary Jean Blink, John Stamper and Jason Levin: *Predictive Student Modeling for Interventions in Online Classes*.


12:00-13:00  Lunch Break

13:00-14:10  **Session 14A: Supporting Teachers - Grand Ballroom**

13:00-13:30  48 - Jesus Gerardo Alvarado Mantecon, Hadi Abdi Ghavidel, Amal Zouaq, Jelena Jovanovic and Jenny McDonald: *A Comparison of Features for the Automatic Labeling of Student answers to Open-ended Questions*.

13:30-13:50  37 - Ben Naismith, Na-Rae Han, Alan Juffs, Brianna Hill and Daniel Zheng: *Accurate Measurement of Lexical Sophistication in ESL with Reference to Learner Data*. 
13:50-14:10  81 - Ruhi Sharma Mittal, Seema Nagar, Mourvi Sharma, Utkarsh Dwivedi, Prasenjit Dey and Ravi Kokku: Using a Common Sense Knowledge Base to Auto Generate Multi-Dimensional Vocabulary Assessments.

13:00-14:10  Session 14B: Post-secondary/College Education – Skyline I

13:00-13:30  66 - Ankita Bihani and Andreas Paepcke. QuanTyler: Apportioning Credit for Student Forum Participation.


13:50-14:10  124 - Agoritsa Polyzou and George Karypis: Feature extraction for classifying students based on their academic performance.

13:00-14:20  Session 14C: Doctoral Consortium I – Skyline II

13:00-13:20  190 - Alan Mishler and Rebecca Nugent: Clustering students and inferring skill profiles in restricted skill spaces.


13:40-14:00  120 - Johannes Berens and Kerstin Schneider: How to prevent dropouts? Experimental analysis of prevention programs at public and private universities.

14:00-14:20  108 - Mehmet Ozer: Effects of STEM Education on Student Scale Scores on State Standardized Algebra, Biology and English End-of-Course Tests.

14:10-14:30  Coffee Break

14:30-15:35  Session 15: Award Ceremony – Grand Ballroom

s7 - Kenneth Koedinger. Award Ceremony and Award Talk

16:00-22:00  Trip to Niagara Falls
Wednesday, July 18th – Templeton’s Landing

08:00-08:15  Breakfast

08:15-09:15  Session 16: Keynote 3 - Grand Ballroom
s10 - Tiffany Barnes.

09:15-09:30  Coffee Break

09:30-10:40  Session 17A: Behavior Mining

09:30-10:00  58 - Weiyu Chen, Andrew Lan, Da Cao, Christopher Brinton and Mung Chiang: Behavioral Analysis at Scale: Learning Course Prerequisite Structures from Learner Clickstreams.

10:00-10:20  96 - Xin Du, Wouter Duivesteijn and Mykola Pechenizkiy: ELBA: Exceptional Learning Behavior Analysis.

10:20-10:40  52 - Stephan Lorenzen, Niklas Hjuler and Stephen Alstrup: Tracking Behavioral Patterns among Students in an Online Educational System

09:30-10:40  Session 17B: Unsupervised Methods

09:30-10:00  42 - Shivangi Chopra and Lukasz Golab: Job Description Mining to Understand Work-Integrated Learning

10:00-10:20  128 - Seung Yeon Lee, Hui Soo Chae and Gary Natriello: Identifying User Engagement Patterns in an Online Video Discussion Platform.

10:20-10:40  118 - Ying Fang, Keith Shubeck, Anne Lippert, Qinyu Cheng, Genghu Shi, Shi Feng, Jessica Gatewood, Su Chen, Zhiqiang Cai, Philip Pavlik, Jan Frijters, Daphne Greenberg and Arthur Graesser: Clustering the Learning Patterns of Adults with Low Literacy Skills Interacting with an Intelligent Tutoring System.

09:30-10:50  Session 17C: JEDM Track – Skyline II

09:30-09:55  291 - Ilya Goldin and April Galyardt: Casting Curves Before Regressions: Limitations in Refining Domain Models with Learning Curves


10:40-11:00  Coffee Break

10:50-12:00  Session 18A: Modeling Student Learning


11:20-11:40  192 - Ángel Pérez-Lemonche, Byron Drury and David Pritchard: Mining Student Misconceptions from Pre- and Post-Testing Data.

11:40-12:00  104 - Binglin Chen, Matthew West and Craig Zilles: Towards a Model-Free Estimate of the Limits to Student Modeling Accuracy.

10:50-12:00  Session 18B: EDM Frameworks


11:40-12:00  31 - Michael Backenköhler, Felix Scherzinger, Adish Singla and Verena Wolf: Data-Driven Approach Towards a Personalized Curriculum.

11:00-12:00  Session 19: Doctoral Consortium II – Skyline II

11:00-11:20  251 - Christa Cody and Tiffany Barnes: Analyzing the Associations of Hint Type on Student Behavior and Performance.


11:40-12:00  249 - Karin Hartl: The Potentials of Educational Data Mining for Decision-Making at German Universities.

12:00-13:00  Lunch Break

12:00-13:00  Session 20: EDM Committee – Marina Room

13:00-14:10  Session 21A: Assessment


13:50-14:10  54 - Yugo Hayashi and Yugo Takeuchi: *The influence of task activity and the learner’s personal characteristics on self-confidence during an online explanation activity with a conversational agent.*

**13:00-14:10 Session 21B: Regression Models**

13:00-13:30  71 - Connor Cook, Andrew Olney, Sean Kelly and Sidney D’Mello: *An Open Vocabulary Approach for Estimating Teacher Use of Authentic Questions in Classroom Discourse*


13:50-14:10  87 - Cecilia Aguerrebere, Cristobal Cobo and Jacob Whitehill: *Estimating the Treatment Effect of New Device Deployment on Uruguayan Students’ Online Learning Activity.*

**13:00-14:20 Session 21C: Doctoral Consortium III – Skyline II**


13:40-14:00  253 - Joseph Reilly and Chris Dede: *Dynamic Feedback as Automated Scaffolding to Support Learners and Teachers in Guided Authentic Scientific Inquiry Settings.*

14:00-14:20  252 - Emily Toutkoushian and Kihyun Ryoo: *Developing a Method to Use Log Files to Understand NGSS-Aligned Science Learning.*

14:10-14:30  Coffee Break

**14:30-15:30 Session 22A: Innovation in Instructional Design**

14:30-15:00  134 - Stephen Fancsali, Michael Yudelson, Susan Berman and Steven Ritter: *Intelligent Instructional Hand Offs.*

15:00-15:30  13 - Khoi-Nguyen Tran, Jey Han Lau, Danish Contractor, Utkarsh Gupta, Bikram Sengupta, Christopher Butler and Mukesh Mohania: *Document Chunking and Learning Objective Generation for Instruction Design.*

**14:30-15:30 Session 22B: Game-based Learning**

14:30-15:00  140 - Bita Akram, Wookhee Min, Eric Wiebe, Bradford Mott, Kristy Boyer and James Lester: *Improving Stealth Assessment in Game-based Learning with LSTM-based Analytics.*

15:00-15:30  39 - Shamya Karumbaiah, Ryan S Baker and Valerie Shute: *Predicting Quitting in Students Playing a Learning Game.*
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<td><strong>Session 22C: Doctoral Consortium IV – Skyline II</strong></td>
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<td>14:30-14:50</td>
<td>275 - Linting Xue and Collin Lynch: <em>Argumentative Structure Analysis to Support Automated Essay Grading</em></td>
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<td>16:00-16:45</td>
<td><strong>Session 23: Panel Discussion - Grand Ballroom</strong></td>
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