

**MARIA OFELIA CLARISSA Z. SAN PEDRO**  
sweetsp@gmail.com

**SUMMARY**

An experienced research and data scientist with a research background in the field of learning analytics and the learning sciences. Over ten years of experience in quantitative and qualitative research and educational data science that use learning technologies and big data (i.e., in education) to drive insights and develop solutions. A team player with proven leadership and management abilities (AMA-CPM™ certified), solid written and oral communication skills, and a strong publication record.

**EDUCATION**

**TEACHERS COLLEGE, COLUMBIA UNIVERSITY** New York, NY  
Ph.D., Cognitive Science in Education May 2016  
Research Concentration in Learning Analytics and Educational Technology

**ATENEO DE MANILA UNIVERSITY** Quezon City, Philippines  
M.S., Computer Science March 2011

**ATENEO DE MANILA UNIVERSITY** Quezon City, Philippines  
B.S., Electronics Engineering, graduated *cum laude* March 2005

**WORK EXPERIENCE**

**ACT, INC.** Iowa City, IA  
*Senior Research Scientist, Applied Research* August 2016 – Present

- Previously Research Scientist; promoted to Senior Research Scientist in November 2020.
- Conduct quantitative and qualitative methods for learning and assessment research questions.
- Conduct data analyses, prototype development, and evaluation research for ACT products.
- Collaborate on thought leadership and research through the development and execution of research-initiated projects in the learning sciences and learning analytics.
- Mentor junior researchers on research design and methodological approaches.

**TEACHERS COLLEGE, COLUMBIA UNIVERSITY** New York, NY  
*Doctoral Research Fellow* September 2012 – June 2016

- Conducted intensive data processing, modeling, and analysis of large datasets of fine-grained educational data mined from multiple databases.
- Modeled long-term student outcomes (i.e. postsecondary education) from student usage of online learning technologies.
- Published and presented research papers in local and international academic conferences.
- Mentored new graduate students in the Educational Data Mining research group.

**NYC DEPARTMENT OF EDUCATION** New York, NY  
*Assessment Technology Summer Intern (Research Intern)* June 2015 – August 2015

- Evaluated usability of an alternative open-source digital-based assessment platform for potential adoption in NYC public schools.
- Implemented and customized Math and ELA assessment items within a digital-based assessment platform (TAO).

**WORCESTER POLYTECHNIC INSTITUTE***Graduate Research Assistant*

Worcester, MA

August 2011 – August 2012

- Applied machine learning tools to fine-grained data mined from the database of an educational software.
- Facilitated pilot of survey data collection for a federally funded grant.

**ATENEO DE MANILA UNIVERSITY***Graduate Student Researcher, Ateneo Laboratory for the Learning Sciences*

Quezon City, Philippines

April 2010 – April 2011

- Conducted intensive data processing and implemented student models on student interaction data from an intelligent tutoring system.

**POINTWEST INNOVATIONS CORPORATION***Software Engineer*

Makati City, Philippines

June 2006 – June 2009

- Executed business analysis, software development and software quality assurance for various business applications of different system platforms.

**CERTIFICATION**

**AMA CERTIFIED PROFESSIONAL IN MANAGEMENT (AMA-CPM™)**, AMERICAN MANAGEMENT ASSOCIATION  
(SEPTEMBER 2020 – SEPTEMBER 2023)

**COMPUTER SKILLS****PROGRAMMING LANGUAGES:**

R, SQL, Python, PySpark

**MACHINE LEARNING/STATISTICAL TOOLS:**

Databricks, SAS, SPSS, RapidMiner, Weka

**DATA VISUALIZATION:**

R Shiny, Tableau

**SURVEY TOOLS:**

Qualtrics, SurveyMonkey

**MULTIMODAL TOOLS:**

Eye-Tracking (experience with Tobii, SMI)

**WEB DEVELOPMENT:**

HTML/CSS (Basic)

**PROCESSES/SOFTWARE ENGINEERING:**

Agile Development, Software Quality Assurance

**HONORS AND AWARDS****DOCTORAL RESEARCH FELLOWSHIP**, TEACHERS COLLEGE, COLUMBIA UNIVERSITY (2012-2016)**FINALIST**, 2015 NAED/SPENCER DISSERTATION FELLOWSHIP**SELECTED PUBLICATIONS**

**San Pedro, M.O.Z.** & Liu, R. (2020). Modeling Collaborative Problem Solving Skills from Team Interactions with an Educational Game. Paper accepted for individual presentation at the virtual *2020 Annual Meeting of the National Council on Measurement in Education (NCME)*.

Walton, K. E., **San Pedro, M.O.Z.**, Whitmer, J., Liu, R., Walton, K. E., Moore, J. L., & Lotero, A. A. (2020) *Using Feature Engineering from Online Learning Environments to Observe Social and Emotional Skills and Academic Performance*. Iowa City, IA: ACT.

Payne, J. S., **San Pedro, M.O.Z.**, Moore, R., & Sanchez, E. (2020). *Educator Perspectives: Insights on Test Preparation in Schools with State and District Testing*. Iowa City, IA: ACT.

Moore, R., Sanchez, E., & **San Pedro, M.O.Z.** (2019). *College Entrance Exams: How Does Test Preparation Affect Retest Scores?* Iowa City, IA: ACT.

**San Pedro, M. O. Z.**, Liu, R., & McKinniss, T. L. (2019). Developing Game-Based Models of Cooperation, Persistence and Problem Solving from Collaborative Gameplay. In *International Conference on Artificial Intelligence in Education* (pp. 247-251).

**San Pedro, M. O. Z.**, Baker, R. S., & Heffernan, N. T. (2017). An Integrated Look at Middle School Engagement and Learning in Digital Environments as Precursors to College Attendance. *Technology, Knowledge and Learning*, 22(3), 243-270.

**San Pedro, M.O.Z.**, Baker, R.S. (2016) Adaptive Learning. In McCarthy, M. (Ed.) *The Cambridge Guide to Blended Learning for Language Technologies*, pp. 234-247

Ocuppaugh, J., **San Pedro, M. O.**, Lai, H. Y., Baker, R. S., & Borgen, F. (2016). Middle School Engagement with Mathematics Software and Later Interest and Self-Efficacy for STEM Careers. *Journal of Science Education and Technology*, 1-11.

**San Pedro, M.O.Z.**, Snow, E.L., Baker, R.S., McNamara, D., Heffernan, N. (2015) Exploring Dynamic Assessments of Affect, Behavior, and Cognition and Math State Test Achievement. In *Proceedings of the 8th International Conference on Educational Data Mining*, 85-92.

**San Pedro, M. O. Z.**, d Baker, R. S., & Rodrigo, M. M. T. (2014). Carelessness and Affect in an Intelligent Tutoring System for Mathematics. *International Journal of Artificial Intelligence in Education*, 24(2), 189-210.

Pardos, Z.A., Baker, R.S., & **San Pedro, M.O.C.Z.**, Gowda, S.M., Gowda, S.M. (2014) Affective states and state tests: Investigating how affect and engagement during the school year predict end of year learning outcomes. *Journal of Learning Analytics*, 1 (1), 107-128.

**San Pedro, M.O.Z.**, Baker, R.S.J.d., Bowers, A.J., & Heffernan, N.T. (2013) Predicting College Enrollment from Student Interaction with an Intelligent Tutoring System in Middle School. *Proceedings of the 6th International Conference on Educational Data Mining*, 177-184.

# MARIA OFELIA CLARISSA Z. SAN PEDRO

<https://sweetsanpedro.com>

sweetsp@gmail.com

## AREAS OF INTEREST

---

- Learning Analytics, Educational Data Science
- EdTech – Online Learning, Adaptive Learning, Intelligent Tutoring Systems, Educational Games
- Learning Sciences, Instructional and Assessment Design, User Experience Research
- Predictive Modeling of Student Outcomes, Student Modeling (Affect, Behavior, Cognition)
- Diversity, Equity and Inclusion in Education

## EDUCATION & CREDENTIALS

---

### **DOCTOR OF PHILOSOPHY (PHD), COGNITIVE SCIENCE IN EDUCATION (2012 – 2016)**

Teachers College Columbia University, New York, NY, USA

Doctoral Dissertation: *Middle School Learning, Academic Emotions and Engagement as Precursors to College Attendance*

Doctoral Advisor: Prof. Ryan S. Baker

### **MASTER OF SCIENCE (MS), COMPUTER SCIENCE (2009 – 2011)**

Ateneo de Manila University, Quezon City, Philippines

Master's Thesis: *Detecting Carelessness through Contextual Estimation of Slip Probabilities among Students Using an Intelligent Tutor for Mathematics*

Advisor: Prof. Ma. Mercedes T. Rodrigo

### **BACHELOR OF SCIENCE (BS), ELECTRONICS AND COMMUNICATIONS ENGINEERING (2000 – 2005)**

Ateneo de Manila University, Quezon City, Philippines

Graduated Cum Laude

Undergraduate Thesis: *Developing Optimal Prequalification Techniques for DSL Provisioning and Diagnostics*

### **AMA CERTIFIED PROFESSIONAL IN MANAGEMENT (AMA-CPM™) (2020-2023)**

American Management Association, New York City, NY, USA

## WORK EXPERIENCE

---

### **SENIOR RESEARCH SCIENTIST (NOVEMBER 2020– PRESENT)**

#### **RESEARCH SCIENTIST (AUGUST 2016 – OCTOBER 2020)**

Applied Research, Supervisor: Dr. Robert Schwartz

ACT, Inc, Iowa City, IA, USA

### **DOCTORAL RESEARCH FELLOW (SEPTEMBER 2012 TO JUNE 2016)**

Educational Data Mining Laboratory, Supervisor: Prof. Ryan S. Baker

Teachers College Columbia University, New York, NY, USA

**ASSESSMENT TECHNOLOGY SUMMER INTERN (RESEARCH INTERN, JUNE 2015 TO AUGUST 2015)**

Office of Assessment Design and Evaluation, Supervisor: Dr. G. Anthony Benners  
NYC Department of Education, New York, NY, USA

**GRADUATE RESEARCH ASSISTANT (AUGUST 2011 – AUGUST 2012)**

Educational Psychology Laboratory, Supervisor: Prof. Ryan S. Baker  
Worcester Polytechnic Institute, Worcester, Massachusetts, USA

**GRADUATE RESEARCH ASSISTANT (APRIL 2010 TO APRIL 2011)**

Ateneo Laboratory for the Learning Sciences, Supervisor: Prof. Mercedes T. Rodrigo  
Ateneo de Manila University, Quezon City, Philippines

**SOFTWARE ENGINEER (JUNE 2006 – JUNE 2009)**

Pointwest Innovations Corporation, Makati City, Philippines

**QUALITY ASSURANCE ENGINEERING INTERN (2004)**

Canon Information Technologies, Quezon City, Philippines

**AWARDS & HONORS**

---

**2015 NAEd/SPENCER DISSERTATION FELLOWSHIP FINALIST**

**DOCTORAL RESEARCH FELLOWSHIP, TEACHERS COLLEGE, COLUMBIA UNIVERSITY (2012-2016)**

**PROFESSIONAL AFFILIATIONS**

---

**AMERICAN EDUCATIONAL RESEARCH ASSOCIATION (2017 – 2019)**

**NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION (2020)**

**INTERNATIONAL SOCIETY OF THE LEARNING SCIENCES (2017 – PRESENT)**

**SOCIETY FOR LEARNING ANALYTICS RESEARCH (2015 – PRESENT)**

**INTERNATIONAL EDUCATIONAL DATA MINING SOCIETY (2013 – PRESENT)**

**INTERNATIONAL ARTIFICIAL INTELLIGENCE IN EDUCATION SOCIETY (2011 – PRESENT)**

**PROFESSIONAL SERVICE (RESEARCH COMMUNITY)**

---

**GRANT REVIEWER**

National Science Foundation (2020-2021)

**GUEST JOURNAL EDITOR (2018 TO 2020)**

Journal of Learning Analytics Special Section (Beyond Cognitive Ability: Enabling Assessment of  
21st Century Skills through Learning Analytics)

<https://epress.lib.uts.edu.au/journals/index.php/JLA/issue/view/478>

**ORGANIZING LEAD ON EXPERTISE EXCHANGE SESSION ON LEARNING ANALYTICS AND  
EDUCATIONAL DATA MINING**

Cyberlearning 2019: Exploring Contradictions in Achieving Equitable Futures

**CONFERENCE ORGANIZING COMMITTEE CHAIR**

2021 Educational Data Mining Conference, Workshop & Tutorial Track  
2019 International Conference on Learning Analytics & Knowledge, Practitioner Track

**JOURNAL PEER REVIEWER**

Advances in Methods and Practices in Psychological Science (2018, 2019)  
IEEE Transactions on Learning Technologies (2017)  
Journal of Learning Analytics (2017 to Present)  
Journal of Educational Data Mining (2012-2019)

**CONFERENCE PROGRAM COMMITTEE MEMBER**

IEEE International Conference on Teaching, Assessment and Learning for Engineering (2018)  
International Conference on Learning Analytics & Knowledge (2016 – present)  
International Conference on Educational Data Mining (2017 – present)  
International Conference on Artificial Intelligence in Education (2017-2019)  
International Conference of the Learning Sciences (2017-2018)

**PROFESSIONAL TALKS AND PRESENTATIONS**

---

**SPEAKER AND SESSION ORGANIZER, ACT STATE ORGANIZATIONS LEADERSHIP SUMMIT  
(FEBRUARY 2020)**

ACT State Orgs. Dallas, Texas  
Session Topic: Educator Perspectives: Insights on Test Preparation in Schools

**SPEAKER, 2019 CYBERLEARNING CONFERENCE (OCTOBER 2019)**

NSF Cyberlearning Program. Alexandria, Virginia  
Expertise Exchange Session on: Research in Learning Analytics and Educational Data Mining

**LECTURER, PROFESSIONAL DEVELOPMENT COURSE ON LEARNING ANALYTICS FOR ACT  
RESEARCH (2019)**

ACT, Inc. Iowa City, IA  
Topic/s: Social Network Analysis; Educational Measurement

**SPEAKER, BLACKBOARD'S WEBINAR PRESENTATION ON ANALYTICS RESEARCH (MAY 18, 2015)**

Topic: Towards Long-Term and Actionable Prediction of Student Outcomes using Automated Detectors of Engagement and Affect; co-presented with Prof. Ryan S. Baker

**SPEAKER, PLAYTIME ONLINE WEBINAR SERIES (JANUARY 20, 2014)**

Topic: What Does Math Have to Do with Games?  
<http://www.instituteofplay.org/awsm/playtime-online/what-does-math-have-to-do-with-games/>

**GUEST LECTURER (SPRING 2013)**

Teachers College Columbia University, New York, NY, USA  
Course: HUDK 5199 – Special Topics in Educational Data Mining  
Topic: Advanced Bayesian Knowledge Tracing

## PUBLICATIONS

---

### JOURNALS

- Joksimovic, S., Siemens, G., Wang, Y. E., **San Pedro, M.O.Z.**, & Way, J. (2020). Editorial: Beyond Cognitive Ability. *Journal of Learning Analytics*, 7(1), 1–4.
- **San Pedro, M.O.Z.**, Baker, R. S., & Heffernan, N. T. (2017). An Integrated Look at Middle School Engagement and Learning in Digital Environments as Precursors to College Attendance. *Technology, Knowledge and Learning*, 22(3), 243-270.
- Ocumpaugh, J., **San Pedro, M.O.Z.**, Lai, H. Y., Baker, R. S., & Borgen, F. (2016). Middle school engagement with mathematics software and later interest and self-efficacy for STEM careers. *Journal of Science Education and Technology*, 25(6), 877-887.
- **San Pedro, M.O.Z.**, d Baker, R. S., & Rodrigo, M. M. T. (2014). Carelessness and Affect in an Intelligent Tutoring System for Mathematics. *International Journal of Artificial Intelligence in Education*, 24(2), 189-210.
- Pardos, Z.A., Baker, R.S., & **San Pedro, M.O.C.Z.**, Gowda, S.M., Gowda, S.M. (2014). Affective states and state tests: Investigating how affect and engagement during the school year predict end of year learning outcomes. *Journal of Learning Analytics*, 1 (1), 107-128.
- Rodrigo, M.M.T., Baker, R.S., Agapito, J., Nabos, J., Repalam, M.C., Reyes, S.S., & **San Pedro, M.O.Z.** (2012). The Effects of an Interactive Software Agent on Student Affective Dynamics while Using an Intelligent Tutoring System. *IEEE Transactions on Affective Computing*, 3 (2), 224-236.

### BOOK

- Wang, Y., Joksimovic, S., **San Pedro, M.O.Z.**, Way, J., & Whitmer, J. (In preparation, proposal accepted for 2021 publication). *Social and Emotional Learning - An Inclusive Learning Analytics Perspective*. Springer Nature's 'Advances in Analytics for Learning and Teaching' series

### BOOK CHAPTERS

- **San Pedro, M.O.Z.**, Baker, R.S., Bowers, A.J., & Heffernan, N.T. (Under Review). Exploring Selective College Attendance and Middle School Cognitive and Non-Cognitive Factors within Computer-Based Math Learning. *Social and Emotional Learning - An Inclusive Learning Analytics Perspective*.
- **San Pedro, M.O.Z.** & Baker, R. S. (In Press). Adaptive Learning and Knowledge Inference Models. In von Davier, A., Mislevy, R. & Hao, J. (eds.) *Computational Psychometrics: New Methods for a New Generation of Educational Assessment*.
- Bobek, B.L., Way, J., & **San Pedro, M.O.Z.** (2021). A Noncognitive Roadmap to College Student Success. *Building Bridges for Student Success: A Sourcebook for College and Universities*. Consortium for Student Retention Data Exchange
- **San Pedro, M.O.Z.** & Baker, R. S. (2016). Adaptive Learning. In McCarthy, M.J. (ed.) *The Cambridge Guide to Blended Learning for Language Teaching*. Cambridge: Cambridge University Press, 234-247.

### WHITE PAPERS / TECHNICAL REPORTS / RESEARCH REPORTS

- Walton, K. E., **San Pedro, M.O.Z.**, Whitmer, J., Liu, R., Walton, K. E., Moore, J. L., & Lotero, A. A. (2020) *Using Feature Engineering from Online Learning Environments to Observe Social and Emotional Skills and Academic Performance*. Iowa City, IA: ACT.
- Payne, J. S., **San Pedro, M.O.Z.**, Moore, R., & Sanchez, E. (2020). *Educator Perspectives: Insights on Test Preparation in Schools with State and District Testing*. Iowa City, IA: ACT.

- Moore, R., Sanchez, E., & **San Pedro, M.O.Z.** (2019). *College Entrance Exams: How Does Test Preparation Affect Retest Scores?* Iowa City, IA: ACT.
- Sanchez, E., Moore, R., & **San Pedro, M.O.Z.** (2018). *Investigating test prep impact on score gains using quasi-experimental propensity score matching.* Iowa City, IA: ACT.
- **San Pedro, M.O.Z.** (2017). *Carelessness in Online Learning Environments: An Evidence-Centered Design Perspective.* SRI White Paper. Menlo Park, CA: SRI Education.

#### CONFERENCE PROCEEDINGS (PUBLISHED PEER-REVIEWED FULL, SHORT, POSTER, WORKSHOP PROPOSALS)

- Schnieders, J.Z., **San Pedro, M.O.Z.**, Paek, P.L., Claypool, A., & Coulson, A. (2020). Exploring the Utility of Eye-tracking in Identifying Misconceptions in a Mathematics Digital Game. In *Proceedings of the 2020 International Conference of the Learning Sciences.*
- **San Pedro, M.O.Z.**, Liu, R., & McKinniss, T. L. (2019). Developing Game-Based Models of Cooperation, Persistence and Problem Solving from Collaborative Gameplay. In *International Conference on Artificial Intelligence in Education* (pp. 247-251). (**presented poster**)
- Wang, Y., **San Pedro, M.O.Z.**, Joksimovic, S., & Way, J. (2019). The 2<sup>nd</sup> Workshop on Online Learning & Social Emotional Learning (SEL). In *Proceedings of the 9th International Conference on Learning Analytics and Knowledge.* (**facilitated workshop**)
- **San Pedro, M.O.Z.** (2018). Discourse Engagement during Online Test Preparation: A Social Network Analysis Approach. In Companion Proceedings of *the 8th International Conference on Learning Analytics & Knowledge*, 151-152. (**presented poster**)
- Wang, Y., **San Pedro, M.O.Z.**, Joksimovic, S., McKinniss, T., & Way, J. (2018). Workshop on non-cognitive assessments at scale for online learning. In *Proceedings of the 8th International Conference on Learning Analytics and Knowledge*, 560-564. (**facilitated workshop**)
- McKinniss, T., **San Pedro, M.O.Z.**, Dixon, A., & Way, J. (2018). Non-cognitive Skills: Relevance & Measurement during Online Learning. In *Proceedings of Workshop at the 8th International Conference on Learning Analytics & Knowledge*, 578-582. (**presented paper**)
- Ocumpaugh, J., Baker, R. S., **San Pedro, M.O.Z.**, Hawn, M. A., Heffernan, C., Heffernan, N. T., & Slater, S. A. (2017). Guidance counselor reports of the ASSISTments college prediction model (ACPM). In *Proceedings The 7<sup>th</sup> International Learning Analytics & Knowledge Conference* (pp. 479-488). [**Nominated for Best Paper Award**]
- **San Pedro, M.O.Z.**, Baker, R.S., Heffernan, N.T., & Ocumpaugh, J.L. (2015). Exploring College Major Choice and Middle School Student Behavior, Affect and Learning: What Happens to Students Who Game the System? *Proceedings of the 5th International Learning Analytics & Knowledge Conference*, 36-40. (**presented paper**)
- **San Pedro, M.O.Z.**, Snow, E.L., Baker, R.S., McNamara, D., Heffernan, N. (2015). Exploring Dynamic Assessments of Affect, Behavior, and Cognition and Math State Test Achievement. In *Proceedings of the 8th International Conference on Educational Data Mining*, 85-92. (**presented paper**)
- **San Pedro, M. O. Z.** (2015). Assessing the Roles of Student Engagement and Academic Emotions within Middle School Computer-Based Learning in College-Going Pathways. In *Proceedings of the 8th International Educational Data Mining Society.* (**presented paper at Doctoral Consortium session**)
- Snow, E.L., **San Pedro, M.O.Z.**, Jacovina, M., McNamara, D.S., Baker, R.S. (2015). Achievement versus Experience: Predicting Students' Choices during Gameplay. In *Proceedings of the 8th International Conference on Educational Data Mining*, 564-565.
- Jiang, Y., Baker, R. S., Paquette, L., **San Pedro, M.**, & Heffernan, N. T. (2015, June). Learning, Moment-by-Moment and Over the Long Term. In *Proceedings of Artificial Intelligence in Education* (pp. 654-657). Springer International Publishing.



- **San Pedro, M.O.Z.**, Ocumpaugh, J.L., Baker, R.S., & Heffernan, N.T. (2014). Predicting STEM and Non-STEM College Major Enrollment from Middle School Interaction with Mathematics Educational Software. *Proceedings of the 7th International Conference on Educational Data Mining*, 276-279. (*presented paper*)
- Bazaldua, D.A.L., Baker, R.S., & **San Pedro, M.O.Z.** (2014). Combining Expert and Metric-Based Assessments of Association Rule Interestingness. *Proceedings of the 7th International Conference on Educational Data Mining*, 44-51.
- **San Pedro, M.O.Z.**, Baker, R.S., Bowers, A.J., & Heffernan, N.T. (2013). Predicting College Enrollment from Student Interaction with an Intelligent Tutoring System in Middle School. *Proceedings of the 6th International Conference on Educational Data Mining*, 177-184. (*presented paper*)
- **San Pedro, M.O.Z.**, Baker, R.S., Gowda, S.M., & Heffernan, N.T. (2013). Towards an Understanding of Affect and Knowledge from Student Interaction with an Intelligent Tutoring System. *Proceedings of the 16th International Conference on Artificial Intelligence and Education*, 41-50. (*presented paper*)
- Pardos, Z.A., Baker, R.S., **San Pedro, M.O.C.Z.**, Gowda, S.M., & Gowda, S.M. (2013). Affective states and state tests: Investigating how affect throughout the school year predicts end of year learning outcomes. *Proceedings of the 3rd International Conference on Learning Analytics and Knowledge*, 117-124.
- **San Pedro, M.O.Z.**, Rodrigo, M.M., & Baker, R.S. (2011). The Relationship between Carelessness and Affect in a Cognitive Tutor. *Proceedings of the 4th bi-annual International Conference on Affective Computing and Intelligent Interaction*. (*presented paper*)
- **San Pedro, M.O.Z.**, Baker, R.S., & Rodrigo, M.M. (2011). Detecting Carelessness through Contextual Estimation of Slip Probabilities among Students Using an Intelligent Tutor for Mathematics. *Proceedings of 15th International Conference on Artificial Intelligence in Education*, 304-311. (*presented paper*)

#### CONFERENCE PRESENTATIONS (PEER-REVIEWED SESSIONS)

- **San Pedro, M.O.Z.** & Liu, R. (2020). Modeling Collaborative Problem Solving Skills from Team Interactions with an Educational Game. Paper accepted for individual presentation at the virtual *2020 Annual Meeting of the National Council on Measurement in Education (NCME)*.
- Paek, P.L., **San Pedro, M.O.Z.**, Coulson, A., Claypool, A., & Krier, C. (2019). Miscarry of Mathematics Learning from Online Games to High-Stakes Assessments. Presented at a paper session at the *2019 Annual Meeting of the National Council on Measurement in Education (NCME)* on April 4-8. 2019.
- **San Pedro, M.O.Z.** & Coulson, A. (2019). Content Knowledge versus Experience: Towards an Understanding of Student Hurdles during Gameplay in Math Learning. Presented at a poster session at the *2019 Annual Meeting of the American Educational Research Association (AERA)* on April 5-9. 2019.
- **San Pedro, M.O.Z.** & Coulson, A. (2019). Trends in Student Mastery and Math Content Knowledge through Spatial-Temporal Gameplay: A Twelve-Year Look. Presented at a structured poster session at the *2019 Annual Meeting of the American Educational Research Association (AERA)* on April 5-9. 2019.
- **San Pedro, M.O.Z.** & Zhou, Y. (2019). Exploring Teacher Noticing of Collaborative Problem-Solving with an Assessment Framework: Does Teacher Experience Matter? Presented at a roundtable session at the *2019 Annual Meeting of the American Educational Research Association (AERA)* on April 5-9. 2019.
- Paek, P.L., **San Pedro, M.O.Z.**, Coulson, A., & Claypool, A. (2018). Uncovering conceptual misunderstandings that lead to short- and long-term challenges in mathematics. Organized and

presented at a conference session at the 2<sup>nd</sup> *NCME Special Conference on Classroom Assessment*, Lawrence, Kansas.

- **San Pedro, M.O.Z.**, Zhou, Y., & McKinniss, T. (2018). Investigating Teacher Noticing in Students' Collaborative Problem Solving Activities within a Physics Educational Game. Poster presentation at the *2018 Annual Meeting of the American Educational Research Association (AERA)*.
- Zhou, Y., & **San Pedro, M.O.Z.** (2017). Exploring Teacher Noticing in Students' Collaborative Problem-Solving Activities. Poster presentation at the *2017 Annual Conference of the Iowa Educational Research & Evaluation Association (IEREA)*.
- **San Pedro, M.O.Z.**, Baker, R.S., Bowers, A.J., & Heffernan, N.T. (2015). Predicting College Enrollment from Machine-Learned Assessments of Knowledge, Academic Emotions and Behavior within Educational Software. Poster paper presented at the *9th Annual Machine Learning Symposium* on March 13, 2015, New York, NY.
- **San Pedro, M.O.Z.**, Ocumpaugh, J.L., Baker, R.S., & Heffernan, N.T. (2015). Predicting STEM and Non-STEM College Major Enrollment from Middle School Interaction with Mathematics Educational Software. Poster paper presented at the *8th Annual Subway Summit on Cognition and Education Research* on January 23, 2015, New York, NY.
- Baker, R.S., Heffernan, N.T., & **San Pedro, M.O.Z.** (2012). Predicting STEM Career Choice from Computational Indicators of Student Engagement within Middle School Mathematics Classes. Poster paper presented at *Worcester Polytechnic Institute's GRAD 2012 (Graduate Research Achievement Day)* on March 28, 2012, Worcester, MA
- **San Pedro, M.O.Z.**, Rodrigo, M.M., & Baker, R.S.J.d. (2011). The Relationship between Carelessness and Affect in a Cognitive Tutor. Poster paper presented at the *15th International Conference on Artificial Intelligence in Education, Young Researcher's Track (YRT)*, Auckland, NZ.

## REFERENCES

---

### **DR. PAUL D. NICHOLS**

Chief Scientist  
Planful Learning & Assessment  
Iowa City, IA 52243  
[paul.nichols@planfullearning.com](mailto:paul.nichols@planfullearning.com)

### **DR. RAEAL L. MOORE**

Principal Research Scientist, Applied Research  
ACT, Inc.  
Iowa City, IA 52243  
[raeal.moore@act.org](mailto:raeal.moore@act.org)

### **DR. PAMELA L. PAEK**

Deputy Chief, Research, Strategy & Evaluation  
UnboundEd.org  
New York, NY 10003  
[pamela.paek@act.org](mailto:pamela.paek@act.org)

### **PROF. MA. MERCEDES T. RODRIGO**

Department of Information Systems and

### **PROF. RYAN S. BAKER** (PhD Advisor)

Graduate School of Education  
University of Pennsylvania  
Philadelphia, PA 19104  
[ryanshaunbaker@gmail.com](mailto:ryanshaunbaker@gmail.com)

### **DR. ERICA L. SNOW**

Director, Learning/Data Science  
Roblox  
Los Angeles, CA 90016  
[elsnow4@yahoo.com](mailto:elsnow4@yahoo.com)

### **DR. LAURIE L. DAVIS**

Senior Director, Psychometrics  
Curriculum Associates  
North Billerica, MA 01862  
[lauriedavis@cainc.com](mailto:lauriedavis@cainc.com)

### **DR. JACLYN L. OCUMPAUGH**

Graduate School of Education

Computer Science  
Ateneo de Manila University  
Quezon City, Philippines  
[mrodrigo@ateneo.edu](mailto:mrodrigo@ateneo.edu)

**PROF. LUC PAQUETTE**  
Department of Curriculum & Instruction  
University of Illinois at Urbana-Champaign  
Urbana, IL 61801  
[lpaq@illinois.edu](mailto:lpaq@illinois.edu)

University of Pennsylvania  
Philadelphia, PA 19104  
[jlocumpaugh@gmail.com](mailto:jlocumpaugh@gmail.com)

**PROF. NEIL T. HEFFERNAN**  
Department of Computer Science  
Worcester Polytechnic Institute  
Worcester, Massachusetts 01609  
[nth@wpi.edu](mailto:nth@wpi.edu)

Updated as of: March 25, 2021