PATRICIA L. ALBACETE

Curriculum Vitae

Learning Research and Development Center
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EDUCATION

Ph. D., INTELLIGENT SYSTEMS — 1999
University of Pittsburgh, Pittsburgh, PA

M.S., INTELLIGENT SYSTEMS — 1993
University of Pittsburgh, Pittsburgh, PA

B.S., COMPUTER SCIENCE AND PHYSICS — 1989
Universidad de Buenos Aires, Buenos Aires, Argentina

EXPERIENCE

RESEARCH ASSOCIATE — 2010-Present
Learning Research and Development Center, University of Pittsburgh.

CONSULTANT — 2002-2009
Learning Research and Development Center, University of Pittsburgh.

RESEARCH ASSISTANT — 1990-1998
Intelligent Systems Program, University of Pittsburgh

TEACHING ASSISTANT — 1992-1995
Intelligent Systems Program, University of Pittsburgh

FUNDING

co-PI on NSF Cyberlearning 2016018 "Automated Debriefing in Simulation-based Training of Paramedics: Comparing Self-guided to Agent Facilitated Debriefing" — 2020-Present

co-PI on IES R305A150155 "Linking Dialogue and Student Modeling to Create an Enhanced Micro-Adaptive Tutoring System" — 2015-2019

co-PI on IES R305A130441 "Exploratory Studies to Derive Policies for Adaptive Natural-language Tutoring in Physics" — 2013-2016

Team member on IES R305A100163 "Improving a Natural-language Tutoring System that Engages Students in Deep Reasoning Dialogues about Physics" — 2010-2013

Consultant on NSF 0325054 "Tutoring Scientific Explanations via Natural Language Dialogue" — 2004-2008

Consultant on ONR N00014-00-1-0600 "Why2000: An Intelligent Tutoring System with Natural Language Understanding" — 2000-2005

RESEACH PAPERS

- Katz, S., Albacete, P., Gallagher, J., Jordan, P., Platt, T., Silliman, S., & Yang, T. (2022). Comparing Alternative Approaches to Debriefing in a Tool to Support Peer-Led Simulation-Based Training. In: *Proceeding of the 18th International Conference on Intelligent Tutoring Systems (ITS 2022) pp. 88-94. Cham: Springer International Publishing.*

- Katz, S., Albacete, P., Chounta, I.A., Jordan, P., McLaren, B.M., & Zapata-Rivera, D. (2021). Linking Dialogue with Student Modeling to Create and Adaptive Tutoring System for Physics. *International Journal of Artificial Intelligence in Education, 31, 397-445.*

- Albacete, P., Jordan, P., Katz, S., Chounta, I.A., & McLaren, B.M. (2019). The Impact of Student Model Updates on Contingent Scaffolding in a Natural-Language Tutoring System. In: *Isotani S. et al (eds) Proceedings of the 20th International Conference on Artificial Intelligence in Education (AIED 2019) pp. 37-47. Lecture Notes in Computer Science, vol 11625. Springer, Cham.*

- Katz, S., Albacete, P., Jordan, P., Chounta, I.A., & McLaren, B.M. (2019). Pilot Study of a Tutorial Dialogue System that Emulates the Contingent Scaffolding of Human Tutors. In: *Proceedings of the Annual Meeting of the American Educational Research Association (AERA 2019).*

- Albacete, P., Jordan, P., Lusetich, D., Chounta, I.A., Katz, S., & McLaren, B.M. (2018). Providing Proactive Scaffolding During Tutorial Dialogue Using Guidance from Student Model Predictions. In: *Penstein Rosé C. et al. (eds) Proceedings of the 19th International Conference on Artificial Intelligence in Education (AIED 2018) pp. 20-25. Lecture Notes in Computer Science, vol 10948. Springer, Cham.*

- Katz, S., Albacete, P., Chounta, I.A., Jordan, P., & McLaren, B.M. (2018). What Does It Mean to Provide the Right Level of Support During Tutorial Dialogue? In: *proceedings of the 14th International Conference on Intelligent Tutoring Systems (ITS 2018).*

- Jordan, P., Albacete, P., & Katz, S. (2018). A Comparison of Tutoring Strategies for Recovering from a Failed Attempt during Faded Support. In: *Penstein Rosé C. et al. (eds) Proceedings of the 19th International Conference on Artificial Intelligence in Education (AIED 2018) pp. 212-224. Lecture Notes in Computer Science, vol 10948. Springer, Cham.*

- Albacete, P., Silliman, S., & Jordan, P. (2017). A Tool to Assess Fine-grained Knowledge from Correct and Incorrect Answers in Online Multiple-choice Tests: an Application to Student Modeling. In: *J. Johnston (Ed.) Proceeding of the 25th World Conference on Educational Media & Technology (EdMedia)*, *pp. 988-996.* https://www.learntechlib.org/p/178413

- Jordan, P., Albacete, P., & Katz, S. (2017). Adapting Step Granularity in Tutorial Dialogue Based on Pretest Scores. In: *André E., Baker R., Hu X., Rodrigo M., du Boulay B. (eds) proceeding of the 18th International Conference on Artificial Intelligence in Education (AIED) pp. 137-148.*

- Chounta, I. A., Albacete, P., Jordan, P. Katz, S., & McLaren B. (2017). The "Grey Area": A Computational Approach to Model the Zone of Proximal Development. In: *proceedings of the 12th European Conference on Technology Enhanced Learning (EC-TEL), pp. 3-16.*

- Chounta, I. A., McLaren, B., Albacete, P., Jordan, P., & Katz, S. (2017). Modeling the Zone of Proximal Development with a Computational Approach. In: *Lavoué É., Drachsler H., Verbert K., Broisin J., Pérez-Sanagustín M. (eds) Proceedings of the 10th International Conference on Educational Data Mining (EDM), pp. 356-357.*

- Jordan, P., Albacete, P., & Katz, S. (2016). Exploring Contingent Step Decomposition in a Tutorial Dialogue System. In: *proceedings of the 24th Conference on User Modeling, Adaptation and Personalization (UMAP).*

- Katz S., Jordan, P., & Albacete, P. (2016). Exploring How to Adaptively Apply Tutorial Dialogue Tactics. In: *Proceedings of the 16th IEEE International Conference on Advanced Learning Technologies (ICALT).*

- Katz, S., Albacete, P., & Jordan, P. (2016). Do summaries support learning from post-problem reflective dialogues? In: *Proceedings of the 13th International Conference on Intelligent Tutoring Systems (ITS),* Zagreb, Croatia.

- Chounta, I.A., McLaren, B. M., Albacete, P., Jordan, P., & Katz, S., (2016). Analysis of Human-to-Human Tutorial Dialogues: Insights for Teaching Analytics. In: *Proceedings of the 4th International Workshop on Teaching Analytics (IWTA 2016) at the 11th European Conference on Technology Enhanced Learning (EC-TEL 2016)*. Lyon, France.

- Albacete, P., Jordan, P., & Katz, S. (2015). Is a Dialogue-Based Tutoring System that Emulates Helpful Co-constructed Relations During Human Tutoring Effective? In: *Proceedings of the 17th International Conference on Artificial Intelligence in Education (AIED), pages 3-12,* Madrid, Spain.

- Jordan, P., Albacete, P., and Katz, S. (2015). When Is It Helpful to Restate Student Responses within a Tutorial Dialogue System? In: *Proceedings of the 17th International Conference on Artificial Intelligence in Education (AIED), pages 658-661,* Madrid, Spain.

- Jordan, P., Albacete, P. & Katz, S. (2015). Exploring the Effects of Redundancy within a Tutorial Dialogue System: Restating Students' Responses. In: *Proceedings of the 16h Annual Meeting on Discourse and Dialogue (SIGdial).*

- Lipschultz, M., Litman, D., Katz, S., Albacete, P., & Jordan, P. (2014). Predicting Semantic Changes in Abstraction in Tutor Responses to Students. *International Journal of Learning Technology, 9(3), 281-303.*

- Katz, S., Jordan, P., & Albacete, P. (2014). Rimac: A natural-language tutoring system that supports students' understanding of physics concepts. *The Ohio Educational Technology Conference (OETC)*, Columbus Ohio.

- Jordan, P., Albacete, P., Ford, M.J., Lipschultz, M., Litman, D., Silliman, S., & Wilson, C. (2013). Interactive Event: The Rimac tutor: A simulation of the highly interactive nature of human tutorial dialogue. In: *Proceedings of the 16th International Conference on Artificial Intelligence in Education (AIED),* pages 928-929, Memphis, TN.

- Katz, S., Albacete, P., Ford, F., Jordan, P., Lipschultz, M., Litman, D., Silliman, S., & Wilson, C. (2013). Pilot test of a natural-language tutoring system for physics that simulates the highly interactive nature of human tutoring. In: *Proceedings of the 16th International Conference on Artificial Intelligence in Education (AIED),* pages 636-639, Memphis, TN.

- Jordan, P., Albacete, P., Ford, M., Katz, S., Lipschultz, M., Litman, D., Silliman, S., & Wilson, C. (2013). The Rimac Tutor: A simulation of the highly interactive nature of human tutorial dialogue. In: *Proceedings of the 9th International Conference of AI in Education (AIED).*

- Katz, S., & Albacete, P. (2013). A tutoring system that simulates the highly interactive nature of human tutoring. *Journal of Educational Psychology. (Special Issue on Advanced Learning Technologies), 105(4), 1126-1141.*

- Jordan, P., Albacete, P., Ford, M.J., Katz, S., & Lipschultz, M. (2012). Eliciting student explanations during tutorial dialogue for the purpose of providing formative feedback. In: *Proceedings of the Workshop on Formative Feedback (AIED).*

- Jordan, P., Katz, S., Albacete, P., Ford, M. & Wilson C. (2012). Reformulating student contributions in tutorial dialogue. In: *Proceedings of the 7th International Natural Language Generation Conference (INLG)*, pp. 95-99, Utica, Association for Computational Linguistics.

- Katz, S., Jordan, P., Litman, D., and the Rimac Project Team. (2011). Rimac: A Natural-language dialogue system that engages students in deep reasoning dialogues about physics. In: *Proceedings of the Society for Research on Educational Effectiveness (SREE)*, Washington, DC.

- Katz, S., Albacete, P., Jordan, P., & Litman, D. (2011). Dialogue analysis to inform the development of a natural-language tutoring system. In: *Proceedings of the Workshop on the Semantics and Pragmatics of Dialogue (SemDial)*, Los Angeles, CA.

- Jordan, P., Makatchev, M., Pappuswamy U., VanLehn, K., and Albacete, P (2006). A Natural Language Tutorial Dialogue System for Physics. In: *Proceedings of the 19th International FLAIRS conference*.

- Jordan, P., Albacete, P., and VanLehn, K (2005). Taking Control of Redundancy in Scripted Tutorial Dialogue. In: *Proceedings of International Conference on Artificial Intelligence in Education (AIED),* pp. 314-321.

- Albacete, P. and VanLehn, K. (2000). Evaluating the Effectiveness of a Cognitive Tutor for Fundamental Physics Concepts, In: *Proceedings of the 22nd Annual Conference of the Cognitive Science Society*, Philadelphia, PA.

- Albacete, P. and VanLehn, K (2000). The Conceptual Helper: An Intelligent Tutoring System for Teaching Fundamental Physics Concepts. In: *Proceedings of the 5th International Conference on Intelligent Tutoring Systems (ITS)*, pp. 564-573.

- Albacete, P., Chang, S.K., Polese, G, and Baker, B (1994). Iconic Language Design for People with Significant Speech and Multiple Impairments. In: *Proceeding of the ACM Conference on Assistive Technologies* (ASSETS). pp. 23-30. DOI: 10.1007/BFb0055967

BOOK CHAPTERS

Katz, S., Albacete, P., Jordan, P., Lusetich, D., Chounta, I., & McLaren, B.M. (2018). *Operationalizing the contingent scaffolding of human tutors in an intelligent tutoring system*. In Craig, S.D. (editor). Tutoring and Intelligent Tutoring Systems. Nova Science Publishers, Inc. pp. 187-220.

Albacete, P., Chang, S., and Polese, G. (1998) *Iconic Language Design for People with Significant Speech and Multiple Impairments* (pp. 12-32). In Assistive Technology and Artificial Intelligence: Applications in Robotics, User Interfaces and Natural Language Processing. V. Mittal, H. Yanco, J. Aronis, and R. Simpson (Eds). Lecture Notes in Computer Science, vol. 1458, Springer.

SYNERGISTIC ACTIVITIES

Reviewer for Journal of Artificial Intelligence in Education, Learning and Instruction Journal, Journal of Research and Technology in Education, Journal ACM Transactions on Interactive Intelligent Systems, Future Generation Computer Systems Journal, and Studies in Educational Evaluation journal.

Program committee member for the International Conference in Artificial Intelligence in Education, the European Conference on Technology Enhanced Learning, the Association for the Advancement in Artificial Intelligence conference, and the International Society of the Learning Sciences conference.

Reviewer for Comisión Nacional de Investigación Científica y Tecnológica (CONICYT) -Chile