MATHEMATICS/COMPUTER SCIENCE

REFEREED PUBLICATIONS

Belcastro, S. M. (2004). To include more students, don't focus on contests-prepare for mathematics! *Mathematics Teacher, 97,* 84-86.

Belcastro, S. M. (2004). Problem 11074: Families of dot-product snarks on orientable surfaces of low genus. *American Mathematical Monthly, 11*.

Guo, H. & Krishnamoorthy, K. (2005). Comparison between two quantiles: The normal and exponential cases. *Communications in statistics-Simulation and computation, 34,* 243-252.

Joshi, H. R., Lenhart, S. & Bergounioux, M. (2005). Solving a crop problem by an optimal control method. *National Resource Modeling, 18*.

Joshi, H. R., Lenhart, S. & Gaff, H. (2005). Optimal harvesting during an invasion of a sublethal plant pathogen. *Environment and Development Economics*.

Joshi, H. R. (2004). Solving a parabolic identification problem by an optimal control method. *Houston Journal of Mathematics, 30,* 1219-1241.

Benjamin, A. T., Neer, J. D., **Otero, D. E.,** & Sellers, J. A. (2003). A probabilistic view of certain weighted Fibonacci sums. *Fibonacci Quarterly, 41,* 360-364.

PRESENTATIONS AT ACADEMIC CONFERENCES

Belcastro, S. M. (2004). *Why do we knit the way we do?* Paper presented at the Miami University Conference: Mathematics and Symmetry, Oxford, OH.

Belcastro, S. M., & Blue, J. (2004). *Feminists critiquing science: From representation issues to philosophy.* Paper presented at the Office of Multicultural Affairs Symposium,

Belcastro, S. M., & Hull, T. C. (2004). *Why are there 3^n cubes in the n-cube?* Paper presented at the American Regions Math League, Penn State University, University Park, PA.

Flaspohler, D. C., & Dinkheller, A. L. (2002). *Connections in discrete mathematics*. Paper presented at the annual meeting of the Ohio Council of Teachers of Mathematics, Cincinnati, OH.

Izsak, A., & **Wagner, J. F.** (2003). *Coordination classes as a lens for understanding the development and generalization of mathematical modeling knowledge*. Paper presented at the Conference on Research in Undergraduate Mathematics Education, Scottsdale, AZ.

Joshi, H. (2003). *Solving a crop problem by an optimal control method*. Paper presented at the Southeastern-Atlantic Regional Conference on Differential Equations, Kennesaw State University, Atlanta, GA.

Otero, D. E. (2004). *Al-Biruni's trigonometry: One millennium later.* Paper presented at the MAA Tri-Section Meeting and Midwest History of Mathematics Conference, University of Evansville, Evansville, IN.

Otero, D. E. (2001). *On using a table of logarithms*. Paper presented at AMS Eastern Section Fall Meeting, Williams College, Williamstown, MA.

Otero, D. E. (2001). *A fifteen-minute history of logarithms*. Paper presented at MAA Ohio Section Fall Meeting, Marietta College, Marietta, OH.

Otero, D. E. (2001). *On building a table of logarithms*. Paper presented at Eighth Midwest History of Mathematics Conference, Northern Kentucky University, Highland Heights, KY.

Rossa, B., Wagner, J. F., Rasmussen, C., & Allen, K. (2005). *Developing and implementing innovative undergraduate mathematics curricula: Improving collaboration between mathematicians and mathematics educators*. Paper presented t the Conference on Research in Undergraduate Mathematics Education, Phoenix, AZ.

Vanderbilt, A. K. (2002). *Free Tweety! Nonmonotonic logic comes of age*. Paper presented at the George Washington University Summer Program for Women in Mathematics, Washington, DC.

Vanderbilt, A. K. (2002). *Common derivations in locally determined logic programs*. Paper presented at the 7th International Symposium on Artificial Intelligence and Mathematics, Ft. Lauderdale, FL.

Vanderbilt, A. K. (2002). *Common derivations in locally determined logic programs and their computability.* Paper presented at the Annual Joint Mathematics Meeting, AMS Special Session on Computability, San Diego, CA.

Wagner, J. F. (2005). *Identifying the knowledge students really use: Some methodological concerns*. Paper presented at the American Educational Research Association Meeting, Montreal, Quebec, Canada.

Wagner, J. F. (2004). *Transfer: A complex knowledge system perspective*. Paper presented at the American Educational Research Association, San Diego, CA.

Wagner, J. F. (2003). *The context sensitivity of mathematical generalizations*. Paper presented at the International Group for the Psychology of Mathematics Education, Joint Meetings of PME and PMENA, Honolulu, HI.

Wagner, J. F. (2003). *The microgenesis of mathematical generalizations: Examining competing theories of conceptual change and transfer.* Paper presented at the American Educational Research Association, Chicago, IL.

Wagner, J. F. (2002). *Constructing generalizations: An analysis of one student's progress toward a generalized understanding of the law of large numbers*. Paper presented at the North American Chapter of the International Group for the Psychology of Mathematics Education, Athens, GA.

PROCEEDINGS

Belcastro, S. M., & Hull, T. C. (2002). A mathematical model for non-flat origami. In T. C. Hull (Ed.), *Origami^3: Third International Meeting of Origami, Science, Mathematics and Education* (pp. 39-51). Wellesley, MA: A.K. Peters, Ltd.

Joshi, H.R., Lenhart, S. L., Michael, L. Y., & Wang, L. (2005). Optimal control methods applied to disease model. *Proceedings of the American Mathematical Society.*

Wagner, J. F. (2003). The context sensitivity of mathematical generalizations. In N. A. Pateman, B. J. Doughtery & J. Zilliox (Eds.), *Proceedings of the Joint Annual Meeting of the International Group for the Psychology of Mathematics Education (PME) and North American Chapter of PME* (pp. 363-370). Honolulu, HI: University of Hawaii Center for Research and Development Group.

Wagner, J. F. (2002). Constructing generalizations: An analysis of one student's progress toward a generalized understanding of the law of large numbers. In D. S. Mewborn, P. Sztajn, D. Y. White, H. G. Wiegel, R. L. Bryant & K. Nooney (Eds.), *Proceedings of the North American Chapter of the International Group for the Psychology of Mathematics* (pp. 1335-1338). Columbus, OH: The Chapter.

OTHER

Belcastro, S. M. (2004). *Using class time--how and why I developed my classroom style*. Panel participant in Project NExT (New Experiences in Teaching), Providence, RI.

Belcastro, S. M., & Hull, T. C. (2004). *Why are there 3^n cubes in the n-cube?* Lecture presented to the BC Calculus class, Wyoming High School, Cincinnati, OH.

Belcastro, S. M., & Howard, A. (2002). The devil is in the culture: Why you should read *The number devil* and other musings on mathematical education and culture. *Math Horizons , 10*(November), 16-20, 29.

Lewandowski, G., Gray, S., Shende, A., & Edwards, W. (2004). *Improving programming skills by developing program comprehension*. Panel participant at Consortium for Computing Sciences in Colleges - East, Baltimore, MD.

Otero, D. E. (2004). *George Polya's Mathematics and plausible reasoning*. Readings presented at the ORESME (Ohio River Early Sources in Mathematical Exposition) Reading Group, Xavier University, Cincinnati, OH.

Otero, D. E. (2004). *Al-Biruni's On shadows: A glimpse at Islamic mathematics*. Invited address presented at Wright State University, Lake Campus, Celina, OH.

Otero, D. E. (2004). *Al-Biruni's contributions to mathematics*. Invited address presented at Ohio State University, Columbus, OH.

Otero, D. E. (2004). *P. A. MacMahon's The design of repeating patterns and On the thirty cubes that can be constructed with six differently coloured squares*. Readings presented at the ORESME (Ohio River Early Sources in Mathematical Exposition) Reading Group, Northern Kentucky University, Highland Heights, KY.

Otero, D. E. (2004). *ORESME Reading Group*. Moderated session on P.a. MacMahon, Northern Kentucky University, Highland Heights, KY.

Vanderbilt, A. K. (2001). *Functions for nonmonotonic rule systems*. Paper presented at the Junior Faculty Research Seminar, Xavier University, Cincinnati, OH.

diSessa, A. A., **& Wagner, J. F.** (2005). What coordination has to say about transfer. In J. P. Mestre (Ed.), *Transfer of learning from a modern multidisciplinary perspective* (pp. 121-154). Greenwich, CT: Information Age Publishing.

Wagner, J. F. (2004). *How do we know that they know? The problem of attributing knowledge to students*. Invited presentation given at the Pi Mu Epsilon induction ceremony, Department of Mathematics and Computer Science, Xavier University, Cincinnati, OH.