

Collaborative Research: Resource of Open Problems for Education (ROPE)

Biographical Sketch

Dana C. Ernst

(a) Professional Preparation

George Mason University	Mathematics	BS, 1997
Northern Arizona University	Mathematics	MS, 2000
University of Colorado at Boulder	Mathematics	PhD, 2008

(b) Appointments

Northern Arizona University, Flagstaff, AZ		
Assistant Professor, Mathematics & Statistics Department		To begin Aug 2012
Plymouth State University, Plymouth, NH		
Assistant Professor, Mathematics Department		Aug 2008–May 2012
University of Colorado at Boulder, Boulder, CO		
Graduate Teaching Instructor, Department of Mathematics		Aug 2003–May 2008
Research Fellow, Thron Fellowship		Summer 2007
Lead Graduate Teacher, Graduate Teacher Program		Aug 2006–May 2007
Front Range Community College, Boulder, CO		
Full-time Faculty, Department of Mathematics		Aug 2001–May 2003
Northern Arizona University, Flagstaff, AZ		
Full-time Instructor, Department of Mathematics & Statistics		Jun 2000–May 2001
Graduate Teaching Instructor, Department of Mathematics & Statistics		Aug 1997–May 2000

(c) Products

(i) Most closely related to project

B. Beaudrie, B. Boschmans, D.C. Ernst. First Semester Experiences in Implementing a Mathematics Emporium Model. In R. McBride & M. Searson (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference*, 2013. New Orleans, LA: AACE.

D.C. Ernst, A. Hodge, A. Schultz. Enhancing Proof Writing via Cross-Institutional Peer Review. Submitted.

D.C. Ernst, A. Hodge. Within ϵ of Independence: An Attempt to Produce Independent Proof-Writers via IBL. Submitted.

(ii) Additional

T. Boothby, J. Burkert*, M. Eichwald*, D.C. Ernst, R.M. Green, and M. Macauley. On the Cyclically Fully Commutative Elements of Coxeter Groups. *J. Algebraic Combin.*, 36(1), 2012. [[arXiv:1202.6657](#)]

D.C. Ernst. Non-cancellable elements in type affine C Coxeter groups, *Int. Electron. J. Algebra*, 8, 2010. [[arXiv:0910.0923](#)]

D.C. Ernst. Diagram calculus for a type affine C Temperley–Lieb algebra, I. *J. Pure Appl. Alg.*, 216(11), 2012. [[arXiv:0910.0925](#)]

(d) **Synergistic Activities**

Columnist for “Math Ed Matters” Spring 2013–Present
Monthly column sponsored by the Mathematical Association of America. The column explores topics and current events related to undergraduate mathematics education.

Special Projects Coordinator for Academy of Inquiry-Based Learning Fall 2012–Present
Help organize, promote, and run IBL-related events including workshops, special sessions, and conferences. Mentor for small cohort of mathematics instructors. Includes annual stipend.

Member of Editorial Board for “Math Horizons” Spring 2014–Present
Math Horizons is the undergraduate magazine of the Mathematical Association of America.

Co-organizer for “Inquiry-Based Learning Best Practices” Summer 2012, 2013
MAA Contributed Paper Session, MathFest 2012, University of Wisconsin, Madison, WI.

Plymouth State University Distinguished Professor of Mathematics 2009 & 2011
Teaching award determined by mathematics majors at Plymouth State University.

(e) **Collaborators and Other Affiliations**

(i) **Collaborators & Co-editors**

Tom Boothby (University of Washington)
Jeffrey Burkert* (Harvey Mudd College)
Joseph Cormier* (Plymouth State University)
Ryan Cross* (Plymouth State University)
Morgan Eichwald* (University of Montana)
Selina Gilbertson* (Northern Arizona University)
Richard M. Green (University of Colorado at Boulder)
Zachariah Goldenberg* (Plymouth State University)
Katie Hills-Kimblall* (Plymouth State University)
Angie Hodge (University of Nebraska at Omaha)
Dane Jacobson* (Northern Arizona University)
Jessica Kelly* (Plymouth State University)
Matthew Macauley (Clemson University)
Christopher Malbon* (Johns Hopkins)
Christie Quaranta* (George Mason University)
Andrew Schultz (Wellesley College)
Nándor Sieben (Northern Arizona University)
Michael Woodward* (Northern Arizona University)

(ii) **Graduate and Postdoctoral Advisors**

PhD Advisor: Richard M. Green (University of Colorado at Boulder).
MS Advisor: Michael J. Falk (Northern Arizona University).

(iii) **MS Thesis Students**

Kirsten Davis (Northern Arizona University)
Brooke Fox (Northern Arizona University)