UNDERGRADUATE RESEARCH PROJECTS DIRECTED

Trinity University Senior Projects.

- Cathy Nguyen, *On Empty Delta Sets in the Block Monoids* B(Z_2^2) and B(Z_2^4), 2004.

Trinity University Honors Theses in Mathematics.


Trinity University Research Experience for Undergraduates in Mathematics Program.

- Jeremy Herr (University of Oklahoma) and Natalie Rooney (University of Texas at Austin), *A Factorization Formula for Class Number Two*, 1998.
- Victor DeLorenzo (Grove City College) and Holly Swisher (University of Oregon), *On the Asymptotic Behavior of Irreducibles in Block Semigroups*, 1999.
- Paul Baginski (Carnegie Mellon University), Kathryn McDonald (University of Oregon) and Lara Pudwell (Valparaiso University), *On Cross Numbers of Minimal Zero-Sequences in Certain Cyclic Groups*, 2001.
- Matt Holden (Pomona College) and Terri Moore (University of Washington), *Asymptotic Elasticity and the Full Elasticity Property in Atomic Monoids*, 2002.
- Melissa Banister (Harvey Mudd College), Jonathan Chaika (University of Iowa) and William Meyerson (Harvard University), *On the Arithmetic of Congruence Monoids*, 2003.
• Craig Bowles (Cornell University), Nathan Kaplan (Princeton University) and Daniel Reiser (New Mexico State University), *Delta Sets of Numerical Monoids*, 2004.

• Christopher Crutchfield (University of California at Berkeley), Grace Kennedy (University of the South) and Matthew Wright (Carnegie Mellon University), *Factorization and Elasticity with Applications to Rings of the form $K[x;S]$ and $K[[x;S]]*$, 2005.

• Ross Kravitz (Williams College), Tori Noquez (Carnegie Mellon University) and Tia Sondjaja (Harvey Mudd College), *Strongly taut restricted block monoids over $\mathbb{Z}$*, 2006.

• Natalie Hine (College of New Jersey) and João Puxaio (Virginia Tech University), *Length sets and $V$ sets of numerical monoids*, 2006.

• Jessica Bauman (Tufts University), *On factorization properties of semi-regular congruence monoids*, 2006.


• Tyler Lemberg (University of Nebraska at Lincoln), Andrew Niles (University of Rochester) and Christina Zlogar (Cornell University), *Shifts of generators and delta sets of numerical monoids*, 2007.

• Jay Daigle (Pomona College) and Rolf Hoyer (Grinnell College), *Factoring with non-minimal generating sets in commutative cancellative atomic monoids*, 2007.

• Desmond Torkorno (University of Richmond), Jay Daigle (Pomona College) and Rolf Hoyer (Grinnell College), *The $\omega$-measure of primality in numerical monoids*, 2007.

• Yiwei She (Northwestern University) and Ryan Rodriguez (Texas A&M), *On factorization in $\mathcal{B}(\mathbb{Z}, S)$*, 2008.

• Christin Bibby (University of Northern Arizona), Caitlin Leerson (Wellesley College) and Anton Malyshev (Princeton), *Determining delta sets of numerical monoids*, 2008.

• Patrick Cesarz (Villanova), *Non-unique factorization properties of algebraic semirings*, 2008.

**REFEREED PUBLICATIONS WITH UNDERGRADUATES**

(*Asterisks denote undergraduate co-authors)


“Delta sets of numerical monoids using non-minimal sets of generators,” (with G. Daigle*, R. Hoyer* and N. Kaplan) to appear in *Comm. Algebra*.

“On the delta set and catenary degree of Krull Monoids with infinite cyclic divisor class group,” (with P. Baginski, R. Rodriguez*, G. Schaeffer and Y. She*) to appear in *J. Pure Appl. Algebra*.

**PAPERS SUBMITTED OR IN PROGRESS**

“Elasticity in generalized arithmetical congruence monoids,” (with D. Steinberg*) submitted.

“An algorithm to compute $\omega$-primality in a numerical monoid,” (with D. F. Anderson, N. Kaplan and D. Torkornoo*) submitted.


PROFESSIONAL NONTECHNICAL WRITING FOR THE TRINITY REU
