Ryan Arredondo

Curriculum Vita

Contact

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Education

M.A. in Mathematics University of South Florida, Tampa, FL 08/2012 – present

Thesis: Properties of Graphs used to Model DNA Recombination

Advisor: Nataša Jonoska

B.A. in Mathematics University of South Florida, Tampa, FL 08/2008 – 05/2012

Minor: German

Presentations

• A Mathematical Model for Processes of Nested DNA Recombination (Poster) 10/25/2013 University of South Florida Oktoberfest Tampa, FL

• Reductions On Double Occurrence Words

44th Southeast. Intl. Conf. on Comb. Graph Th. and Comp.

Boca Raton, FL

Nesting Index for Assembly Words
 Pi Mu Epsilon National Meeting at MAA Mathfest
 Madison, WI

• Reductions of Assembly Words
University of South Florida Math Club
Tampa, FL

Publications

1. Ryan Arredondo. Reductions on Double Occurrence Words. Proceedings of the Fourty-fourth Southeastern International Conference on Combinatorics, Graph Theory and Computing. Congressus Numerantium (to appear)

Relevant Experience

Graduate Research Assistant

USF Faculty Grant University of South Florida, Tampa, FL 08/2013 – 05/2014

- Implemented an algorithm to compute the genera of surfaces into which certain 4-valent rigid vertex graphs can be cellularly embedded
- Prepared research poster for 2013 USF Oktoberfest Research Symposium

• Substituted for two classes of Nataša Jonoska's Bio/Math seminar

Undergraduate Research Assistant

USF Faculty Grant

University of South Florida, Tampa, FL

Summer 2010 - 2012

- Implemented an algorithm for biologically motivated reductions of double occurrence words into Python and C programs
- Proved or disproved conjectures resulting from program's output
- Delivered talks on our results to a general math audience

STEM Tutor/Peer Leader

NSF STEP Grant

University of South Florida, Tampa, FL

01/2009 - 05/2012

- Conducted a cooperative learning activity with an Engineering or Life Sciences Calculus class once a week throughout the school semester
- Guided students through newly introduced concepts of calculus
- Discussed solutions to the activity with the class as a whole

Other Work Experience

Process Improvement Co-Op Student

CAE USA Inc.

Tampa, FL

11/2010 - 08/2013

- Checked the integrity of and performed analysis on company metrics to aid in the improvement of processes
- Wrote and maintained Visual Basic macros for data analysis in Microsoft Excel
- Assisted a team to select and implement a new facility wide peer review tool

Extracurricular Involvement

- Bio/Math Research Group, Member, 01/2012 present
 - Attend weekly meetings where I provide feedback to peer researchers or present advances in my own work
- Computer Committee, Student Representative, 08/2011 present
 - Serve as the student representative on a committee whose goal is to inform the appropriate individuals to the use of computers in instruction, research and administration
- Pi Mu Epsilon, President, 05/2011 08/2012
 - Organized and hosted an inductions and awards ceremony for the USF Chapter

Awards

• University Graduate Fellowship recipient

08/2012

• Bright Futures Florida Medallion Scholar

08/2008

Computer Skills

- Operating systems used on a daily basis: Windows XP, Windows 7, Linux (Ubuntu, Arch)
- \bullet Experience in: Python, VB (for applications), C, JavaScript, LATEX, PostScript
- \bullet Microsoft Office: Excel, Outlook, Word, Powerpoint, Visio