

# Jennifer Vandebussche

Department of Mathematics  
Southern Polytechnic State University  
1100 South Marietta Parkway  
Marietta, GA 30060

phone: 678-431-3897  
email: jvandenb@spsu.edu

## Research Interests

A wide variety of problems in Extremal Graph Theory, including matching problems, coloring problems, and independence number.

## Education

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN, URBANA, IL.  
Ph.D. in Mathematics, 2008 (3.93/4.0).  
Thesis title: *Five Problems in Extremal and Structural Graph Theory*.  
Advisor: Douglas West.

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN, URBANA, IL.  
M.A. in Mathematics, 2005 (3.91/4.0).

UNIVERSITY OF GEORGIA, ATHENS, GA.  
Graduate work in mathematics, 2002-2003 (4.0/4.0).

STATE UNIVERSITY OF NEW YORK AT POTSDAM, POTSDAM, NY.  
B.Mus. in Music Education and Mathematics, 2000 (3.99/4.0).

## Positions Held

ASSISTANT PROFESSOR, Department of Mathematics  
Southern Polytechnic State University, Marietta, Georgia, *Fall 2008 – present*

PART-TIME INSTRUCTOR, Department of Mathematics  
Southern Polytechnic State University, Marietta, Georgia, *Fall 2007 – Spring 2008*

RESEARCH FELLOW, Department of Mathematics  
University of Illinois at Urbana-Champaign, *Fall 2006 - Spring 2007, Summer 2004, Summer 2005*

TEACHING ASSISTANT, Department of Mathematics  
University of Illinois at Urbana-Champaign, *Fall 2003 - Spring 2006*

RESEARCH FELLOW, Department of Mathematics  
University of Georgia, Athens, Georgia, *Fall 2002 – Spring 2003*

TEACHER, Music and Mathematics  
Schoharie Central School, Schoharie, New York, *Fall 2000 – Spring 2002*

RESEARCH ASSISTANT, Research Experience for Teachers  
SUNY Potsdam, Potsdam, New York, *Summer 2000*

## Teaching Experience

- Instructor for Merit Workshop Calculus II.  
*Active learning format: In place of traditional lectures, prepared daily worksheets to guide students through material and wrote study guides to assist with textbook reading. Full responsibility for writing exams, holding office hours and review sessions, and assigning grades.*
- Instructor for the following courses:
  - College Algebra
  - Calculus I
  - Discrete Mathematics
  - A Mathematical World*Full responsibility for preparing lectures, writing exams and worksheets, holding office hours and review sessions, and assigning grades.*
- Teaching Assistant for the following courses:
  - Business Calculus
  - Calculus I
  - Theory of Arithmetic*Led discussion sections, held office hours, graded exams and quizzes, wrote supplemental notes.*
- Chair, Mathematics Graduate Teaching Awards Committee, 2006.  
*Led committee consisting of undergraduates, graduate students, and faculty responsible for handing out departmental teaching awards to graduate students.*
- Developed curricula for high school Calculus I and Calculus II courses at Schoharie Central School.

## Honors and Awards

- Departmental Fellowship recipient, University of Illinois, 2006.
- Brahana TA Instructional Award, University of Illinois, 2005.
- Listed in “UIUC Incomplete List of Instructors Ranked as Excellent.,” 2003-2006.
- VIGRE Fellowship recipient, University of Illinois, Summer 2004, Summer 2005, Fall 2006.
- Graduate School Assistantship, University of Georgia, 2002.
- Academic Honoree for Highest GPA, SUNY Potsdam, 2000.
- C.F. Stephens Mathematics Scholarship Winner, SUNY Potsdam, 1999.

## Accepted and Submitted Research Publications

- S. Hartke, J. Vandenbussche, and P. Wenger: “Further results on bar  $k$ -visibility graphs,” *SIAM Journal of Discrete Math*, 21 (2007), no. 2, 523–531 (electronic).
- S. Hartke and J. Vandenbussche: “On a question of Sos about 3-uniform hypergraphs,” *Journal of Combinatorial Designs* (to appear).
- A. Asratian, C.J. Casselgren, J. Vandenbussche, and D. West, “Proper path-factors and interval edge-coloring of  $(3, 4)$ -biregular bigraphs,” submitted.
- J. Vandenbussche, D. West, and G. Yu: “On the Pagenumber of  $k$ -trees,” submitted.
- J. Vandenbussche, D. West: “Independence in 2-factor-plus-triangles-graphs,” submitted.
- J. Vandenbussche, D. West: “Extending matchings in hypercubes to perfect matchings,” submitted.

## Presentations

- “Extending matchings in hypercubes to perfect matchings,” *Cumberland Conference*, Vanderbilt University, Spring 2008.
- “Extending matchings in hypercubes to perfect matchings,” *Combinatorics Seminar*, UIUC, Spring 2008.
- “Using colors to schedule conferences,” *Mathematics Colloquium*, Southern Polytechnic State University, Fall 2007.
- “Friendship in Combinatorics,” *Seminar for Women in Mathematics*, UIUC, Fall 2006.
- “Results on bar  $k$ -visibility graphs,” *SIAM Conference on Discrete Mathematics*, University of Victoria, Summer 2006.
- “The pagenumber of  $k$ -trees is  $k + 1$ ,” *Graduate Student Combinatorics Conference*, University of Wisconsin-Madison, Spring 2006.
- “Results on bar  $k$ -visibility graphs,” *Combinatorics Seminar*, UIUC, Fall 2005.
- “The bookthickness of  $k$ -trees,” *Combinatorics Seminar*, UIUC, Fall 2004.

## Additional Service Activities

- Organizer, Seminar for Women in Mathematics, University of Illinois, 2006.
- Mentor for new Teaching Assistants, University of Illinois, 2005.
- Panel Discussion Member, Orientation for Women in Math, Science, and Engineering living-learning community, University of Illinois, 2005.
- Referee for *Journal of Graph Theory and Algorithms*, *Discrete Mathematics*, *ISAAC*, and *Graph Theory Notes of New York*.

## Memberships

American Mathematical Society (AMS)  
Association for Women in Mathematics (AWM)  
Society for Industrial and Applied Mathematics (SIAM)  
Pi Mu Epsilon Honorary Math Society