

**Judith A. Vogel**  
Richard Stockton College  
Division of Natural Sciences and Mathematics

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## **Education**

**Temple University**, Philadelphia, Pennsylvania.

- Ph.D. -Mathematics, August 2000  
Advisor: Daniel B. Szyld  
Title: FQMR: A Flexible QMR Method with Inexact Preconditioning
- M.A. -Mathematics, January 1996

**Richard Stockton College**, Pomona, New Jersey.

- B.A. -Mathematics, May 1993  
Valedictorian

## **Teaching Experience**

**Richard Stockton College**

- Assistant Professor, August 2001 – August 2006.
- Associate Professor, August 2006 – Present.

**Virginia Commonwealth University**

- Assistant Professor, August 2000 – June 2001.

**Temple University**

- Teaching Assistant: Undergraduate Instructor, 1993-2000.
- Instructor in Learning Communities: Teaching Across the Curriculum, 1996.

**Richard Stockton College**

- Recitation Instructor, 1993.
- Skills Center Mathematics Tutor, 1991 -1993.
- EOF Tutor/Counselor, Summer 1991.
- Calculus I, II Grading Assistant, 1990 -1993.

**Teaching Awards**

- Distinguished Teaching Award, Temple University, 1997.
- Distinguished Teaching Award, Temple University, 1998.
- Certificate of Merit in Teaching, Temple University, 1995.
- Governor's Teaching Scholar, State of New Jersey, 1989.

## Service

### College wide Service

- Holocaust and Genocide Studies, Associated Faculty Member – 2006 to present.
- Computational Science, Associated Faculty Member – 2006 to present.
- CSAMS Student Mentoring – 2006 to 2008.
- Newly Tenured Advisory Committee to ISCT – Fall 2006
- CPLS Graduate Program Subcommittee – Spring 2008.
- Tech Academy Information Session, presenter – Fall 2008.
- Selection Committee Director of the Institute of Faculty Development – Spring 2009.
- Faculty Development Institute Advisory Committee – Spring 2009.
- “Course Enhancement with the Use of Technology.” Day of Scholarship Presentation, Richard Stockton College – Spring 2009.
- “Children of the Holocaust.” MAHG Lecture Series Presentation, Richard Stockton College – Fall 2009.
- Faculty Mentor, Dina Yankelewitz – Summer 2010 to present
- Participation in GEN pilot assessment project – Fall 2010.
- Minor in Childhood Studies, Associated Faculty Member – In development Fall 2011 to present.
- College wide Assessment Committee – Fall 11 to present.
- Red Balloon Committee. Founding member. Proposed Summer 2012.
- Academic Affairs’ Academic Plan Initiative: 21<sup>st</sup> century teaching and learning – Fall 2012 to present.

### Computational Science Program

- Planning Committee, 2001-2004
- Math Program Representative, 2004-present

### General Studies

- GNM Convener 2003-2007.
- GIS Convener 2013- 2014.

### Academic Reviewer

- Textbook Review, Spring 01 -Functions of Mathematics in the Liberal Arts, by Craig M. Johnson.
- Textbook Review, Spring 03 -Calculus: One and Several Variables, by Saturnino L. Salas, et al.
- Article Review, Summer 05 -Problem-Based Service Learning in a 200-level Systems Analysis and Design Course.
- Article Review, Summer 05 -UML 2 Teaching at Postgraduate Studies. Prerequisites and Practice
- Article Review, Summer 05 -Declining CS/IS/IT enrollments: Crisis or cycle?
- Article Review, Fall 08 -BiCR variants of the hybrid BiCG methods for solving linear systems with nonsymmetric matrices
- Article Review, Spring 09 -Algebraic Approaches for Name Disambiguation, by Ingyu Lee, Byung-Won On

- Article Review, Spring 09 -Semi-Supervised Document Clustering by Approximate-Structure-Preserving Dimension Reduction, by Su Yan, Hai Wang, Dongwon Lee, and Jesse Barlow
- Article Review, Spring 11-Mining Research Cycles with Adapted Hierarchical Clustering, by Dan He

### **Conference Program Committee Participation**

- Program Committee Member, Fall 08/Spring 09
  - 2009 SIAM International Conference on Data Mining.
- Program Committee Member, Fall 09/Spring 10
  - 2010 SIAM International Conference on Data Mining.
- Program Committee Member, Fall 10/Spring 11
  - 2011 SIAM International Conference on Data Mining.
- Program Committee Member, Fall 11/Spring 12
  - 2012 SIAM International Conference on Data Mining

### **Speaking Engagements**

- “Why Learn about the Holocaust?” Little Egg Harbor Library Teen Program.  
To be scheduled Spring 2013
- “The Children’s Experience.” Yom HaShoah Service  
Temple Sinai Synagogue, Dresher, PA. May 1, 2011
- “Children of the Holocaust.” Keynote Speaker, Yom Kippur Martyrology Service  
Beth El Synagogue, Margate, NJ. September 18, 2010
- “Prejudice and the Holocaust.” Guest Speaker, Accelerated Language Arts Class  
Joyce Kilmer School, Milltown, NJ. May 6, 2010
- “The Children’s Experience.” Keynote Speaker, Yom HaShoah Commemoration  
Temple Beth Am Shalom, Lakewood, NJ. April 18, 2010
- “Children of the Holocaust.” Keynote Speaker, Holocaust Commemoration  
Jewish Federation of Greater Middlesex County. April 12, 2010
- “Understanding Prejudice, Learning about the Holocaust.” Guest Speaker, 7<sup>th</sup>  
Grade Class, Green Bank Elementary School, Green Bank, NJ. Spring 2009

## **Research**

### **Interests**

- Numerical Analysis, Numerical Linear Algebra, Iterative Methods, Krylov Subspace Methods, Flexible Preconditioning, Data Mining.
- Pedagogy, Mathematical Modeling, Middle School Teaching, Interdisciplinary Learning.
- Holocaust and Genocide Studies, Children of the Holocaust, Holocaust Education.

### **Awards**

- Meritorious Writing Award ISECON 2005, “Why Do I Have to Take Calculus?”

Foundation for Information Technology Education and the Association of Information Technology Professionals at the Information Systems Education Conference, October 2005.

- Dissertation Completion Grant, January-August 2000.
- First Place Student Paper Competition, April 2000  
Copper Mountain Conference on Iterative Methods.

## Grants

- Research and Professional Development Mini-Grant, Richard Stockton College. *Children of the Holocaust Textbook Project*. 2012
- Provost Assessment Funding. Richard Stockton College, *Math Program Assessment*, 2012 with Chia-Lin Wu
- Research Experience for Undergraduates. Richard Stockton College, *Computational Number Theory*, 2011/2012
- Research and Professional Development Grant. Richard Stockton College, *Using Numerical Linear Algebra Techniques for Information Retrieval*, 2008
- Distinguished Faculty Fellowship. Richard Stockton College, July 2005. Funds used for textbook project: Sports and Math.
- National Science Foundation -Award # DUE 0323917. September 2003, Computer Science and Mathematics Scholarships.
- Research and Professional Development Grant. Richard Stockton College, July 2002. Funds used for research and conference travel.
- Travel grant, July 2001. Association of Women in Mathematics.
- NSF 1997-1999, Special instructor in the development and teaching of a Multi-cultural and Collaborative Approach to Mathematics.
- Dupont 1993, Special instructor for experimental course; topics included Practical and Applied Mathematics.

## Papers

- Betsy McShea, Judith Vogel, Maureen Yarnevich, "Harry Potter and the Magic of Mathematics." *Exploring Mathematics through Literature*. Invited for re-publication with supplementary teaching aids. March 2013.(See **Awards/Honors**)
- Bradley Forrest, Pamela Kosick, Judith Vogel and Chia-Lin Wu, "Mathematical Achievement of High School Students through Community Partnership: A Red Balloon Initiative." *Teacher-Scholar: The Journal of the State Comprehensive University*, 4, no. 1 (2012) 29-38.
- Bradley Forrest, Pamela Kosick, Judith Vogel and Chia-Lin Wu, "Increasing Math Proficiency in High School Teaching: A Model for a College and Community Partnership." *The Journal of Public Scholarship in Higher Education*, 2 (2012) 50-75.
- Judith A. Vogel, "Children of the Holocaust – An Important focus for the 21<sup>st</sup> century." Proceeding of the Ethel LeFrak Holocaust Education Conference. Seton Hill University.
- Judith A. Vogel, "Flexible BiCG and Flexible BiCG-Stab for Nonsymmetric Linear Systems." *Applied Mathematics and Computation*. Vol. 188 (2007) pp. 226-233.
- Jill Gerhardt, Judith Vogel, and Chia-Lin Wu, "Why Do I Have to Take Calculus." *Information Systems Education Journal*, Vol. 4 (2006).

- Betsy McShea, Judith A. Vogel, and Maureen Yarnevich, "Connecting Linear Modeling to Baseball." *Connecticut Mathematics Journal*. Associated Teachers of Mathematics in Connecticut, (2005).
- Jill Gerhardt, Judith Vogel, and Chia-Lin Wu, "Why Do I Have to Take Calculus." Proceedings of the 22nd Annual Information Systems Education Conference. Vol. 22 (2005).
- Betsy McShea, Judith A. Vogel, Maureen Yarnevich, "Harry Potter and the Magic of Mathematics." *Mathematics Teaching in the Middle School*, The National Council of Teachers in Mathematic. Focus Issue: Mathematics and Literature (2005) pp. 408-414.
- Daniel B. Szyld and Judith A. Vogel, "FQMR: A Flexible Quasi-Minimal Residual Method with Inexact Preconditioning." *SIAM Journal on Scientific Computing*. Vol. 23 (2001) pp. 363-381.
- Judith A. Vogel, "FQMR: A Flexible Quasi-Minimal Residual Method with Inexact Preconditioning." Proceedings of Copper Mountain Conference on Iterative Methods. Vol. 2 (2000).

### **Textbook Projects**

- Sports and Math, Betsy McShea and Judith Vogel.  
Signed contracts with Raymond-Reese Publishing. Philadelphia, Pennsylvania.
- Children of the Holocaust, Maryann McLoughlin and Judith Vogel.  
Currently working on a draft of the manuscript.

### **Professional Activities**

#### **Presentations**

- From Patterns to Proofs: Understanding the Building Blocks of Mathematics. (scheduled). National Council of Mathematics Teachers Regional Conference, October 16-19, 2013.
- A Math Partnership Program: Redefining the Role of Higher Education. (scheduled, co-presenting with Bradley Forrest). American Association of University Professors, Annual Conference on the State of Higher Education, Washington D.C., June 2013.
- Redefining the Role of Faculty in Teacher Preparation and Student College Readiness. (scheduled, co-presenting with Chia-Lin Wu.) New Jersey Association of Mathematics Teacher Educators Seventh Annual Conference, May 23, 2013.
- An Institutional Partnership: Insuring Consistency in Course Content. (co-presented with Chia-Lin Wu). Bergen County Best Practices Conference, March 2013.
- Mathematics Partnership Program - A Red Balloon Initiative. (co-presented with Dennis Weiss and Bradley Forrest) American Association of State Colleges and Universities, Winter Academic Affairs Meeting, Point Clear, AL, February 2013
- Children of the Holocaust. MAHG Lecture Series  
Richard Stockton College. November 12, 2009.

- Children of the Holocaust: An Important Focus for the 21st Century. Ethel LeFrak Holocaust Education Conference, Seton Hill University. October 25-27, 2009.
- Course Enhancement with the Use of Technology. Day of Scholarship Presentation, Richard Stockton College. March 4, 2009.
- Data Mining and Latent Semantic Indexing. Temple University Scientific Computing Seminar. Philadelphia, Pennsylvania. October 19, 2005.
- Examining the Influence of Culture on Teaching and Learning. AAC&U Conference on Pedagogies of Engagement. Chicago, Illinois. April 15-17, 2004.
- Bi-CG and Bi-CGStab Implemented with Flexible Preconditioning. Householder Symposium IV. Peebles, Scotland. June, 2002.
- Bi-CG and Bi-CGStab Implemented with Flexible Preconditioning. Society of Industrial and Applied Mathematics 50th Anniversary and Annual Meeting. Philadelphia, Pennsylvania. July, 2002.
- Flexible Quasi-Minimal Residual and other Variably Preconditioned Krylov Subspace Methods. Society of Industrial and Applied Mathematics Annual Meeting. San Diego, California. July, 2001.
- FQMR: A Flexible Quasi Minimal Residual Method. Seventh SIAM Conference on Applied Linear Algebra. Raleigh, North Carolina. October 22-25, 2000.
- FQMR: A Flexible Quasi Minimal Residual Method with Inexact Preconditioning. Copper Mountain Conference on Iterative Methods. Copper Mountain, Colorado. April 2-7, 2000.
- Flexible Quasi Minimal Residual Method for Solving Large Systems of Linear Equations. Temple University Candidates Seminar. Philadelphia, Pennsylvania. October 20, 1999.
- Comparison of Variable Preconditioned Krylov Subspace Methods. 8th ILAS Conference. Barcelona, Spain. July 19-22, 1999.
- Numerical Methods for solving Large Systems of Linear Equations. Mathematics Seminar. Richard Stockton College. Pomona, New Jersey. November 15, 1999.

### **Attended**

- KPAL conference. Shaping General Education Programs Focused on Scientific and Quantitative Literacy. November 7-9, 2003. NYU and New School University. New York, NY.
- Linear Algebra Conference in Honor of Bob Plemmons, Wake Forest University, NC, January 8-9, 1999.
- Conference on Numerical Analysis and Domain Decomposition in Honor of Olof B. Widlund, Courant Institute of Mathematical Sciences, January 23-24, 1998.

### **Computer Skills**

- Fortran, Matlab, Maple, C++, and UNIX.