

Sarah Gelsinger Brewer

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Education

M.S., Mathematics, University of South Alabama, 2008, Thesis: "On the topology of the singularities of a sphere eversion" (under the name Sarah Gelsinger) Advisor J. Scott Carter.

B.S., Mathematics, University of South Alabama, 2006, summa cum laude.

B.F.A., Art History and Ceramics, University of South Alabama, 2006, summa cum laude.

Honors Diploma, Alabama School of Math and Science, 2000.

Employment

2008-Present: Math instructor, Alabama School of Math and Science.

Department representative, 2010-2013;

Courses taught: Intermediate Algebra, Accelerated Algebra, Trigonometry, Precalculus, Differential Calculus, Integral Calculus, Visual Mathematics; Directed Study for individuals and small groups in Topology, Knot Theory, Advanced Calculus, Group Theory, Mathematical Origami, Math History, Dynamical Systems.

1998-Present: Private mathematics tutor, all levels.

2010: Adjunct instructor, Department of Mathematics and Statistics, University of South Alabama.

Taught Precalculus Algebra.

2010: Knitting instructor, Morphosis Studios @ The Demented Needle, Mobile AL.

2006-2008: Graduate Assistant, Department of Mathematics and Statistics, University of South Alabama.

Taught 2-4 lab sections of Precalculus each semester, administered and graded quizzes, reviewed homework exercises, and held office hours outside of class to help students.

2007-2008: Tutor, Department of Mathematics and Statistics, University of South Alabama.

Tutored students in all levels of undergraduate mathematics.

2006-2007: Student Assistant/Slide Librarian, Department of Visual Arts, University of South Alabama.

Maintained the art history slide collection, including filing used slides and mounting new ones, assisted professors in the creation of PowerPoint presentations, performed general clerical work in the department office

2002-2005: Student Assistant, Web Services, University of South Alabama.

Created and maintained University-affiliated web pages using Photoshop and Dreamweaver.

2001: Customer Service Representative, Domino's Pizza, Mobile, AL.

Recent Workshops

2013: Khan Academy Teacher Workshop, New Orleans, LA.

2012: Math + Art SARIC Workshop, Mobile Museum of Art, Mobile, AL.

Talks

"Outside In and Other Eversions: Turning a Sphere from Red to Blue" October 8, 2008, Mobile Math Society.

"On the Topology of the Singularities of a Sphere Eversion" March 21, 2008, USA Graduate Student Seminar.

"Conway's ZIP Proof" February 15, 2008, USA Graduate Student Seminar.

"DNA Topology, part 2" November 16, 2007, USA Math Biology Seminar.

"DNA Topology, part 1" October 12, 2007, USA Graduate Student Seminar.

"An Introduction to Sphere Eversions" August 31, 2007, USA Graduate Student Seminar.

"Rational Tangles and 2-Bridge Knots" March 23, 2007, USA Graduate Student Seminar.

"Continued Fractions" January 19, 2007 USA Graduate Student Seminar.

"Trinity Episcopal Church and the Gothic Revival" October 23, 2002, Southeast College Art Conference
(abstract published in *SECAC Review* 2002).

Film

- "The Fox Spirit" - adapted and directed with Renae Brewer; puppeteer, set design, camera, editing. June 2012.
Mobile Bay "Summer Silents" Film Scramble 5.
- "The Shoebox Bear Hauntings" - written and directed with Renae Brewer; actor, camera, editing. September 2011.
Mobile Bay "Haunted" Film Scramble 3.
- "Never Odd or Even" - adapted and directed with Renae Brewer; casting, props, camera, editing. March 2011.
Mobile Bay "Yellow Flowers" Film Scramble.
- "The Walmart Ninja Incident" - actor. Directed by Logan Bowes, April 2011. 2nd Annual SAFA Film Festival.
- "An Echo in the Tunnel of Illusions" - written and directed with Renae Brewer; casting, camera, editing. October 2010.
Mod Mobilian "Giallo" Film Scramble.
- "Googly Island" - with Ryan Jetten, Renae Brewer, and Will Fawcett, February 2010.
- "Could an Idea be Inherently Bad?" - writing, direction, editing. January 2010. DCWF "Johnny Jenkins" Film Scramble.
- "Nuclear Winter" written and directed with Zack Brewer, September 2009. PhonoSutra "End of the World" Scramble.
- "Killer Robot" with Zack Brewer, 2007.

Art

- "Visual Mathematics" Solo Exhibit, April 23-August 23 2010, ASMS Gallery, Mobile, AL.
- "Artstrology" Group Exhibit, 23 January 2010, Morphosis Studios, Mobile, AL, curated by Ashelea Penquite.
- "Toys, Games, and Puzzles" Group Exhibit, August 13, 2009, The Blind Mule, Mobile, AL, curated by Zach DePolo.
- "Vessel" Group Exhibit, August 7, 2009, Satori Coffee House, Mobile, AL, curated by Sarah Parvardeh.
- "Construction of Humanity" Group Exhibit, June 15, 2007, Satori Coffee House, Mobile, AL, curated by Sarah Parvardeh.
- "Arts and Raps" Group Exhibit, 21 July 2006, Satori Coffee House, Mobile, AL, curated by Sarah Parvardeh.
- Alabama Clay Conference Show, 2004, Eastern Shore Art Center, Fairhope, AL.

Music

- Tatsuya Nakatani's Gong Orchestra, May 11 2011.
- Blind Mule Improv Group, 2009-2010.
- Moon Colony, experimental electronica duo with Johnny Jitters, 2006-2007.
- Clarinet, 1993-present.

Awards

- 40 Most Influential Teachers Under 40 in the United States, Veritas Prep, 2013.
- Outstanding Master's Thesis Award for the Math, Sciences, and Engineering, USA Graduate School, 2009.
- Graduate Teaching Assistantship, USA Department of Mathematics and Statistics, 2006-2008.
- University of South Alabama Honors Scholarship, 2001-2006.
- 3rd Place Annual Mathematics and Statistics Contest, 2006.
- Robert Snell Art Scholarship, 2004.
- Hall of Fame Award, Alabama School of Math and Science, 2000.

Community Involvement

- Faculty sponsor for ASMS clubs: Bike to an Indie Film Club, Directors' Guild, Origami Club, 2009-present.
- Writer of Gifted Algebra II curriculum for the State of Alabama, 2011.
- South Lafayette Street Association, 2011-present.
- Rumor Union Arts Collective, 2011.
- Downtown Creative and Wellness Foundation, 2009-2010.

Co-founder of Crescent Shorts Film Festival Series, 2010.

Co-organizer of "The Happenin' Art and Music Festival for Clean Energy" with MoveOn Mobile, 31 May 2009.

Co-founder and webmaster of the Mobile Math Society, 2007-present.

Miscellaneous Skills

Adobe Creative Suite (esp. Photoshop, Dreamweaver, Premiere)

Web design and coding (HTML, CSS, Wordpress, FTP)

Translational fluency in French

Knitting, crochet, bookbinding

Mediocre clarinetist

Hum & Whistle at the same time

Personal

Husband (Zack, science/engineering teacher & robotics coach)

Son (James, 2012)

2 Himalayan cats (Frodo & Gandalf, 2001)