



Kathleen Ambruso Acker, Ph.D.



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## Education

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- 2019,2015,  
2010,2009      **Chester County Intermediate Unit**, Downingtown PA. Act 48 Credits  
Continuing Education Information for Professional Personnel ID: 4942826
- 2003            **Cabrini College**, Radnor, PA  
Education Class for Student Teaching for Secondary Education Certificate
- 2000            Ph.D. Mathematics Education  
**American University**, Washington, DC  
Dissertation: Mathematics and Athletics, A Winning Combination?
- 1993            M.A. Mathematics Education  
**Virginia Commonwealth University**, Richmond, Virginia
- 1991            B.S. Mathematics and Philosophy  
**University of Scranton**, Scranton, Pennsylvania

## Professional Positions

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- 2017 - Present    **Continuing Assistant Professor**  
2013 - 2017      **Visiting Assistant Professor**  
**Villanova University**, Villanova, Pennsylvania
- 2012 - 2013      **Adjunct Professor**  
**Villanova University**, Villanova, Pennsylvania
- 2010, 2011       **Adjunct Professor**  
**Teach for America Program**  
**American University**, Washington, DC



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## Professional Positions - Continued

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2008	<b>Adjunct Professor</b> <b>Cabrini College</b> , Radnor, Pennsylvania
2003 - 2007	<b>Assistant Professor</b> <b>Cabrini College</b> , Radnor, Pennsylvania
2003	<b>Adjunct Professor</b> <b>Mercer County Community College</b> , West Windsor, New Jersey
2002 - 2005	<b>Adjunct Professor</b> <b>Villanova University</b> , Villanova, Pennsylvania
2002 - 2003	<b>Instructor</b> <b>Cabrini College</b> , Radnor, Pennsylvania
2001 - 2002	<b>Senior Product Development Engineer</b> <b>Intellifit</b> , King of Prussia, Pennsylvania
2000 - 2001	<b>Assistant Professor</b> <b>St. Joseph's University</b> , Philadelphia, Pennsylvania
2000	<b>Adjunct Professor</b> <b>College Misericordia</b> , Dallas, Pennsylvania
1997 - 2000	<b>Instructor</b> <b>American University</b> , Washington, DC
1998, 1999	<b>Graduate Assistant</b> <b>Fellow for the Institute in the History of Mathematics</b> <b>and Its Use in Teaching</b> <b>Catholic University</b> , Washington, DC
1996, 1997	<b>Graduate Assistant</b> <b>Fellow for the Institute in the History of Mathematics</b> <b>and Its Use in Teaching</b> <b>American University</b> , Washington, DC
1995 - 1997	<b>Graduate Teaching Assistant</b> <b>American University</b> , Washington, DC
1995 - 1999	<b>Adjunct Professor</b> <b>Prince George's Community College</b> , Largo, Maryland



## Professional Positions - Continued

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1993 - 1995	<b>Adjunct Professor</b> <b>College Misericordia</b> , Dallas, Pennsylvania
1994 - 1995	<b>Adjunct Professor</b> <b>Pennsylvania State University</b> , Wilkes-Barre Campus, Dallas, Pennsylvania
1994 - 1995	<b>Tutoring Coordinator for Learning Support Center</b> <b>Pennsylvania State University</b> , Wilkes-Barre Campus, Dallas, Pennsylvania
1993 - 1995	<b>Office Manager</b> <b>Victor T. Ambruso, MD, PC</b> , Forty Fort, Pennsylvania
1991 - 1993	<b>Graduate Teaching Assistant</b> <b>Virginia Commonwealth University</b> , Richmond, Virginia
1991	<b>Summer Education Enhancement Program (SEEP)</b> <b>Luzerne County Intermediate Unit</b> , Wilkes-Barre, Pennsylvania



## Certifications

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2017	<b>Administrative Official, Meet Manager, Penn-Del YMCA Swim</b>		
2011	<b>Pennsylvania Certificate Mid-Level Mathematics 7-9</b>		
2006	<b>Pennsylvania Certificate Instructional Level I, Mathematics 7-12</b>		
	<b>Praxis Information:</b>		
	PPST Mathematics (5730) 12/2004	Score: 185	Passing: 173
	PPST Reading (5710) 12/2004	Score: 183	Passing: 172
	PPST Writing (5720) 12/2004	Score: 177	Passing: 173
	Mathematics Content Knowledge (0061) 3/2005		
	(Top 5%)	Score: 183	Passing: 136
	Principles of Learning and Teaching Grades 7-12 (0524) 6/2005		
		Score: 181	Passing: 167
	Middle School Mathematics (0069) 1/2011		

 Publications

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- 2012 \*      “Mathematics and Homeschooling.” *Notices of the AMS*, Volume 59, Number 4, pp. 513-521, April 2012. Co-authors Mary W. Gray, Behzad Jalali, and Matthew Pascal.
- 2012        “Discovering Mathematicians in Unusual Places.” *PCTM Magazine*, Volume L, Number 2, Winter 2012, pp. 12-13. Co-Author Robert McGee.
- 2010        “An Impromptu Experiment in Distance Learning.” *PCTM Magazine*, Volume XLIX, Number 1, Fall 2010 pp. 6-7. Co-authors Robin Guerrero and Robert McGee.
- 2009 \*      "Accommodations of Learning Disabilities in Mathematics Courses." *Notices of the AMS*, Volume 56, Number 9, pp. 1072-1080, October 2009. Co-authors Mary W. Gray, and Behzad Jalali"
- 2004 \*      “Drug Levels and Difference Equations.” *Mathematics Teacher: Focus Issue on Patterns.*, November 2004, Vol. 98, Issue 4, p. 266. National Council of Teachers of Mathematics, Reston, VA.
- 2004 \*      “Agonist-dependent internalization of the angiotensin II type one receptor (AT<sub>1</sub>):role of C-terminus phosphorylation in recruitment of  $\beta$ -arrestins.” March 2004. *Regulatory Peptides* 120 (2004) 141-148. Co- authors: Chris E. Kule, Vijaya Karoor, Jonathan N.E. Day, Walter G. Thomas, Kenneth M. Baker, Diem Dinh, and George W. Booz.

\*Peer Reviewed



## Presentations

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- 2014 “Fibonnacci”  
Malvern Public Library  
Part of the Fizz, Boom Read Lecture Series aimed at ages 6-12.
- 2012 “Connecting Algebra, Geometry, Number Theory and the History of Mathematics” Presented with Robert McGee and Carol Serotta.  
Pennsylvania Council of Teachers of Mathematics 61th Annual Conference, October 2012 Harrisburg, PA.
- 2011 “The Genius of Archimedes” Presented with Robert McGee and Carol Serotta. Pennsylvania Council of Teachers of Mathematics, 60th Annual Conference, November 2011 State College, PA.
- 2010 “Crockett Johnson, Painter of Theorems” Presented with Robert McGee. American Mathematical Association of Two-Year Colleges 36th Annual Conference, Poster Session, November 2010, Boston MA.
- 2010 “Classical Greek Mathematics in Today's Classroom” Presented with Robert McGee and Carol Serotta. Pennsylvania Council of Teachers of Mathematics, 59th Annual Conference, November 2010, Harrisburg, PA.
- 2010 “What If Euclid Owned an iPad?” Presented with Robert McGee and Carol Serotta, Cabrini College Mathematics and Science Colloquium. October 2010, Radnor, PA.
- 2010 “Mathematics and The Bible” and “Mathematics and The Movies” Two internet classes were held from Pennsylvania via Skype for Valley Christian High School, located in Brownsville, TX. May 6 and May 7, 2010.
- 2008 “In the Footsteps of Matteo Ricci” with Robert McGee and Carol Serotta, Pennsylvania Teachers of Mathematics Association Conference, Fall 2008, Poconos, PA.
- 2008 “In the Footsteps of Matteo Ricci” with Robert McGee and Trevina Nesbitt, Sigma Zeta Induction Dinner, April 11, 2008, Cabrini College, Radnor, PA.,.
- 2005 “Religion and Mathematics: The Intersection is Not Empty” with Robert McGee and Carol Serotta, Cabrini College Mathematics and Science Colloquium. Fall 2005, Radnor, PA.

- 2005 “Religion and Mathematics: The Intersection is Not Empty” with Robert McGee and Carol Serotta, Pennsylvania Teachers of Mathematics Association Conference, Fall 2005, Harrisburg, PA.
- 2004 “Teaching with Technology.” Presented at MathFest, the national summer meeting of the Mathematical Association of America, August 12, 2004, Providence, RI.
- 2003 “Theorems in Color.” Presented with Robert McGee at MathFest the national summer meeting of the Mathematical Association of America, August 2, 2003, Boulder, CO.
- 2003 “Crockett Johnson: Painter of Theorems.” Presented with Robert McGee at the 52<sup>nd</sup> Annual Meeting of the Pennsylvania Council of Teachers of Mathematics, March 13, 2003, Poconos, PA.
- 1998 "Difference Equations and the TI-83." Presented at the PathFinder Minigrant Workshop, April 28, 1998, Prince George's Community College, Largo, MD."
- 1996 “Prerequisites to Reform.” Presented to the Mathematical Association of America, Maryland/DC/Virginia Section Spring Meeting, April 12 & 13, 1996, Randolph Macon University, Ashland, VA.



## Presented Student Research Projects

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- 2006 **Richard DiDonato II:** Pizza, What is in a Slice? Presented at Southeastern Pennsylvania Consortium for Higher Education, Spring 2006
- 2006 **Christina Gentile:** Women in Mathematics. Presented at Southeastern Pennsylvania Consortium for Higher Education, Spring 2006
- 2003 **Amanda Brown:** Following Hypatia: Sofia Kovalevskaya's Mathematical Discoveries, presented at Southeastern Pennsylvania Consortium for Higher Education, Spring 2003.

Ongoing	Service to Mathematics and Statistics at Villanova University 2018 – Present Course Coordinator for MAT 1500-1505-2500 2019 – MLRC Committee 2018 – Faculty Mentor 2018 – Committee on Mathematics Education 2018 – External Review Participant 2017 – Present. Advising of Math Majors. Current total is 4. 2017 – Pre-Calculus Refresher Program
2016	Referee <i>Teaching Children Mathematics</i>
2015-Present	Referee <i>Current Issues in Education</i>
2010	Reviewed for <b>College of New Rochelle</b> the state application for approval for their development of an Advanced Certificate in Elementary School Mathematics, for current in-service elementary teachers.
2008	Invited book review Spring 2008 on <i>The World of Maria Gaetana Agnesi, Mathematician of God</i> by Massimo Mazzotti for <i>Convergence: Where Mathematics, History, and Teaching Interact</i> , the online magazine for the Mathematics Association of America.
2007	Invited book review Fall 2007 on <i>The Mathematician's Brain</i> , David Ruelle, for <i>Convergence: Where Mathematics, History, and Teaching Interact</i> , the online magazine for the Mathematics Association of America.
2007	Invited book review Spring 2007 <i>A History of Mathematics, Second Edition</i> , Carl B. Boyer, Revised by Uta C. Merzbach for <i>Convergence: Where Mathematics, History, and Teaching Interact</i> , the online magazine for the Mathematics Association of America.
2005	Invited book review Spring 2005 on <i>A Discourse Concerning Algebra: English Algebra to 1685</i> by Jacqueline A. Stedall, for <i>Convergence: Where Mathematics, History, and Teaching Interact</i> , the online magazine for the Mathematics Association of America.
2002 - 2007	Service while at Cabrini College <ul style="list-style-type: none"><li>• Elected Representative for Mathematics and Science to the Curriculum Committee</li><li>• Served, Then Chair of Technology Committee</li><li>• Member of the Faculty Handbook Committee</li></ul>

- Faculty Liaison to the Board of Trustees, Student Development Committee
- Math Department Liaison to the Secondary Education Council.
- Conducted Academic Search for Mathematics Department
- Academic Advisor – Both Majors and Freshmen
- Coordinator for Sigma Zeta, the Mathematics and Science Honor Society

- 1999      Designed artwork for inaugural History and Pedagogy of Mathematics website. Published under Maiden name of Ambruso. This website design has been retired, but it is still accessible at <http://www.hpm-americas.org/old/main/genindex.html>
- 1999      "Set Theory, Probability, and Basic Data Analysis." In-service for elementary school teachers, August 25, 1999, Janey Elementary School, Washington DC.
- 1998      Strengthening of Underrepresented Minority Mathematics Achievement (SUMMA) Web Site. Biography Writer.  
[http://www.maa.org/summa/archive/ar\\_index.htm](http://www.maa.org/summa/archive/ar_index.htm)  
 Martha A. Brown  
 James Ashley Donaldson  
 Fern Y. Hunt  
 William Anthony Hawkins, Jr.  
 Raymond Lewis Johnson  
 Tepper L. Gill  
 Gladys Lee Gaskin Whitehead

## Clearances

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- 2015      The Pennsylvania Child Abuse History Clearance;  
 The Pennsylvania State Police Criminal Record Check  
 Pennsylvania State Resident Affidavit in place of FBI Check
- 2011      The FBI Criminal Record Check: No Prior Arrest





## Awards

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- 2018                      YMCA Volunteer of the Year
- 2010                      *Princeton Anthology of Best Writing on Mathematics*, (Fall 2010).  
Included article “Accommodations of Learning Disabilities in  
Mathematics Courses.” previously published in *Notices of the AMS*,  
Volume 56, Number 9, pp. 1072-1080, October 2009. Co-authors:  
Mary W. Gray, and Behzad Jalali.
- 2005                      Award of Excellence from the Educational Testing Service (ETS). Scored  
in Top 15% of all test takers nationwide on Mathematics Content  
Knowledge Praxis Exam.



## College Courses Taught

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Developmental Mathematics	Finite Mathematics	Pre-Calculus
Basic Algebra	Statistics	Business Calculus
College Algebra	Business Statistics	Applied Calculus
Problem Solving	Probability	Calculus I
Financial Mathematics	Linear Algebra	Calculus II
Technical Mathematics	Discrete Mathematics	Calculus III
	History of Mathematics	

History of Mathematics Online Course  
 Elementary Mathematical Models  
 Teach for America: Advanced Exploration of Secondary Mathematics  
 Praxis Prep: PPST Mathematics (5730)  
 Praxis Prep: Mathematics Content (0061)



## Computer Skills

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Maple	HTML, CSS	Visual Basic
SPSS	Excel, Word	SQL
TI Graphing Calculators	Adobe Photoshop, Illustrator	Dreamweaver
Mathematica	Front Page, Paint	CorelDraw
Geometer’s Sketchpad	Zoom	



## Volunteer Experience

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- 2018 - Present      **Board Member, West Chester Area YMCA**  
**Volunteer of the Year**
- 2013 - Present      **Volunteer for West Chester YMCA Swim Team, The Marlins**  
Deck Parent  
Console Operator  
Meet Manager Certified  
Administrative Official (Until 2020)  
Liaison between the swim team and the YMCA Management.
- 2012- Present      **Elementary School**
- Worked with elementary teachers to develop curriculum materials to celebrate Mathematics Awareness Month
  - Organized a clothing swap-open to all members of the KDM community. This was done to ensure all students had coats, hats and mittens for winter.
  - Organized Children Helping Children- A Sock Drive to help homeless children.
  - Organized Candy Collection for Active Military Personnel
  - Organized Collection of Art Supplies and Toys for children at CHOP.
  - Contributed to gift bag creation for the homeless
- 2010                      **Story Time Volunteer**  
**Malvern Public Library**, Malvern, Pennsylvania
- 2007-2009              **Chester County Mom of Multiples:** Worked with low income parents to help with literacy and job training.
- 2002-2007              **Cabrini College**  
**Day of Service:** Philabundance; St. Joseph's Home for Children  
**Sigma Zeta Community Service:** Walk for MS 2005