

# Michael Kurt Buescher

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## Teaching Experience

### **Hathaway Brown School, Cleveland, Ohio**

- Mathematics Teacher, 1999-present. Department Chair, 2009-present.
- Courses Taught: Algebra; Algebra II; Geometry; Statistics and Precalculus; Honors Precalculus
- Other Duties: student mentor; Diversity Liaison; new faculty mentor; advisor to the Math Club; A.P. Coordinator; World Affairs Club and Model U.N. advisor; Service Learning Committee; Senior Project Committee

### **The University of Chicago School Mathematics Project**

- Contributor, 2007-2008
- Field Tester, 2006-2007
- Writing ancillary materials, including worksheets, tests, and quizzes for the 3<sup>rd</sup> edition of UCSMP Geometry and UCSMP Advanced Algebra.
- Testing pre-publication versions of the 3<sup>rd</sup> edition texts in the classroom.
- Providing feedback on both the field test and final versions of the 3<sup>rd</sup> edition texts.

### **The Kent School, Kent, Connecticut**

- Mathematics Teacher, 1990-1996
- Courses Taught: Geometry; Algebra II; Accelerated Algebra II with Trigonometry; Functions, Statistics, and Trigonometry; Precalculus; Accelerated Precalculus; Computer Programming; AP Computer Science.
- Other Duties: student advisor; Disciplinary Committee (chair); Academic Committee; new faculty mentor; faculty advisor to WKNT, 87.9 FM; faculty advisor to the math team; baseball and soccer coach; dormitory resident

### **Other Teaching Experience**

- Instructor, *SAT Preparation*. Distance learning class coordinated through WVIZ (PBS). 2007-2008.
- Instructor, CIS 240: *Introduction to Programming in C/C++*, for the department of Computer and Information Systems at Champlain College. Developing online content for a web-based course. 1997-1999.
- Instructor, CDAE 169: *Small Business Computer Applications* in the department of Community Development and Applied Economics at the University of Vermont, 1997-1998.
- Teaching Assistant, Oberlin College, *Precalculus*. 1984-1988.

### **Credentials**

- Licensed through the Ohio Department of Education to teach Mathematics in grades 7-12.

### **Professional Associations**

- National Council of Teachers of Mathematics, 1991-present
- Ohio Council of Teachers of Mathematics, 1999-present
- Greater Cleveland Council of Teachers of Mathematics, 1999-present

## Educational Technology

- SMART Notebook and Recorder software; Texas Instruments calculators and software, including the Nspire CX CAS, TI-89, and earlier models; GeoGebra; Geometer's Sketchpad; Mathematica; assorted other technologies
- Programming languages: C++, Visual Basic, HTML, Pascal

## Education

### **The University of Vermont, Burlington, Vermont**

- M.S. in Community Development and Applied Economics, 1998.
- Thesis: *Effective Rural Development Strategies: Optimizing Community-Business Matches*
- Research focused on rural economic development and regional economics.
- Course work included economics, statistics, mathematics, and education.
- Employed 1998-1999 as software developer for the Community-Business Matching Project

### **Oberlin College, Oberlin, Ohio**

- B.A. in Mathematics, 1988.
- Course work included mathematics, computer science, Spanish, and the liberal arts.
- Other work included teaching assistant for precalculus, consultant in the computing center, and board member of the Oberlin Student Cooperative Association.

### **Additional Studies**

- **John Carroll University, University Heights, Ohio:** Course work leading to Ohio State Teaching Certification, including educational psychology, literacy across the curriculum, history of mathematics, and other topics. Program also included student teaching. 2000-02.
- **Den Internationale Højskole, Helsingør, Denmark:** Semester-long program including courses on sustainable development, Denmark's education system, and other topics. Student body from 40 countries. Fall 1998.
- **Ohio State University, Columbus, Ohio:** Summer courses in mathematics and architecture, 1994.
- **Teachers College, Columbia University, New York, New York:** Klingenstein Summer Fellowship for teachers in independent secondary schools, 1993.

## Workshops Presented - Mathematics Education

- “Second-Year Algebra with Computer Algebra Systems: Teaching, Learning, and Assessment.” Presented at the *Teachers Teaching with Technology* ( $T^3$ ) International Conference, Chicago, Illinois, March 2012.
- “Social Awareness through Data” and “Reaching Weaker Algebra Students with CAS.” Presented at the *Ohio Council of Teachers of Mathematics* annual conference, Akron, Ohio, October 2010.
- “Second-Year Algebra with CAS: Pedagogy, Content, and Evaluation.” Presented at the *USACAS* conference, June 2010.
- “Social Awareness through Data.” Presented at the *National Council of Teachers of Mathematics* annual conference, Washington DC, April 2010.
- “Advanced Algebra – 3<sup>rd</sup> Edition.” Presented at the *University of Chicago School Mathematics Project* user conference, Chicago, Illinois, November 2008.
- “The 21<sup>st</sup> Century CAS Classroom.” Presented at the *Ohio Council of Teachers of Mathematics* annual conference, Columbus, Ohio, October 2007.
- “CAS for the ‘Average’ Student.” Presented at the 5<sup>th</sup> *Computer Algebra in Mathematics Education* (CAME) conference, the University of Pécs, Hungary, June 2007.
- “Assessment with CAS: Writing Tests for CAS-Capable Students.” Presented at the *USACAS* conference, Chicago, Illinois, June 2007.
- “Extending the Algebra Curriculum with CAS.” Presented at the *National Council of Teachers of Mathematics* regional conference, Chicago, Illinois, September 2006.
- “CAS in the Classroom: Test Questions that Challenge and Stimulate.” Presented at the *National Council of Teachers of Mathematics* annual conference, St. Louis, Missouri, April 2006.
- “Dynamic Spreadsheets.” Presented to Youngstown area mathematics educators, November 2005.
- “Dynamic Spreadsheets: Manipulatives for Older Students”, “Computer Algebra Systems Make High School Math Teachers Obsolete – Or Do They?”, and “Exponential Growth and Your Great Aunt Hildegard’s Will.” Presented at the *Ohio Council of Teachers of Mathematics* annual conference, Dayton, Ohio, October 2005.
- “‘But the Calculator Does All of This for Me’ – Assessment with the TI-89.” Presented at  $T^3$  – *Teachers Teaching With Technology* Regional Conference, Cleveland, Ohio, November 2004.
- “Election Year Mathematics”, “Computer Algebra Systems in Algebra and Precalculus Courses”, and “Dynamic Spreadsheets Bring Mathematics To Life.” Presented at the *Ohio Council of Teachers of Mathematics* annual conference, Akron, Ohio, October 2004.

- “Computer Algebra Systems in Algebra and Precalculus Courses”. Week-long course presented at the *Anja S. Greer Mathematics and Technology Conference*, Exeter, New Hampshire, June-July 2004.
- “CAS in Algebra II and Precalculus Courses”. Presented at the 2<sup>nd</sup> annual *USACAS* conference, Chicago, Illinois, June 2004.
- “Computer Algebra in Algebra and Precalculus Courses”. Presented at the *National Council of Teachers of Mathematics* annual conference, Philadelphia, Pennsylvania, April 2004.
- “Exponential Growth and Your Great Aunt Hildegard’s Will”, “Linear Regression Comes to Life”, and “Dynamic Spreadsheets Bring Mathematics To Life.” Presented at the *Ohio Council of Teachers of Mathematics* annual conference, Cleveland, Ohio, October 2003. The first two presentations were given in collaboration with my students.
- “Dynamic Spreadsheets Bring Mathematics To Life.” Presented at the *Ohio Council of Teachers of Mathematics* annual conference, Cincinnati, Ohio, October 2002.
- “The Mathematician’s Sketchpad: Geometry and Beyond.” Week-long course presented at the *Technology, Teaching, and Learning Institute*, Sydney, Australia, July 2002.
- “Test Questions When Students Have Computer Algebra Systems” and “Using a Digital Whiteboard in the Classroom.” 45-minute sessions presented at the *Technology, Teaching, and Learning Institute*, Sydney, Australia, July 2002.
- “Test Questions When Students Have Computer Algebra Systems.” CWIC session presented at the *Anja S. Greer Mathematics and Technology Conference*, Exeter, New Hampshire, June 2002.

### **Conferences Attended (in addition to those listed under Presentations)**

- *Ohio Educational Technology Conference*. Columbus, Ohio, February, 2012.
- *National Association of Independent Schools (NAIS) People of Color Conference*. San Diego, California, December 2010.
- *USACAS* 3<sup>rd</sup> annual conference, Atlanta, Georgia, June 2005.
- *National Association of Independent Schools (NAIS) People of Color Conference*. Miami, Florida, December 2004.
- *National Council of Teachers of Mathematics Annual Conference*, Philadelphia, Pennsylvania, April 2004 [presenter and participant].
- *Island School Conference*, The Island School, Eleuthra, Bahamas, August 2002.
- *Anja S. Greer Mathematics and Technology Conference*, Exeter, New Hampshire, June 2002.
- *Strengthening Your Math Students’ Achievement: Strategies that Increase Motivation and Involvement*, Cleveland, OH, January 2002.
- *National Council of Teachers of Mathematics Regional Conference*, Columbus, Ohio, September 2001.
- *Anja S. Greer Mathematics and Technology Conference*, Exeter, New Hampshire, June 2001.
- *Anja S. Greer Mathematics and Technology Conference*, Exeter, New Hampshire, June 2000.
- *Independent Schools Coalition of the Central States Annual Conference*, Cleveland, Ohio, November 1999.
- *Learning About Learning*, Burlington, Vermont, January 1998.
- *Techniques for Student Motivation: Working Effectively with Students of Differing Abilities*, Burlington, Vermont, August, 1997.
- *Advanced Placement Computer Science: C++*, Taft Educational Center, Watertown, Connecticut: Summer 1995.
- *National Council of Teachers of Mathematics (NCTM) Annual Meeting*, Boston, April 1995.
- *NCTM Regional Meeting*, New Jersey, November 1994.
- *College Board conference: AP Computer Science*, New York, New York, Spring 1994.
- *Association of Teachers of Mathematics In Connecticut (ATOMIC) Conference*, "Technology in Math Education", Suffield, Connecticut, Spring 1994.
- *New England Teachers Conference*, Springfield, Massachusetts, Fall 1993.
- *ATOMIC Conference*, "Ethnomathematics", Farmington, Connecticut, Fall 1993.
- *ATOMIC Conference*, "The University of Chicago School Mathematics Project and the NCTM Standards", Kent, Connecticut, Spring 1992.
- *Beginning Teachers Institute*, Farmington, Connecticut, Fall 1991.

### **Other Interests**

- Parenting, cooking, gardening, guitar and vocal music, recreational sports.