Curriculum Vitae

Peter Andrews

Work Address:
Mathematics & Computer Science Department
Eastern Illinois University
Charleston, IL 61920

Home Address:
513 Ashby Drive
Charleston, IL 61920

Degrees

B.Sc., University of Toronto	1971
M.A., University of Maryland	1974
Ph.D., University of Maryland	1975

Positions Held

Chairman — 2003–2015
Mathematics & Computer Science
Eastern Illinois University
Charleston, Illinois

Professor — 1996–present
Mathematics & Computer Science
Eastern Illinois University
Charleston, Illinois

Visiting Research Scientist — 2001–2002
National Center for Supercomputing Applications
University of Illinois
Champaign–Urbana, Illinois

Associate Professor — 1992–1996
Mathematics & Computer Science
Eastern Illinois University
Charleston, Illinois

Associate Professor — 1987–1992
Computer Science
Middlebury College
Middlebury, Vermont

Acting Director — 1988–1989
Academic Computing
Middlebury College
Middlebury, Vermont

Assistant Director — 1987–1988
Academic Computing
Middlebury College
Middlebury, Vermont

Assistant Professor 1984–1987
Mathematics
Wilfrid Laurier University
Waterloo, Ontario

Visiting Assistant Professor 1981–1984
Mathematics & Computer Science
McMaster University
Hamilton, Ontario

Assistant Professor 1977–1982
Mathematics
Williams College
Williamstown, Massachusetts

J. W. Young Research Instructor 1975–1977
Mathematics
Dartmouth College
Hanover, New Hamphsire

Publications

Papers in Refereed Journals

(with R. Belinsky) *PIPCIRs—polynomials whose inflection points coincide with their interior roots*, Mathematics magazine 73 (2000), 285–292

(with W. Slough) *Laboratory experiments with graph algorithms*, PRIMUS VI(1996), 158–166

Where not to find the critical points of a polynomial—variation on a Putnam theme, Amer. Math. Monthly 102 (1995) 155–158

Classification of surfaces, Amer. Math. Monthly 95 (1988), 851–865

(with M. Arkowitz)*Sullivan's minimal models and higher order Whitehead products*, Can. J. Math. 30 (1978), 961–982

The genus of a closed simply connected manifold, Mich. Math. J. 23 (1976), 309–319

Papers at Refereed Conferences

(with A, Mertz, N. Van Cleave) *Fractals and LiteBrite: Coloring a Grid*, CCSC MidWest Conference, October 2010

(with D. Broline, W. Slough, N. Van Cleave) *A Suite of Typesetting Tools for the Web-Enhanced Classroom*, 6^{th} Work Multi-Conference on Systemics, Cybernetics, and Informatics, Orlando FL, July 2002

(with W. Slough, N. Van Cleave, S. Westbrooke) *Learning Activities for Secondary and Post-Secondary CS Courses*, 31^{st} ASEE/IEEE Frontiers in Education Conference, Reno NV, October 2001

(with D. Broline, W. Slough, N. Van Cleave) *A Set of CS 1 Labs Utilizing Graphical Objects and Inheritance*, 31^{st} ASEE/IEEE Frontiers in Education Conference, Reno NV, October 2001

(with W. Slough) *A simple graphics package for CS 1*, Small College Computing Symposium, Winona State University, April 1994

(with W. Slough) *A simple graphics package for CS 1*, Small College Computing Symposium, Winona State University, April 1994

(with W. Slough and D. Broline) *Computer algebra systems and business calculus*, Small College Computing Symposium, Winona State University, April 1994

(with W. Slough) *Laboratory experiments with graph algorithms*, Small College Computing Symposium, University of Northern Iowa, April 1993

Refereed Problems and Solutions

(with E.T.H. Wang and M. Klamkin) Solution to Problem E3307, Amer. Math. Monthly 98 (1991), 755–759

(with E.T.H. Wang and M. Klamkin) Problem E3307, Amer. Math. Monthly 96 (1989)

(with E.T.H. Wang) Problem E3260, Amer. Math. Monthly 95 (1988), 350

(with E.T.H. Wang) Problem #346, College Math. J., 18 (1987), 160

(with E.T.H. Wang) Solution to Problem #36 , Crux Mathematicorum 13 (1987), 46–47

(with E.T.H. Wang) Problem #1197, Crux Mathematicorum 12 (1986), 283

Editorial/Referee Work

Referee for Annual ACM/SIGCSE Meeting	1996–2014
Referee for Mathematics Magazine	1995–2001

Grants

Illinois Higher Education Cooperative Agreement 1996–1997
(with T. Peresini et. al.) Math Teacher Link—A Web Site and Course Modules for Inservice Teachers

National Science Foundation 1996–1998
(with W. Slough et. al.) ILI Grant: Computer Algebra Laboratories for Business Calculus

National Science Foundation 1993–1995
(with M. Gerling et. al.) ILI Grant: A Computer Laboratory for Mathematics Education

ACM–SIGGRAPH 1988
SIGGRAPH Education Grant

Fund for the Improvement of Post Secondary Education 1988
(with K. Skubokowski et. al.) Monitoring the Effectiveness of Computers in Freshman Writing Classes

Honors

Illinois Section of the Mathematical Association of America 2013
Distinguished Service Award

Eastern Illinois University 2002
Excellence Award for the Use of Technology in Teaching

Eastern Illinois University 1999
Mathematics Department Teacher Scholar Award

Williams College 1981–1982
Class of 1942 Fellowship

University of Toronto 1967–1970
Burnside Scholarship

Major Committees

External Reviewer for Mathematics Program at Governors' State University, Fall 2014

Acting Governor of the Mathematical Association of America for the Illinois Section, 2013–2014

External Reviewer for Mathematics Programs at Western Illinois University, Spring 2012

Governor of the Mathematical Association of America for the Illinois Section, 2010–2013

Chair, Council of Chairs, Eastern Illinois University, 2010–2011

Chair, Search Committee for Assistant Vice President for Academic Affairs for Technology, Eastern Illinois University, 2010–2011

Chair, Search Committee for Assistant to the Dean of College of Sciences for Technology, Eastern Illinois University, 2008

Program Chair, Annual Meeting of the Illinois Section of the Mathematical Association of America, 2008

Four-Year Public University representative to the Board of the Illinois Section of the Mathematical Association of America, 2006–2008

Search Committee for Assistant to the Registrar for Transfer Articulation, 2006

Mathematics Department Personnel Committee, Eastern Illinois, 1999–2001

Mathematics Department Personnel Committee, Eastern Illinois, 1995–1998 (Chair 1997-1998)

Mathematics Department Scholarship Committee, Eastern Illinois University, 1994–2001

National Science Scholarship Program Selection Committee, Illinois Department of Education, 1993–1995

Mathematics Department Search Committee, Eastern Illinois University, 1998–1999 (Chair)

Academic Technology Advisory Committee, Eastern Illinois University, 2002–

Committee on Academic Computing, Eastern Illinois University, 1995–1998

Mathematics and Computer Science Program Review Committee, Eastern Illinois University, 1996 (Chair)

Mathematics Department External Review Committee, Millikin University, 1994

Mathematics Curriculum Committee, Addison County Supervisory Unit, 1991–1992

Committee on Academic Computing, Middlebbury College, 1987–1989

Faculty Steering Committee, Williams College, 1980–1981

Committee on Educational Policy, Williams College, 1978–1980

Presentations

Invited Talks/Seminars

You Gotta Know How to Fold Em, Pi Mu Epsilon Induction Ceremony, Jacksonville University, April 2012

Whats So Complex About Complex Numbers?, Annual Meeting, Illinois Council of Teachers of Mathematics, October 2008

Geometry revisited – Dynamically, Geometry Potpourri Seminar, University of Illinois, September 1999

Geometry revisited, 76^{th} Annual Meeting ISMAA, Augustana College, March 1999

(with W. Slough and D. Broline) *Interactive worksheets for a business calculus course*, Special Session on Symbolic Computation in the Undergraduate Classroom, MAA–AMS Summer MathFest, University of Vermont, August 1995

(with W. Slough and D. Broline) *Interactive laboratories in the "Brief Calculus" course*, 72^{nd} Annual Meeting of the ISMAA, Monmouth College, March 1995

(with W. Slough and D. Broline) *Using Maple worksheets in business calculus*, Special Session on Technology in the Classroom, 895^{th} Meeting of the American Mathematical Society, Oklahoma State University, October 1994

Betti numbers and power series, Mathematics Department Colloquium, Dartmouth College, January 1986

Lusternik-Schnirelman category and rational homotopy, Mathematics Department Colloquium, University of Western Ontario, March 1984

Minimal models and local rings, Mathematics Department Colloquium, McMaster University, February 1982

An inverse eigen-value problem, Mathematics Department Colloquium, Dartmouth College, November 1977

Curvature, Gauss Bicentennial Celebration, Middlebury College, April 1977

Differential forms and the fundamental group, Mathematics Department Colloquium, University of New Hampshire, December 1976

Recent Departmental Colloquia

(with Y. Movshovich) *Binomial Coefficients and Bernoulli Numbers in Two-Part Harmony*, September 2013

Tropical Mathematics, September 2013

(with M. Lassak, P. Coulton) *If This is Alpha What is Beta*, September 2011

Chebyshev Polynomials and Closely Watched Trains, September 2010

Other Seminars/Talks Given

Looking Toward the Future: Math and Science Curricula in the 1960s (with K. Lewandowski, S. Daniels, D. Linton, P.Wiles), in conjunction with *A Futuristic Look Through Ancient Lenses: Symposium on Ancient Greece*, Eastern Illinois University, October 2014

Euclid and the Greatest Common Divisor (with William Slough), in conjunction with *Revolutionary Decade: Reflections on the 1960s*, Eastern Illinois University, October 2012

Now You See It, Now You Don't – Invisible Objects, Annual Meeting of the ISMAA, North Central College, April 2011

Life Can Be Simpler When It Is More Complex, Geometry Potpourri Seminar, University of Illinois, April 2009

Euclidean Analytic Geometry with Complex Numbers, Annual Meeting of ISMAA, Bradley University, April 2009

Zig-Zags Between Circles, Geometry Potpourri Seminar, University of Illinois, July 2002

Anatomy of a (Possible) Triangle Center, Geometry Potpourri Seminar, University of Illinois, October 2001

Constructing regular polygons, Geometry Potpourri Seminar, University of Illinois, April 2000

Making algorithms come alive with ISETL, Annual Meeting Illinois Council of Teachers of Mathematics, October 1996

(with W. Slough and D. Broline) *Using Maple to teach the "black box" approach to functions*, Annual Meeting Illinois Council of Teachers of Mathematics, October 1996

(with W. Slough and D. Broline) *Using Maple worksheets in teaching business calculus*, October 1995

(with W. Slough) *High school mathematics on the internet*, Project Connect—Distance Learning and Global Communications, Eastern Illinois University, September 1995

HyperCard, 37^{th} Annual Conference on the Teaching of Mathematics, Eastern Illinois University, March 1994

Geometer's Sketchpad, 37^{th} Annual Conference on the Teaching of Mathematics, Eastern Illinois University, March 1994

The Generation of Conics—Newton and MacLaurin, Geometer's Sketchpad Users Group–Joint Meetings of the AMS/MAA, Cincinnati, January 1994

A computer laboratory for mathematics education instruction, Poster Session at the Joint Meetings of the AMS/MAA, Cincinnati, January 1994

The three tangent theorem and rational Bézier curves, TriSectional Meeting of the MAA, College of St. Mary's, April 1993

Modular arithmetic, string patterns and secret codes, 36^{th} Annual Conference on the Teaching of Mathematics, Eastern Illinois University, March 1993

Teaching in a heterogeneous computing environment, Computing Strategies Across the Curriculum, University of Vermont, April 1991

Using the RS/6000 in mathematics teaching and research, RISC in Higher Education, IBM–Burlington VT, April 1990

Teaching Experience

Computer Science—Graduate

Cryptography

Computer Graphics

Computational Geometry

Computer Science—Undergraduate

CS1 (FORTRAN, Pascal, Modula-2, C++, Java, Python)

CS2 (Pascal, C, C++)

Data Structures

Computer Systems/Assembly Language

Operating Systems

Architecture

Theory of Computation

Analysis of Algorithms

Programming Languages

Mathematics—Graduate

Topology

Topics in Discrete Mathematics

Complex Numbers and Geometry

Homology Theory

Geometry of Transformations

Mathematics—Undergraduate

Discrete Mathematics
Calculus 1, 2, 3
Calculus for Business and Social Sciences
Differential Geometry
Geometry
Elementary Statistics
Geometry for Elementary Teachers
Linear Algebra
Finite Mathematics
Differential Equations
Abstract Algebra
Complex Analysis
Topology

Workshops

Dynamic Geometry
Spreadsheet Mathematics
Mathematics of Paper Folding
Recursion (with Logo)

Memberships

Association for Computing Machinery

Mathematics Association of America

June, 2015