

Curriculum Vitae

Michael E. Zieve

Homepage: www.math.rutgers.edu/~zieve/

Personal Information

Born April 15, 1971 in Minneapolis, MN.

Employment

Member, Institute for Advanced Study, 2008–2009.

Visiting Professor, Rutgers University, 2007–2008.

Research Staff, Center for Communications Research (Princeton),
2000–2007.

Stieltjes Visiting Professor, Leiden University, 2000.

MSRI Postdoctoral Research Fellow, 1999.

Assistant Professor, University of Southern California, 1997–1999.

NSF Postdoctoral Research Fellow, 1996–1999.

NSF Graduate Fellow, 1992–1995.

Education

University of California at Berkeley, Ph.D. in Mathematics, 1996,
under the supervision of Hendrik W. Lenstra, Jr.

Harvard University, A.B., Magna Cum Laude with Highest Honors, 1992.

Selected Publications

(Full publication list available at www.math.rutgers.edu/~zieve/)

Intersections of polynomial orbits, and a dynamical Mordell–Lang conjecture (with D. Ghioca and T. Tucker), *Inventiones Math.*, 2008.

Polynomials with $\mathrm{PSL}(2)$ monodromy (with R. Guralnick), *Annals of Math.*, to appear.

A new family of exceptional polynomials in characteristic two (with R. Guralnick and J. Rosenberg), *Annals of Math.*, to appear.

Exceptional covers and bijections on rational points (with R. Guralnick and T. Tucker), *Internat. Math. Res. Notices*, 2007.

Polynomials with a common composite (with R. Beals and J. Wetherell), *Israel J. Math.*, to appear.

Permutation binomials over finite fields (with A. Masuda), *Trans. Amer. Math. Soc.*, to appear.

Curves of every genus with many points, II: Asymptotically good families (with N. Elkies, E. Howe, A. Kresch, B. Poonen and J. Wetherell), *Duke Math. J.*, 2004.

Bivariate factorizations connecting Dickson polynomials and Galois theory (with S. Abhyankar and S. Cohen), *Trans. Amer. Math. Soc.*, 2000.

Selected Invited Addresses

Mathematisches Forschungsinstitut Oberwolfach, Germany:

Coding Theory (5/00, 12/03)

Computational Number Theory (5/95)

Finite Fields: Theory and Computation (1/97, 1/01, 12/04)

Galois Groups and Fundamental Groups (6/97)

Centre International de Rencontres Mathématiques, Luminy, France:

Arithmetic, Geometry and Coding Theory (7/97)

Number Theory and Dynamical Systems (7/95)

Antalya Algebra Days (5/06) (plenary speaker)

Arizona Winter School for Arithmetic Geometry (2/00) (2 talks)

Automorphisms of Curves, Leiden, Netherlands (8/04) (2 talks)

Dutch Intercity Number Theory Seminar (2/00–5/00) (7 talks)

Finite Fields and Applications, Toulouse, France (5/03) (plenary speaker)

Invited Addresses in 2008

January 8: special session on Algebraic Dynamics, AMS annual meeting

January 11: Discrete Mathematics and Representation Theory seminar,
University of California (Davis)

February 8: Computational and Commutative Algebra seminar, Rutgers

February 25: Gelfand seminar, Rutgers University

March 3: Algebra seminar, Brown University

March 27: New York Number Theory seminar, CUNY Graduate Center

April 4: Commutative Algebra and Algebraic Geometry seminar, CUNY
Graduate Center

April 8: Number Theory seminar, Rutgers University

April 15: Colloquium, Center for Communications Research (Princeton)

April 18: Kolchin seminar, CUNY Graduate Center

May 2: Kolchin seminar, CUNY Graduate Center

May 21: Combinatorial and Additive Number Theory conference, CUNY
Graduate Center

September 22: Algebra seminar, Rutgers University

September 29: Computer Science and Discrete Mathematics seminar,
Institute for Advanced Study

October 9: Number Theory seminar, University of Waterloo

October 10: Ontario Research Center for Computer Algebra seminar,
University of Waterloo

October 12: special session on Number Theory, AMS sectional meeting

October 31: Algebra seminar, Wesleyan University

Research Interests

Algebra
Number theory and arithmetic geometry
Dynamical systems
Algorithms and computational complexity
Discrete mathematics
Cryptography

Service

Mathematical Reviews
Referee for various journals and NSF and NSA grant proposals
(refereed eleven papers in 2008)
Developed a widely-used webpage at CCR facilitating collaboration
Problem supporter for the USA Mathematics Talent Search
Developed and led a student project at the Arizona Winter School in 2000
Developed and led an undergraduate research project at NSA in 2002
Guest lecturer and frequent visitor at Thomas Grover Middle School
Math Club in 2003

Courses Taught

Mathematical Statistics (Rutgers)
Business Calculus (USC)
Engineering Calculus (USC)
Number Theory (USC)

References

Gregory Cherlin (Rutgers) (teaching)
Andrew Granville (Montreal)
Robert Guralnick (USC)
Hendrik Lenstra (Leiden)
Richard Lyons (Rutgers)
David Saltman (IDA/CCR-P)
Thomas Scanlon (Berkeley)
Felipe Voloch (Texas)
Avi Wigderson (IAS)