

# Curriculum Vitae

## Angel V. Kumchev

### CONTACT INFORMATION

*Mail:* Department of Mathematics  
Towson University  
7800 York Road  
Towson, MD 21252  
U.S.A.  
*Phone:* (410) 704–2983  
*Fax:* (410) 704–4149  
*E-mail:* akumchev@towson.edu  
*URL:* <http://pages.towson.edu/akumchev>

### EDUCATION

- **Ph.D. in Mathematics:** The University of South Carolina, 08/1997–08/2001
- **B.S. and M.S. in Mathematics:** Plovdiv University, 09/1991–07/1996

### EMPLOYMENT

- **Assistant Professor:** Towson University, 08/2005–present
- **Postdoc:** The University of Texas at Austin, 01/2003–07/2005
- **Postdoc:** The University of Toronto, 07/2001–12/2002

### PROFESSIONAL ACTIVITIES

- **Referee work:** Acta Arithmetica, Acta Mathematica Sinica, Boletín de la Sociedad Matemática Mexicana, Glasgow Mathematical Journal, Illinois Journal of Mathematics, Journal of the London Mathematical Society, Journal of Mathematical Analysis and Applications, Journal of Number Theory, Monatshefte für Mathematik, Ramanujan Journal, Rocky Mountain Journal of Mathematics, Quarterly Journal of Mathematics
- **Reviewer work:** Mathematical Reviews, Zentralblatt MATH

### PROFESSIONAL MEMBERSHIPS

- American Mathematical Society (1998–present)
- Mathematical Association of America (2004, 2006–present)

## HONORS AND AWARDS

- 2008:** Excellence in Scholarship Award, Fisher College of Science and Mathematics, Towson University
- 2006:** Summer Research Fellowship Award, Towson University
- 2001:** Dean's Award for Excellence in Graduate Study, Graduate School, the University of South Carolina
- 2001:** Outstanding Graduate Student Award, Department of Mathematics, the University of South Carolina
- 1998:** Outstanding First Year Graduate Student Award, Department of Mathematics, the University of South Carolina
- 1996–97:** Co-investigator for grant #MM–430/94 from the Bulgarian National Science Fund
- 1996:** Outstanding Young Scientist Award (Mathematics), EVRIKA Foundation (Bulgaria)
- 1995:** Outstanding Mathematics Student Award, Department of Mathematics, Plovdiv University
- 1992–95:** Outstanding Mathematics Student Awards for 1st, 3rd, and 4th Year Student, EVRIKA Foundation (Bulgaria)

## PUBLICATIONS AND PREPRINTS

1. *On a system of two Diophantine equations with prime numbers*, C. R. Acad. Bulgar. Sci. **49** (1996), 21–24.
2. *On the Piatetski-Shapiro–Vinogradov theorem*, J. Theor. Nombres Bordeaux **9** (1997), 11–23.
3. *An additive problem with prime numbers from a thin set* (with D. Tolev), Acta Math. Hungar. **76** (1997), 31–43.
4. *On an equation with prime numbers* (with T. Nedeva), Acta Arith. **83** (1998), 117–126.
5. *On the distribution of prime numbers of the form  $[n^c]$* , Glasgow Math. J. **41** (1999), 85–102.
6. *A Diophantine inequality involving prime powers*, Acta Arith. **89** (1999), 311–330.
7. *A note on the  $2k$ -th mean value of the Hurwitz zeta function*, Bull. Austral. Math. Soc. **60** (1999), 403–405.
8. *The  $k$ -free divisor problem*, Monatsh. Math. **129** (2000), 321–327.
9. *Diophantine approximation by cubes of primes and an almost prime*, Rocky Mountain J. Math. **30** (2000), 961–980.
10. *Diophantine approximation by cubes of primes and an almost prime II* (with J. Brüdern), Illinois J. Math. **45** (2001), 309–321.
11. *On a binary Diophantine inequality involving prime powers* (with M. Laporta), in "Number Theory for the Millennium", vol. 2, AK Peters, 2002, pp. 307–329.
12. *The difference between consecutive primes in an arithmetic progression*, Quart. J. Math. Oxford (2) **53** (2002), 479–501.

13. *The distribution of prime ideals of imaginary quadratic fields* (with G. Harman and P. Lewis), *Trans. Amer. Math. Soc.* **356** (2004), 599–620.
14. *Quadratic equations with five prime unknowns* (with S. Choi), *J. Number Theory* **107** (2004), 357–367.
15. *On the Waring–Goldbach problem: exceptional sets for sums of cubes and higher powers*, *Canad. J. Math.* **57** (2005), 298–327.
16. *An invitation to additive prime number theory* (with D. Tolev), *Serdica Math. J.* **31** (2005), 1–74.
17. *The Waring–Goldbach problem for seventh powers*, *Proc. Amer. Math. Soc.* **133** (2005), 2927–2937.
18. *On sums of three squares* (with S. Choi and R. Osburn), *Internat. J. Number Theory.* **1** (2005), 161–173.
19. *On sums of squares of primes* (with G. Harman), *Math. Proc. Cambridge Philos. Soc.* **140** (2006), 1–13.
20. *Mean values of Dirichlet polynomials and applications to linear equations with prime variables* (with S. Choi), *Acta Arith.* **123** (2006), 125–142.
21. *On Weyl sums over primes and almost primes*, *Michigan Math. J.* **54** (2006), 243–268.
22. *On the irreducibility of a truncated binomial expansion* (with M. Filaseta and D. Pasechnik), *Rocky Mountain J. Math.* **37** (2007), 455–464.
23. *On sums of primes from Beatty sequences*, *Integers* **8** (2008), #A08.
24. *A binary additive equation involving fractional powers*, *Internat. J. Number Theory* **5** (2009), 281–292.
25. *Sums of primes and squares of primes in short intervals* (with J. Liu), to appear in *Monatsh. Math.*
26. *Additive bases arising from functions in a Hardy field*, (with T.H. Chan and M. Wierdl), submitted to *Acta Math. Hungar.*
27. *On sums of squares of primes II* (with G. Harman), submitted to *Math. Proc. Cambridge Philos. Soc.*

#### SEMINAR AND CONFERENCE TALKS

- July 2008: *Exceptional sets for sums of primes and squares of primes*, 10th Meeting of the Canadian Number Theory Association, Waterloo, ON.
- May 2008: *Additive bases arising from functions in a Hardy field*, 6th Annual Workshop on Combinatorial and Additive Number Theory, New York, NY.
- May 2008: *Exceptional sets for sums of primes and squares of primes*, AMS Meeting #1039, Claremont, CA (invited talk).
- February 2008: *Exceptional sets in the Waring-Goldbach problem*, Special Ergodic and Number Theory Seminar, University of Memphis, Memphis, TN.
- July 2007: *Exponential sums over primes and their applications*, Number Theory Seminar, Shandong University, Jinan, P.R. China.

- February 2007: *Small gaps between primes: The ideas of Goldston-Pintz-Yildirim*, Pure Mathematics Colloquium, U.S. Naval Academy, Annapolis, MD.
- January 2007: *Small gaps between primes: The ideas of Goldston-Pintz-Yildirim*, Number Theory Seminar, Johns Hopkins University, Baltimore, MD.
- April 2006: *Exceptional sets in short intervals*, AMS Meeting #1016, South Bend, IN (invited talk).
- November 2005: *The Waring-Goldbach problem*, Mathematics Colloquium, Loyola College, Baltimore, MD.
- April 2005: *Recent advances in the Waring-Goldbach problem*, 9th Pacific North West Number Theory Conference, Simon Fraser University, Burnaby, BC.
- March 2005: *The Waring-Goldbach problem*, Number Theory Seminar, Texas A&M University, College Station, TX.
- February 2005: *The Waring-Goldbach problem*, Number Theory Seminar, University of Texas, Austin, TX.
- November 2004: *Exceptional sets in the Waring-Goldbach problem*, Conference on Additive Number Theory, Gainesville, FL.
- June 2004: *The large sieve in additive prime number theory*, 8th Meeting of the Canadian Number Theory Association, Toronto, ON.
- June 2004: *Applications of the large sieve in additive prime number theory*, CECM Colloquium, Simon Fraser University, Burnaby, BC.
- March 2004: *The Waring-Goldbach problem*, Number Theory Seminar, University of Texas, Austin, TX.
- June 2003: *The Waring-Goldbach problem*, PIMS Summer Program in Number Theory, Simon Fraser University, Burnaby, BC.
- November 2002: *The Waring-Goldbach problem*, Number Theory Seminar, University of Toronto, Toronto, ON.
- October 2002: *Exponential sums over primes and the Waring-Goldbach problem*, AMS Meeting #981, Salt Lake City, UT (invited talk).
- May 2002: *Distribution of primes in arithmetic progressions and short intervals*, 7th Meeting of the Canadian Number Theory Association, Montreal, QC.
- March 2002: *Distribution of primes in arithmetic progressions and in short intervals*, Number Theory Seminar, McMaster University, Hamilton, ON.
- January 2002: *The difference between consecutive primes in an arithmetic progression*, AMS Meeting #973, San Diego, CA.
- October 2001: *The distribution of primes in arithmetic progressions and in short intervals*, Number Theory Seminar, University of Toronto, Toronto, ON.
- March 2001: *Distribution of prime ideals of quadratic fields and prime values of binary quadratic forms*, AMS Meeting #963, Columbia, SC (invited talk).
- January 2001: *The distribution of prime ideals of imaginary quadratic fields*, AMS Meeting #962, New Orleans, LA.

- December 2000: *The distribution of prime values of binary quadratic forms*, West Coast Number Theory Conference, San Diego, CA.
- September 2000: *Sieve methods and Diophantine problems involving primes*, Number Theory Seminar, University of Michigan, Ann Arbor, MI.
- May 2000: *Diophantine approximation by cubes of primes and an almost prime*, Millennial Conference on Number Theory, Urbana–Champaign, IL.
- April 2000: *Diophantine approximation by fractional powers of primes*, South East Regional Meeting on Numbers, Blacksburg, VA.
- December 1999: *Diophantine approximation by cubes of primes and an almost prime*, West Coast Number Theory Conference, Asilomar, CA.
- April 1999: *Diophantine approximation by cubes of primes and an almost prime*, South East Regional Meeting on Numbers, Columbia, SC.
- March 1999: *The  $k$ -free divisor problem*, AMS Meeting #941, Urbana–Champaign, IL.
- December 1998: *A Diophantine inequality involving prime powers*, West Coast Number Theory Conference, San Francisco, CA.
- May 1998: *A Diophantine inequality involving prime powers*, South East Regional Meeting on Numbers, Greensboro, NC.

## TEACHING EXPERIENCE

- at Towson University:
  - Spring 2009: Calculus I; Senior Seminar (Quadratic Reciprocity).
  - Fall 2008: Basic Mathematics for the Sciences; Calculus I; Algebraic Structures.
  - Summer 2008: Basic Mathematics for the Sciences; Introduction to Abstract Algebra.
  - Spring 2008: Calculus III; Senior Seminar (Quadratic Reciprocity).
  - Fall 2007: Introduction to Abstract Mathematics; Calculus III.
  - Summer 2007: Calculus III.
  - Spring 2007: Calculus I; Number Theory.
  - Fall 2006: Elementary Linear Algebra; Calculus III.
  - Spring 2006: Honors Calculus I; Calculus III.
  - Fall 2005: Calculus I; Algebraic Structures.
- at the University of Texas:
  - Summer 2005: Sequences, Series and Multivariable Calculus.
  - Spring 2005: Sequences, Series and Multivariable Calculus; Topics in Analysis.
  - Fall 2004: Discrete Mathematics; Matrices and Matrix Calculations.
  - Summer 2004: Matrices and Matrix Calculations.
  - Spring 2004: Sequences, Series and Multivariable Calculus; Complex Variables.
  - Fall 2003: Differentiable and Integral Calculus; Complex Variables.
  - Spring 2003: Matrices and Matrix Calculations; Probability.

- at the University of Toronto:
  - Fall 2002: Advanced Differential Equations.
  - Spring 2002: Calculus (second semester).
  - Fall 2001: Calculus (first semester).