

# Fan Ge

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## Employment

Postdoc, Department of Pure Mathematics, University of Waterloo, 2017-present

## Education

Ph.D. in Mathematics, University of Rochester, 2017,

Thesis: On zeros of the derivative of the Riemann zeta-function

Advisor: Prof. Steve Gonek

M.S. in Mathematics, University of Rochester, 2012-2014.

B.S. in Mathematics, Nanjing University, 2009.

## Interest

Number Theory, Combinatorics, Analysis, Probability, Operation Management

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## Publications

9. The number of zeros of  $L'(s, \chi)$ ,  
*Acta Arith.*, to appear.
8. Some multidimensional integrals in number theory and connections with the Painlevé V equation  
(with E. Basor and M.O. Rubinstein),  
*J. Math. Phys.* 59, 091404 (2018).
7. On the index conjecture in zero-sum theory: singular case,  
*Int. J. Number Theory*, 14 (2018), no. 2, 355–364.
6. The distribution of zeros of  $\zeta'(s)$  and gaps between zeros of  $\zeta(s)$ ,  
*Adv. Math.* 320 (2017), 574–594.
5. The number of zeros of  $\zeta'(s)$ ,  
*Int. Math. Res. Not. IMRN* 2017 (5), 1578–1588.
4. On a permutation problem for finite abelian groups (with Z-W. Sun),  
*Electron. J. Combin.* 24 (2017) P1.17.
3. Conditional estimates on small distances between ordinates of zeros of  $\zeta(s)$  and  $\zeta'(s)$ ,  
*J. Number Theory* 165 (2016), 304–313.
2. Note on the index conjecture in zero-sum theory and its connection to a Dedekind-type sum,  
*J. Number Theory* 168 (2016), 128–134.
1. On some universal sums of generalized polygonal numbers (with Z-W. Sun),  
*Colloq. Math.* 145 (2016), 149–155.

## Preprints

5. The mean square discrepancy in the Dirichlet divisor problem (with S. M. Gonek), submitted.
  4. Lower bounds for small fractional moments of quadratic Dirichlet  $L$ -functions (with S. Baluyot).
  3. Critical points of polynomials with roots on the unit circle (with S. M. Gonek).
  2. Lower bounds for small fractional moments of  $L$ -series of Hecke eigencuspforms (with S. Baluyot).
  1. On zeros of  $\zeta^{(k)}(s)$  (with A. Suriajaya), in preparation.
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## Conferences

- Perspectives on the Riemann Hypothesis, Bristol (Heilbronn), 2018.
- Probability in Number Theory, Montreal (CRM), 2018.
- International Conference on Mathematics and Statistics, Memphis, 2018.
- Canadian Mathematical Society meeting, Waterloo, 2017.
- Recent developments in Analytic Number Theory, Berkeley (MSRI), 2017.
- Moments of zeta and correlations of divisor sums, San Jose (AIM), 2016.
- The sixth upstate New York number theory conference, Rochester, 2016.
- New approaches in probabilistic and multiplicative number theory, Montreal (CRM), 2014.
- 13th Conference of the Canadian Number Theory Association, Ottawa, 2014.
- 1st Workshop on supercongruences,  $\pi$ -series and related topics, Nanjing, 2011.
- 2nd National Conference on Combinatorial Number Theory, Guangzhou, 2011.
- 1st National Conference on Combinatorial Number Theory, Nanjing, 2009.

## Talks

- Counting zeros of the derivative of the Riemann zeta-function, International Conference on Mathematics and Statistics, Memphis, 2018.
- Counting zeros of the derivative of the Riemann zeta-function, York Number Theory Seminar, Toronto, 2017.
- Riemann's memoir and the prime number theorem, Analytic number theory class, Waterloo, 2017.
- The number of zeros of  $\zeta'(s)$ , Waterloo Number Theory Seminar, Waterloo, 2017.
- Connections between zeros of  $\zeta$  and  $\zeta'$ : old and new results, The sixth upstate New York number theory conference, Rochester, 2016.

## Honors

Fellowship, University of Rochester, Spring 2015.

Elite Program for Top Students, Fellowship, Nanjing University, 2009-2011.

Excellent Graduate Scholarship, Nanjing University, 2011.

Renmin Scholarship, Nanjing University, 2007, 2008.

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## Teaching

University of Waterloo Evaluation: 4.3/5

Rate-my-professors score: 4.8/5

Instructor,	Algebra for Honors Mathematics,	University of Waterloo,	Fall 2018.
Instructor,	Algebra for Honors Mathematics,	University of Waterloo,	Winter 2018.
Instructor,	Algebra for Honors Mathematics,	University of Waterloo,	Fall 2017.
Teaching Assistant,	Algebra,	University of Rochester,	Spring 2017.
Teaching Assistant,	Calculus,	University of Rochester,	Fall 2016.
Teaching Assistant,	Algebra,	University of Rochester,	Spring 2016.
Teaching Assistant,	Calculus,	University of Rochester,	Fall 2015.
Teaching Assistant,	Calculus,	University of Rochester,	Fall 2014.
Teaching Assistant,	Algebra I, (graduate level),	University of Rochester,	Fall 2014.
Teaching Assistant,	Algebra II (graduate level),	University of Rochester,	Spring 2014.
Teaching Assistant,	Algebra I, (graduate level),	University of Rochester,	Fall 2013.
Teaching Assistant,	Complex Analysis,	University of Rochester,	Spring 2013.
Teaching Assistant,	Number Theory,	University of Rochester,	Fall 2012.

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## Services

Referee for: Acta Arithmetica, International Journal of Number Theory, etc.

Advisory Panelist for: Ph.D. and Post-doc Research and Job Application,  
Department of Mathematics, University of Rochester, 2017.

Reviewer for: MathSciNet.

Volunteer Technician: Canadian Mathematical Society meeting, Waterloo, 2017.