

CURRICULUM VITAE

CHUNG-HANG KWAN

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Fields of Interests

- Automorphic Forms, L -functions, Analytic Number Theory

Education

- 2017-2022 **Columbia University in the City of New York** (Advisor: Dorian Goldfeld)
 - Ph.D. Candidate in Mathematics (2022 expected)
 - M.Phil. in Mathematics (2021)
 - M. A. in Mathematics (2019)
- 2015-2016 **University of Illinois at Urbana-Champaign**, Undergraduate Study Abroad Program
- 2013-2017 **The Chinese University of Hong Kong**, BSc. Mathematics, First-class Honor

Publications

- Spectral Moment Formulae for $GL(3) \times GL(2)$ L -functions, Preprint (Submitted), http://www.math.columbia.edu/~ck2854/GL3_GL2_12_20_21.pdf; <https://arxiv.org/abs/2112.08568>
- On Smoothing Singularities of Elliptic Orbital Integrals on $GL(n)$ and Beyond Endoscopy, *Journal of Number Theory*, vol. 183, pp. 407-427. (Joint with O. Gonzalez, S. J. Miller, R. van Peski, T.A. Wong), <https://arxiv.org/abs/1608.05938>
- On Near Perfect Numbers, *Acta Arith.* 194 (2020), no. 4, 341-366. (Joint with P. Cohen, K. Cordwell, A. Epstein, A. Lott, S. J. Miller), <https://arxiv.org/abs/1610.04253>

Awards & Scholarships for PhD Study

- Dean's Fellow, Graduate School of Arts and Sciences, Columbia University
- Croucher Scholarships for Doctoral Study
- Sir Run Run Shaw Postgraduate Scholarship (2017-2018)

Research Talks

- Moment Formulae of Automorphic L -functions of Higher-rank Groups:
 - Warwick Number Theory Seminar (31 Jan 2022)
 - Rutgers University (31 Jan 2022)
 - Tenth Annual Upstate Number Theory Conference (23–24 Oct 2021)
 - Maine-Quebec Number Theory Conference (2 Oct 2021)
 - FRG Seminar, American Institute of Mathematics (26 Aug 2021)

– Rutgers University (20th July 2021)

- Within-perfect, near-perfect and order a -abundant numbers, 16th Combinatorial and Additive Number Theory Conference, CUNY Graduate Center (22-25th May 2018)

Seminar Talks

- Fouvry-Style Exponential Sum Estimates, London Analytic Number Theory Study Group (9 February 2022)
- Munshi's hybrid $GL(2)$ -subconvexity, London Learning Seminar on Analytic Number Theory (10 March 2021), <https://www.ucl.ac.uk/~ucahpet/StudyGroup2021.html>
- The Fyodorov-Hiary-Keating Conjecture, London Analytic Number Theory Study Group (30 June 2021), <https://sites.google.com/view/studygp2021/>
- Averages of Fourier Coefficients, FRG Grad Seminar, American Institute of Mathematics (22 Feb 2021)
- Some Aspects of Γ -functions, FRG Grad Seminar, American Institute of Mathematics (29 Nov 2021)
- Zeros of Riemann Zeta Function, Rutgers Graduate Student Number Theory Seminars (16 Feb 2021)
- Spectral Reciprocity, Moments and Non-vanishing of Automorphic L-functions of High-rank, Columbia Student Seminar on Analytic Aspects of Automorphic Forms (Spring 2019)

Seminar Organized

- (Joint with Asbjorn Nordentoft) Student Seminar on Analytic Aspects of Automorphic Forms (Spring 2019), Columbia University, <http://www.math.columbia.edu/~ck2854/S19-ANT.html>

Teaching

- Instructor, Undergraduate Seminar: Number Theory & Statistics (Fall, 2019)
- Instructor, Calculus I (Fall 2020)
- Graduate TA, Algebraic Number Theory (Class Field Theory) (Spring 2020)
- Graduate TA, Analytic Number Theory (Spring 2019, 2020, 2021, 2022)
- Graduate TA, Making Breaking Codes (Fall 2018, 2021)

Outreach

- **Graduate Assistant**, Columbia Math Undergraduate Summer Research Program (May-August 2020), Project Leader: Dr. Michael Woodbury
 - *Assisting a group of 5 undergraduates conducting original research on the triple product L-function and Jacobi forms.*
- **Teaching Assistant**, Enrichment Programme for Young Mathematics Talents (EPYMT), Department of Mathematics, the Chinese University of Hong Kong (May–June 2014, Nov 2014–March 2015, July 2015)
 - *Leading discussion sessions for high school students on advanced topics in mathematics: non-Euclidean geometry, differential geometry and mathematical analysis.*