



Soumendra Ganguly

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 Department of Mathematics,
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Research interests

Analytic number theory, automorphic forms, L -functions

Education

Ph.D. in Mathematics

Texas A&M University, College Station, Texas, USA

August 2019 - August 2023

advisor: Prof. Matthew Young

M.S. in Mathematical Sciences

Clemson University, Clemson, South Carolina, USA

January 2017 - August 2019

advisor: Prof. Kevin James

M.Sc. in Mathematics

Chennai Mathematical Institute, Chennai, India

August 2014 - August 2016

B.Sc. (Honours) in Mathematics and Computer Science

Chennai Mathematical Institute, Chennai, India

August 2011 - August 2014

Academic appointments

Postdoctoral fellow

Aarhus University, Aarhus, Denmark

September 2023 -

Publications and preprints

Strong Hybrid Subconvexity For Twisted Selfdual GL_3 L -Functions (preprint)

Submitted to Math Annalen

<https://arxiv.org/abs/2408.00596>

With Peter Humphries, Yongxiao Lin, and Ramon Nunes

Subconvexity for twisted L -functions on $GL(3) \times GL(2)$ and $GL(3)$

Ph.D. dissertation, Texas A&M University, 2023

<https://oaktrust.library.tamu.edu/handle/1969.1/200140>

m -ary partitions

master's thesis, Clemson University, 2019

https://tigerprints.clemson.edu/all_theses/3165/

Perfect Domination in Knights Graphs

The 49th Southeastern International Conference on Combinatorics, Graph Theory & Computing

<https://arxiv.org/abs/1805.03335>

With Todd Fenstermacher and Renu Laskar

Talks

- Nov 2024 **Hybrid subconvex bounds for selfdual GL_3 L -functions via $GL_3 \times GL_2 \leftrightarrow GL_4 \times GL_1$ spectral reciprocity**, Number Theory Seminar, Stat-Math Unit, ISI Kolkata
- Oct 2024 **The trivial delta method via a geometric argument, part 2**, Aarhus Automorphic Forms Seminar, Aarhus University
- Oct 2024 **The trivial delta method via a geometric argument, part 1**, Aarhus Automorphic Forms Seminar, Aarhus University
- Sep 2024 **Conference talk**, Building Bridges: 6th EU/US Summer School & Workshop on Automorphic Forms and Related Topics, Centre International de Rencontres Mathématiques (CIRM)
- Aug 2024 **Conference talk**, Paul Nelson's 40th birthday seminar, Queen Mary University of London
- May 2024 **On discreteness of the cuspidal spectrum of $L^2(\Gamma \backslash G)$, part 2**, Aarhus Automorphic Forms Seminar, Aarhus University
- Apr 2024 **Conference talk**, Analytic Number Theory Program, Institut Mittag-Leffler
- Apr 2024 **On discreteness of the cuspidal spectrum of $L^2(\Gamma \backslash G)$, part 1**, Aarhus Automorphic Forms Seminar, Aarhus University
- Jun 2023 **Conference talk**, Arithmetic Statistics in Automorphic Forms and Analytic Number Theory Workshop, EPF Lausanne
- May 2023 **Conference talk**, 35th Automorphic Forms Workshop, Louisiana State University
- Mar 2023 **Conference talk**, Southern Regional Number Theory Conference, Louisiana State University
- Nov 2022 **Subconvexity for twisted L-functions on $GL(3) \times GL(2)$ and $GL(3)$** , Algebra and Number Theory Seminar, University of Mississippi
- Nov 2022 _____, Number Theory Seminar, Texas A&M University
- Mar 2019 **Conference talk**, 50th Southeastern International Conference on Combinatorics, Graph Theory & Computing, Florida Atlantic University

Workshops and conferences

- 2025 **Arizona Winter School 2025: Representation theory of p -adic groups**, March 8-12
University of Arizona, Tucson, AZ, USA
- 2025 **Hot Topics: Interactions between Harmonic Analysis, Homogeneous Dynamics, and Number Theory**, March 3-7
Simons Laufer Mathematical Sciences Institute (SLMath), Berkeley, CA, USA
- 2024 **N Cube Days XXI**, November 28-30
Christian-Albrechts-Universität zu Kiel, Kiel, Germany
- 2024 **Circle Method and Related Topics**, November 4-8
International Centre for Theoretical Sciences (ICTS), Bengaluru, India
- 2024 **Building Bridges: 6th EU/US Summer School & Workshop on Automorphic Forms and Related Topics**, September 2-13
Centre International de Rencontres Mathématiques (CIRM), Luminy, Marseille, France
- 2024 **Automorphic Forms in Budapest 2024**, August 26-30
Alfréd Rényi Institute of Mathematics, Budapest, Hungary
- 2024 **Paul Nelson's 40th birthday seminar**, August 2
Queen Mary University of London, London, England
- 2024 **International Conference on L-functions and Automorphic Forms in conjunction with**

- the 36th Shanks lecture**, June 13-16
Vanderbilt University, Nashville, Tennessee
- 2024 **Analytic Number Theory Program**, April 13-26
Institut Mittag-Leffler, Djursholm, Sweden
- 2023 **Arithmetic Statistics in Automorphic Forms and Analytic Number Theory**, June 5-9
EPF Lausanne, Lausanne, Switzerland
- 2023 **Oberwolfach Seminar: Analysis of Automorphic Forms and L -Functions in Higher Rank**,
28 May - 02 June
Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, Germany
- 2023 **35th Automorphic Forms Workshop**, May 22-26
Louisiana State University, Baton Rouge, LA, USA
- 2023 **Southern Regional Number Theory Conference**, March 11-12
Louisiana State University, Baton Rouge, LA, USA
Online
- 2022 **ICTS Discussion Meeting on L-functions, Circle-Method and Applications**, 27 June - 01
July
Online
- 2022 **Southern Regional Number Theory Conference**, March 12-13
Louisiana State University, Baton Rouge, LA, USA
- 2021 **HIM Summer School: Polynomial Methods**, June 7-17
Online
- 2021 **HCM Hausdorff School: The Circle Method**, May 10-14 and May 17-21
Online
- 2019 **The 50th Southeastern International Conference on Combinatorics, Graph Theory & Computing**, March
Florida Atlantic University, Boca Raton, FL, USA
- 2018 **The 49th Southeastern International Conference on Combinatorics, Graph Theory & Computing**, March
Florida Atlantic University, Boca Raton, FL, USA
- 2018 **MAAM 2018: Mid-Atlantic Analysis Meeting**, November 9-11
Virginia Tech, Blacksburg, VA, USA
- 2018 **The Palmetto Number Theory Series (PANTS) XXXI**, December 8-9
University of South Carolina, Columbia, SC, USA
- 2017 **The Palmetto Number Theory Series (PANTS) XXVIII**, September 16-17
University of Tennessee, Knoxville, TN, USA
- 2017 **AMS Special Sessions on “Coding Theory, Cryptography, and Number Theory”**, March
10-12
College of Charleston, Charleston, SC, USA
- 2015 **Advanced Instructional School on Analytic Number Theory**, June 1-20
KIIT University, Bhubaneswar, India

Teaching and work experience

Aarhus University:

- 2025 Instructor (lecturer), [Introduction to Analytic Number Theory](#), spring

2025 Mat Lab instructor (homework help), **Numerical Linear Algebra**, spring
2024 Mat Lab instructor (homework help), **Introduction to Mathematics and Optimization**, fall
2024 Mat Lab instructor (homework help), **Linear Algebra and Mathematical Analysis 2**, spring

Texas A&M University:

2023 Instructor of record, **MATH 167 - Explorations in Mathematics**, spring
2022 Instructor of record, **MATH 167 - Explorations in Mathematics**, fall
2022 Recitation and Python lab TA, **MATH 152 - Engineering Mathematics II**, spring
2021 Recitation and Python lab TA, **MATH 151 - Engineering Mathematics I**, fall
2021 **Research Assistant**, summer
2021 Recitation and Python lab TA, **MATH 147 - Calculus I for Biological Sciences**, spring
2020 Recitation and Python lab TA, **MATH 152 - Engineering Mathematics II**, fall
2020 Grader, **MATH 470 - Communications and Cryptography**, summer
2020 Grader, **MATH 304 - Linear Algebra**, summer
2020 Grader, **MATH 411 - Mathematical probability**, spring
2019 Grader, **MATH 415 - Modern Algebra I**, fall
2019 Help session TA, **MATH 304 - Linear Algebra**, fall

Clemson University:

2019 Grader, **MATH 1080 - Calculus of One Variable II**, summer
2019 Grader, **MATH 8530 - Matrix Analysis (graduate)**, spring
2019 Lab TA, **MATH 1051 - Precalculus Laboratory**, spring
2019 Lab TA, **MATH 1991 - Problem Solving in Mathematics Laboratory**, spring
2018 Advanced teaching experience (under RTG grant from NSF), **MATH 4120 - Introduction to Modern Algebra**, fall
2018 Grader, **MATH 8050 - Data Analysis (graduate)**, summer
2018 Grader, **MATH 8050 - Data Analysis (graduate)**, spring
2018 Grader, **MATH 8530 - Matrix Analysis (graduate)**, spring
2018 Grader, **MATH 3110 - Linear Algebra**, spring
2017 Lab TA, **STAT 2301 - Statistical Methods I Laboratory**, fall
2017 TA (duties: preparing quizzes and worksheets), **MATH 1080 - Calculus of One Variable II**, summer
2017 Grader, **MATH 1060 - Calculus of One Variable I**, summer
2017 Classroom TA and Grader, **MATH 1080 - Calculus of One Variable II**, spring

Outreach

2022 **Math Circle** leader at the Texas A&M math circle, April 9

Peer review

Journal of the London Mathematical Society (JLMS)

Conferences organized

2025 Main organizer of [The Aarhus Automorphic Forms Conference and Summer School](#), August 4-15
Aarhus University, Aarhus, Denmark

Honors

The Kishore Vaigyanik Protsahan Yojana (KVPY) fellowship, awarded 2011
Funded by the Department of Science and Technology (Govt. of India) and implemented by IISc, Bangalore

Regional Mathematical Olympiad (RMO 2010), West Bengal, India

Languages

Proficient in **Bengali**, **Hindi**, and **English**

Learning **Danish** (Danskuddannelse 3, module 3 ongoing as of April 2025)