

# Christina Giannitsi (she/her)

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Skiles 163 🏢  
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## Education

- 2017-PRESENT **PhD** in Mathematics, expected graduation: May 2023. [School of Mathematics](#), College of Sciences, Georgia Institute of Technology, Atlanta.  
“**Improving and maximal inequalities in discrete harmonic analysis**”  
Advisor: [Michael Lacey](#)
- 2022 **MS** in Mathematics. [School of Mathematics](#), College of Sciences, Georgia Institute of Technology, Atlanta.
- 2017 **MS** in Pure Mathematics. [Department of Mathematics](#), Faculty of Sciences, Aristotle University of Thessaloniki.  
“**The reflection principle on the hyperbolic plane**” ([pdf in Greek](#)).  
Advisor: [Dimitrios Betsakos](#)
- 2015 **BS** in Mathematics. [Department of Mathematics](#), Faculty of Sciences, Aristotle University of Thessaloniki.

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## Papers & Preprints

5. (in preparation) **Two parameter commutators and product BMO: Dyadic case**, with Komla Domelevo, Michael T. Lacey, Jill Pipher, Yumeng Ou, Stefanie Petermichl, and Brett Wick.
4. (in preparation) **Gaussian Integers: Improving inequalities for primes and the Goldbach Conjecture**, with Ben Krause, Michael T. Lacey, Hamed Mousavi, and Yaghoub Rahimi.
3. **A lower estimate on the square function of an indicator set**, (2022) with Michael T. Lacey, (submitted to Proceedings of the AMS)
2. **Improving and maximal inequalities for primes in progressions** (2021), with Michael T. Lacey, Hamed Mousavi, and Yaghoub Rahimi. [arXiv](#) (Banach J. Math. Anal. (2022) <https://doi.org/10.1007/s43037-022-00191-9>)
1. **Averaging with the divisor function:  $\ell^p$ -improving and sparse bounds** (2021), [arXiv](#) (Rocky Mountain Journal of Mathematics, (2022) <https://doi.org/10.1216/rmj.2022.52.2027>))

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## Awards & Recognitions

- **Thank a Teacher Award** (Fall 2022), Center for Teaching and Learning, Georgia Institute of Technology

- **Graduate Student Instructor of the Year Award** 2021 - 2022, Georgia Institute of Technology, School of Math
- **Outstanding Online Graduate Student Instructor Award** 2020 - 2021, Georgia Institute of Technology, School of Math
- **Outstanding TA Award** 2021, Georgia Institute of Technology, School of Math
- **Festa Fellowship** 2020. A School of Mathematics award for superior academic and leadership skills, Georgia Institute of Technology
- **Graduate TA Recognition** 2019 - 2020, Georgia Institute of Technology, School of Mathematics.
- **Thank a Teacher Award** (Fall 2019), Center for Teaching and Learning, Georgia Institute of Technology
- **3rd place Admission Award** (2011), from the Greek National Scholarship Foundation.

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## Teaching

PRIMARY INSTRUCTOR	<b>Probability &amp; Statistics</b> (MATH3215N online for the second half of the semester) Spring 2020, (MATH3215L) Fall 2022 - Georgia Institute of Technology <b>Linear Algebra</b> (MATH1554A hybrid course) Summer 2021 - Georgia Institute of Technology <b>Finite Math</b> (MATH1711A online course) Summer 2020, (MATH1711G) Spring 2023 - Georgia Institute of Technology <b>Survey of Calculus</b> , (MATH1712A) Summer 2019 - Georgia Institute of Technology
TEACHING ASSISTANT	<b>MS Analytics Boot Camp</b> , College of Computing, Summer 2021 - Georgia Institute of Technology <b>Integral Calculus</b> , (MATH1552A1) Fall 2017 - Georgia Institute of Technology <b>Survey of Calculus</b> , (MATH1712D3 & D4) Fall 2019, (MATH1712B1 & D1) Fall 2018 - Georgia Institute of Technology <b>Differential Equations</b> (MATH2552A1 & SOUP*) Summer 2018 - Georgia Institute of Technology
GRADER	Analysis II, (MATH4318) Spring 2022 - Georgia Institute of Technology Analysis I, (MATH4317) Fall 2021 - Georgia Institute of Technology Mathematical Methods in Applied Sciences I (MATH6701A & Q online sections), Summer 2021 - Georgia Institute of Technology
TUTOR	Real Analysis, Complex Analysis, Differential and Integral Calculus, Galois Theory & Graduate Complex Analysis (2014-2016)

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\*SOUP = Summer Online Undergraduate Program

Worked/working as a Research Assistant at Georgia Institute of Technology instead of teaching during: Spring 2018, Spring 2019, Fall 2020, Spring 2021, Fall 2021, Spring 2022, Summer 2022.  
Supporting grants by the US National Science Foundation: DMS-1600693, DMS-1949206

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## Invited Talks

- 2023 (upcoming) **Spring Southeastern AMS Sectional Meeting**. Georgia Institute of Technology
- 2022 **2nd Symposium for the 100 years of the Hellenic Mathematical Society**. “Averaging with Primes in Progressions”, National Institute of Technology, Athens, Greece
- AWM Research Symposium**. “Averaging with Primes in Progressions”, The Institute for Mathematics and its Applications, Minneapolis, Minnesota

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## Talks & Presentations

- 2022 **Georgia Tech Graduate Student Colloquium** “Improving and maximal inequalities: An introduction to the discrete setting”, School of Mathematics, Georgia Institute of Technology
- Kennesaw State Discrete Math Seminar** “Averaging with Primes in Progressions” Kennesaw State University
- Louisiana State Number Theory Seminar** “Averaging with Primes in Progressions”, Louisiana State University
- 2021 **George M. Georganopoulos Analysis Seminar** “Improving and sparse bounds for a discrete averaging operator involving the divisor function”, Aristotle University of Thessaloniki, Greece.
- Georgia Tech Analysis Seminar** “Improving and sparse bounds for a discrete averaging operator involving the divisor function”, Georgia Institute of Technology
- JMM 2021 - AWM Graduate Student Poster Session**. “[Averaging with the divisor function](#)”.
- 2020 **Oral Exam - Research Proposal** Georgia Institute of Technology  
Committee members: Michael Lacey (advisor), Christopher Heil, Doron Lubinsky, Shahaf Nitzan.
- Student Analysis Seminar** “The Reflection Principle On The Hyperbolic Plane”, Georgia Institute of Technology, School of Mathematics.
- 2019 **Student Analysis Seminar** “A brief overview of sparse bounds”, Georgia Institute of Technology, School of Mathematics.
- 2018 **Georgia Institute of Technology High-Dimensional Seminar** “[Giannopolos’s upper bound for the Banach-Mazur distance to the cube](#)”, Georgia Institute of Technology, School of Math

- 2017 **Master Thesis Defense** “The Reflection Principle On The Hyperbolic Plane”, Aristotle University of Thessaloniki, Department of Mathematics. Committee members: Dimitrios Betsakos (advisor), Petros Galanopoulos, Anestis Fotiadis

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### Summer/Winter Schools & Workshops: Participated

- 2022 **“Analysis on the hypercube with applications to quantum computing”**, American Institute of Mathematics (AIM), San Jose, California  
Included invited expository talk and group work on open problems.
- 2021 **“Discrete Analysis and Complexity of Quantum Algorithms”**, University of California Irvine and University of Cambridge, [online](#)  
Included expository talks of all participants.
- 2020 **CUNY learning seminar in Machine Learning**, City University of New York, [online](#)
- 2019 **4th BCAM-UPV/EHU summer school on harmonic analysis and PDEs: Restriction theory**, Bilbao, Spain  
Included group work and poster presentations in groups of all participants.
- 2015 **Applying MatLab and Control System Toolbox and Simulink packages in Control Theory**, Aristotle University of Thessaloniki, Greece (semester-long winter school)
- 2013 **GAS GeoGebra Software - Dynamic Mathematics for Schools**, 5<sup>th</sup> International Week Dedicated to Mathematics, Thessaloniki, Greece (summer school)

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### Conferences: Attended

- 2022 **“Extremal Problems in Harmonic Analysis, Convexity, and Bellman Functions”**, Institute for Computational and Experimental Research in Mathematics (ICERM), Brown University, Providence, Rhode Island  
**Clemson-GaTech Time-Frequency Meeting**, Georgia Institute of Technology, Atlanta, Georgia  
**Guido Weiss Memorial Conference On Harmonic Analysis**, Washington University in St Louis, St Louis, Missouri  
**38th Southeastern Analysis Meeting (SEAM)**, University of Florida  
**paraDIGMS: Diversity in Graduate Mathematical Sciences - Spring Conference**, Institute for Mathematical and Statistical Innovation, [online](#)
- 2021 **paraDIGMS: Diversity in Graduate Mathematical Sciences - Spring Conference**, Institute for Mathematical and Statistical Innovation, [online](#)  
**Joint Math Meetings**, AMS-MAA, [online](#)

- 2020 **2nd Mid Atlantic Analysis Meeting**, University of Pennsylvania, online  
**paraDIGMS: Diversity in Graduate Mathematical Sciences - Fall Conference**, Institute for Mathematical and Statistical Innovation, online
- 2019 **Analysis Winter Meeting 2019**, Aristotle University of Thessaloniki , Greece  
**4th Northeastern Analysis Meeting (NEAM)**, Syracuse University, Syracuse, New York  
**February Fourier Talks 2019**, University of Maryland, College Park MD
- 2018 **Analysis Winter Meeting 2018**, Aristotle University of Thessaloniki, Greece  
**34th Southeastern Analysis Meeting (SEAM)**, Georgia Institute of Technology, Atlanta GA
- 2017 **Analysis Summer Meeting 2017**, Aristotle University of Thessaloniki, Greece
- 2016 **Analysis Winter Meeting 2016**, Aristotle University of Thessaloniki, Greece  
**Analysis Summer Meeting 2016**, Aristotle University of Thessaloniki, Greece
- 2015 **Analysis Winter Meeting 2015**, Aristotle University of Thessaloniki, Greece  
**Analysis Summer Meeting 2015**, Aristotle University of Thessaloniki, Greece

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## Professional Trainings

- 2022 **Level up: an advanced LGBTQIA allyship course**, LGBTQIA Resource Center at Georgia Institute of Technology  
 Topics covered: Historical Foundations, Trans 201, QPOC and Racial Justice, Intersectionality, Advanced Allyship.  
**Inclusive Language workshop**, organized by the DEI committee of the School of Math, Georgia Institute of Technology.  
**Psychological First Aid**, Bloomberg School of Public Health, Johns Hopkins University on Coursera  
**Level Up Part II: An Advanced Allyship Course**, Georgia Institute of Technology LGBTQIA Resource Center  
 Topics covered: Intersex 101, Non-monosexual identities, Legislative advocacy, Difficult Dialogues, Queer Atlanta bus tour.  
**GTREET 2022** Georgia Institute of Technology Retreat Exploring Effective Teaching offered by Georgia Institute of Technology's Center for Teaching and Learning
- 2021 **Question, Persuade, Refer (QPR) Training** Suicide Prevention Gatekeeper Training - End Suicide Initiative at Georgia Institute of Technology  
**Implicit Bias Training** Georgia Institute of Technology, School of Math  
**Trans 101** Georgia Institute of Technology LGBTQIA Resource Center
- 2020 **Safe Space Training** Georgia Institute of Technology LGBTQIA Resource Center

- 2019 **Graduate Student Instructor Training**, Georgia Institute of Technology, School of Math
- 2017 **Graduate Teaching Assistant Training**, Georgia Institute of Technology, School of Math

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## Professional Service

- SERVICE** **CoS Dean's Graduate Advisory Council**, Georgia Institute of Technology, College of Sciences, Spring 2021 - Summer 2022
- Graduate Student Council**, Georgia Institute of Technology, School of Mathematics Summer 2019 - present
- Graduate Student Orientation Week**, Georgia Institute of Technology, School of Mathematics 2019, 2020, 2021
- International Graduate Student Orientation Week**, Georgia Institute of Technology, School of Mathematics 2019, 2020, 2021, 2022
- Masters Student Orientation Day**, Georgia Institute of Technology, School of Mathematics 2019
- International Post-Doc Teaching Orientation Day**, Georgia Institute of Technology, School of Mathematics 2019
- MENTORING** **Peer Graduate Student Mentoring Initiative**, Georgia Institute of Technology, School of Mathematics 2020 - present
- Atlanta Undergraduate Research Mathematics Seminar (AURMS)**, Fall 2022 (undergraduate student mentoring)
- Directed Reading Program**, Georgia Institute of Technology, School of Mathematics (*Mathematics of Machine Learning*) Spring 2021, (*Ergodic Theory and Applications in Dynamical systems*) Fall 2020
- ORGANIZING** **Student Analysis Seminar**, Georgia Institute of Technology, School of Mathematics, Fall 2019, Spring 2020, Fall 2020
- Peer Grad Mentoring Initiative**, Georgia Institute of Technology, School of Mathematics 2020 - present
- CO-ORGANIZING** **Atlanta Undergraduate Research Mathematics Seminar (AURMS)**, Summer 2021 - present
- VOLUNTEERING** **Admitted Graduate Student Day presentation & panel**, Georgia Institute of Technology, School of Mathematics 2018, 2020, 2021, 2022
- AWM Graduate School Recruiting panel**, Georgia Institute of Technology, AWM Chapter, Spring 2021, Spring 2022

**Graduate School panel for honor students**, Georgia Institute of Technology, School of Mathematics Spring 2021

**Prospective Graduate Student Day panel**, Georgia Institute of Technology, School of Mathematics 2019, 2020, 2021, 2022

**Welcome panel for Graduate Student Orientation**, Georgia Institute of Technology, School of Mathematics 2018, 2019, 2020, 2021

**Welcome panel for International Graduate Student Orientation**, Georgia Institute of Technology, School of Mathematics 2018, 2019, 2020, 2021

**Georgia Institute of Technology High School Math Competition** 2018, 2019 (assisted with organization, proctoring, and grading)

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## Other Skills

Programming Languages:

- C++ (elementary level)
- Pascal (elementary level)
- Python (elementary level)

Software:

- MS Office, and L<sup>A</sup>T<sub>E</sub>X
- GeoGebra, Sketchpad, Cabri and Cabri 3D
- MatLab, SPSS, R Studio, Stata

Languages:

- Greek Native speaker
- English Certificate of Proficiency in English - University of Cambridge  
Certificate of Proficiency in English - University of Michigan  
National Foreign Language Exam System (KPG) - Level B2  
TOEFL iBT (October 2016)
- German Goethe Zertifikat B2  
National Foreign Language Exam System (KPG) - Level C1
- Spanish currently learning
- ASL American Sign Language (elementary level)

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## References

- Research *Michael Lacey* (lacey@math.gatech.edu), Georgia Institute of Technology (advisor)  
*Rui Han* (rhan@lsu.edu), Louisiana State University  
*Ben Krause* (ben.krause@kcl.ac.uk), King's College London
- Teaching *Klara Grodzinsky* (klara.grodzinsky@math.gatech.edu), Director of Teaching Assistants of the School of Mathematics Georgia Institute of Technology