

Giancarlo Castellano

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I am a PhD student in mathematics at the University of Vienna. My current research revolves around special values of Rankin–Selberg automorphic L -functions.

Education

- 2017–present PhD in mathematics, University of Vienna
Supervisor: Harald Grobner
Thesis: “Whittaker periods of isobaric sums over totally real fields and special L -values”
- 2015–2017 Master’s degree in mathematics, University of Vienna
Supervisor: Leonhard Summerer
Thesis: “The Hasse–Minkowski Theorem for global fields”
- 2012–2015 Bachelor’s degree in mathematics, University of Vienna
Supervisor: Herwig Hauser
Theses: • “Elliptic curves and Fermat’s Last Theorem”
 • “ p -adic analysis and its applications”

Work experience

- 2021–present Doctoral researcher, Faculty of Mathematics, University of Vienna
PI: Harald Grobner (Grants Y966, P32333 of the Austrian Science Fund)
- 2018–2021 Doctoral researcher and lecturer, Faculty of Mathematics, Univ. of Vienna
Uni:docs Fellowship Programme for Doctoral Candidates
- 2018–2020 Adjunct Lecturer, College of Teacher Education Burgenland
- 2018–2019 Adjunct Lecturer, Faculty of Physics, University of Vienna
- 2017 Student assistant, Faculty of Mathematics, University of Vienna
PI: Herwig Hauser (Grant P25652 of the Austrian Science Fund)

Teaching

- 2019–2021 Faculty of Mathematics, University of Vienna:
• *Locally compact groups* (spring 2021; joint with Harald Grobner), advanced lecture course in the master’s programme.
• Problem session *Introduction to analysis* (fall 2019/20 & fall 2020/21).
• Problem session *Discrete mathematics* (spring 2020).
- 2018–2020 College of Teacher Education Burgenland:
• *Stochastics I* (fall 2018/19 & fall 2019/20), lecture course and problem session.
• Supervision of a bachelor’s thesis on the RSA encryption system.
- 2018–2019 Faculty of Physics, University of Vienna:
• Problem session *Analysis I for physicists* (fall 2018/19).

- Problem session *Analysis II for physicists* (spring 2018).
- 2015–17 Faculty of Mathematics, University of Vienna:
- Tutorial for *Introduction to mathematics* (fall 2015/16 & fall 2016/17).

Scholarships and honors

- 2018–2021 Uni:docs Fellowship Program for Doctoral Candidates
- 2017 Participant in the Univ. of Vienna’s High Potential Programme *NaturTalente*
- 2013, . . . , 2017 Performance Scholarship of the University of Vienna
- 2011, 2012 Inclusion in the Italian “National Excellence Honors Roll”

Presentations and talks

- Jan. 2023 Fordham University, New York City
Topic: Overview of my dissertation topic and presentation of results
- Jan. 2022 Univ. of Vienna, Seminar “Representation Theory and Automorphic Forms”
Topic: Overview of and progress made in my dissertation topic
- July 2019 University of Vienna, Workshop of the Algebraic Geometry research group
Topic: Moduli spaces of elliptic curves with level structure
- Apr. 2019 Vienna School of Mathematics (VSM), PhD Colloquium
Topic: The local-global principle for quadratic forms over \mathbb{Q}
- Jan. 2019 University of Vienna, joint seminar of the algebra and number theory group
Topic: Fermat’s Last Theorem and the modularity theorem
- Nov. 2017 University of Vienna, seminar of the Algebraic Geometry research group
Topic: An adèlic proof of the Riemann–Roch theorem

Formative and scientific activities (selection)

- 2022 Participant in the *Summer School on the Langlands program*, IHES
- 2022 Participant in the event *Diversity in Academia* of the Austrian Association of Women in Mathematics
- 2022 Participant in the workshop *Minimal Representations and Theta Correspondence*, Erwin Schrödinger Institut (ESI), Vienna
- 2021–present Organizer of the PhD Colloquium of the Vienna School of Mathematics (VSM)
- 2021–2022 Organizer of the VSM mini-course *Introduction to the Mathematics of String Theory*
- 2021 Participant in the VSM workshop *A PhD in mathematics – career possibilities & gender aspects*
- 2020 Participant in the *Cross-Atlantic Representation Theory and Other topics ONline* (CAR-TOON) conference
- 2019 Participant in the conference *Automorphic p-adic L-functions and regulators*, Lille
- 2018 Participant in the conference *New Developments in Automorphic Forms*, Seville
- 2015, 2016, 2017 Participant in the Vojtěch Jarník International Mathematical Competition
- 2015 Participant in the first three weeks of the special semester on *Artin Approximation and Singularities*, CIRM Luminy

IT skills

Proficiency with: \LaTeX , MS Word and MS Excel; moderate familiarity with: MATLAB/Octave, bash, HTML, CSS and Python; rudiments of: Java and Mathematica.

Languages

Italian — native; English, German — fluent; French, Spanish — intermediate.