Dr. Oscar Ortega Moreno

CONTACT INFORMATION

Institute of Discrete Mathematics and Geometry
Vienna University of Technology
Wiedner Hauptstraße 8–10
1040 Vienna, Austria
5th floor, Tower A, DA 05 A09
oscarortem@gmail.com

EDUCATION

Warwick Mathematics Institute, University of Warwick

Ph.D. in Mathematics, Oct 2019. Advisor: Prof. Keith M. Ball FRS.

M.Sc. in Mathematics with distinction, Oct 2015.

Instituto Tecnológico Autónomo de México

B.Sc. in Applied Mathematics with honors, Sep 2014.

RESEARCH INTERESTS

Geometric Functional Analysis, Convex and Discrete Geometry.

GRANTS

- *Fixed Point Problems and Isoperimetric Inequalities*;
  Funded by the Austrian Science Fund (FWF) 2022 – 2025;
  Principal Investigator; Funding 294,016 Euro;
  Project number: ESP 236;
  Grant DOI 10.55776/ESP236

PUBLICATIONS

- L. Brauner, Georg C. Hofstätter and O. Ortega-Moreno, *The Klain Approach to Zonal Valuations*, (2024) submitted.
- L. Brauner, Georg C. Hofstätter and O. Ortega-Moreno, *Lefschetz Operators on Convex Valuations*, (2024) submitted.
- L. Brauner and O. Ortega-Moreno, *Fixed Points of Mean Section Operators*,Trans. Amer. Math. Soc. **378** (2025).
- O. Ortega-Moreno, *The Complex Plank Problem, Revisited*, Discrete Comput Geom **71** (2024).
- O. Ortega-Moreno, *Iterations of Minkowski Valuations*, J. Funct. Anal. **284** (2023).
- O. Ortega-Moreno and F. Schuster, *Fixed Points of Minkowski Valuations*, Adv. Math. **392** (2021)
- O. Ortega-Moreno, *An Optimal Plank Theorem*, Proc. Amer. Math. Soc. **149** (2021).
- K. Ball, O. Ortega-Moreno, and M. Prodromou. *Hadamard Matrices and 1-Factorization of Complete Graphs.* Mathematika **65** (2019).

SELECTED CONFERENCE TALKS

- *Moment inequalities for Gaussian vectors*,
  Convex Geometry in Florence, Florence,
  June 2024.
- *The complex plank problem, revisited*,
  Harmonic Analysis and Convexity, Banff International Research Station, Banff,
  November 2023.
- *Iterations of Minkowski valuations*,
  Conference on Convex Geometry and Geometric Probability, Salzburg,
  September 2023
- *Fixed points of mean section operators*,
  Convex geometry - Analytic aspects, Cortona,
  June 2023.
- *Iterations of Minkowski valuations*,
  Geometric Valuation Theory - from convex sets to functions, Castro Urdiales,
  June 2023.
- *Fixed points of Mikowski valuations*,
  Special session on 'New perspectives on the Brunn–Minkowski theory', CMS 75th +1 Anniversary Summer Meeting, Ottawa,
  June 2021.
- *An optimal plank theorem*,
  Conference on 'Geometric Tomography', Banff International Research Station,
  February 2020.
- *An optimal plank theorem*,
  Conference on 'Convex, Discrete and Integral Geometry', Jena,
  September 2019.

TEACHING EXPERIENCE

University of Warwick
2015 - 2016
Teaching Assistant:
MA359 Measure Theory.
MA225 Differentiation.
Supervisor:
Second-year undergraduate students.
2016 - 2017
Teaching Assistant:
MA359 Measure Theory.
MA3G8 Functional Analysis II.
MA225 Differentiation.
Supervisor:
Second-year undergraduate students.
2017 - 2018
Teaching Assistant:
MA359 Measure Theory.
MA3G8 Functional Analysis I.
Supervisor:
Second-year undergraduate students.
2018 - 2019
Teaching Assistant
MA359 Measure Theory.
MA3G8 Functional Analysis II.
MA3J2 Combinatorics II.
Supervisor:
Second-year undergraduate students.

Vienna University of Technology
2020 - 2021
Teaching Assistant
Introduction to smooth manifolds.
2022 - 2023
Teaching Assistant
Introduction to smooth manifolds.
2023 - 2024
Lecture
Lie groups and representation theory.

RELEVANT SKILLS

Languages: Spanish (Native), English (Fluent). German (A2)
Programming: Python, MATLAB, Mathematica.

REFERENCES

- Prof. Keith M. Ball FRS FRSE, Warwick Mathematics Institute, University of Warwick, +44 (0)24 7652 3736, K.M.Ball@warwick.ac.uk
- Prof. Franz Schuster, Institut für Diskrete Mathematik und Geometrie, TU Wien, +43-1-58801/10475, schuster@dmg.tuwien.ac.at
- Prof. Thomas Wannerer, Institut für Mathematik, Friedrich-Schiller-Universität Jena, +49 3641 9 46145, thomas.wannerer@uni-jena.de