

# Davide Leonessi

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## Education

- from August 2022 PhD in Mathematics, Graduate Center, City University of New York
- Receiving a Graduate Center Fellowship, with full funding for 5 years
- September 2021 MSc in Mathematics and Foundations of Computer Science, University of Oxford
- Awarded a Distinction
  - Defended the dissertation “Transfinite game values in infinite games” under the supervision of Prof. Joel David Hamkins; received the mark of 88
  - Took courses on Game Theory, Topological Group Theory, Quantum Computing, Model Theory, and Axiomatic Set Theory; final average mark of 81
- June 2019 BA in Mathematics, St Hugh’s College, University of Oxford
- Achieved 2:1
  - Taken both pure and applied modules, in particular Probability, Algebra, Topology, and Logic

## Publications

- [1] Davide Leonessi. “Transfinite game values in infinite games” (2021). MSc dissertation, Mathematics and Foundations of Computer Science, University of Oxford. arXiv:2111.01630, <http://wp.me/pdrDew-N>.
- [2] Joel David Hamkins and Davide Leonessi. “Transfinite game values in infinite draughts” (2021). arXiv:2111.02053, <http://wp.me/pdrDew-1I>. *To appear in Integers*.
- [3] Joel David Hamkins and Davide Leonessi. “Infinite Hex is a draw” (2022). arXiv:2201.06475, <https://wp.me/pdrDew-2s>. *To appear in Integers*.

## Talks

- May 2022 *The games of infinite draughts and infinite Hex*, University of Oxford, Junior Logic Seminar
- June 2021 *Transfinite game values in infinite games*, London Mathematical Society, Summer Graduate Student Meeting

## Honours and Prizes

- June 2021 Best Graduate Student Talk Prize, London Mathematical Society  
Received for the presentation of my MSc dissertation research in front of PhD students and academics at the LMS Summer Graduate Student Meeting
- September 2019 Bursary to attend “Prospects in Mathematics”, London Mathematical Society Meeting for students interested in further education held at the University of Lancaster
- May 2014 2<sup>nd</sup> prize, Philosophical Debating Olympiads, Italian Philosophical Society  
Selected to join my high school team at the national final held in Faenza, Italy
- September 2013 Bursary to attend course “Senior”, Scuola Normale Superiore of Pisa  
Selected to attend intensive course in preparation of mathematical competitions
- September 2011 Mention in the National Registry of Excellence of the Italian Ministry of Education  
Received after winning a place at the international final of the International Championship of Mathematical Games held by the French Federation of Mathematical Games in Paris. [indire.it](http://indire.it)

## Experience

- December 2020 Admissions Exam Marker, Mathematical Institute, University of Oxford
- Learned marking conventions for the MAT, the Maths test for undergraduate admissions
  - Cooperated with a team of graduate students to mark consistently 2000 scripts
- Oct. 2019 – June 2020 Private Tutor, Arezzo, Italy
- Tutored 5 grade 9-10 students in Mathematics on a weekly basis
  - Tutored 3 grade 11-12 students in Mathematics, Physics, and Chemistry
  - All students had a marked increase in confidence and performance during exams
- July – August 2019 Data Scientist, Imaflora, Piracicaba (São Paulo), Brazil
- Analysed a comprehensive data set of timber trade taken place in Brazil over a decade, which was recently released by the Brazilian government
  - Developed a tool in Python that recognizes potentially criminal productive behaviour of timber companies, using a Network Theory approach for the first time in this setting
  - Presented and discussed the approach at a workshop organized by the University of São Paulo, with academics and industry representatives
- June – Sept. 2017 Researcher, Mathematical Institute, University of Oxford
- Applied Network Theory to predict the industrial pollution of US cities
  - Analysed large data sets with Matlab; visualized complex networks with Gephi
  - Attended the multidisciplinary conference “Oxford Summer School in Economic Networks”
- July 2016 Visiting Student, IARU Program, Peking University, Beijing
- Received a bursary to attend a course on Cultural Psychology and an introduction to Mandarin
  - Submitted a research proposal at the end of the course and received grade A

## Skills and interests

- Languages Native speaker of Italian, intermediate knowledge of Portuguese, basic level of French and Spanish
- Programming Experience with Python, Matlab, and Sage; basic proficiency of C
- Rowing Taken part in inter-collegiate rowing regattas with the St Hugh’s College Boat Club at Oxford
- Trekking Walked 900 km in Northern Spain along a Medieval route over 5 weeks
- Volunteering Oxfam Italy volunteer in local and national fundraising campaigns
- Acting Attended acting courses and acted in annual plays for 9 years at “Libera Accademia del Teatro”
- Traditional events Volunteer for the historical re-enactment of the medieval Saracen Joust held in my home town