

Curriculum vitae



1 Personal Information

- First name: Dragoș
- Surname: Manea
- Date of birth: 28th November 1998
- Street address: Bld. Muncii Nr. 14, Bl. E16, Ap. 19, Brașov, Romania
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2 Education

- 2021 - present: PhD student at "Simion Stoilow" Mathematical Institute of the Romanian Academy, Bucharest
Subject: *Qualitative properties for local and non-local diffusion equations* – supervisors: Prof. Ioan-Liviu Ignat (e-mail: liviu.ignat@imar.ro) and Assoc. Prof. Cristian Cazacu (e-mail: cristian.cazacu@fmi.unibuc.ro).
- 2020-2021: Master of Science in Mathematical Sciences, University of Oxford (Distinction Award)
Master's Dissertation: *Spectral sets and normal dilations* – supervisor: Prof. Stuart White
- 2017-2020: Bachelor in Mathematics – Faculty of Mathematics and Computer Science, University of Bucharest, Romania (valedictorian)
Bachelor Thesis: *Critical Point Theory for Poincaré Relativistic Lagrangian* – supervisor: Prof. Cristian Bereanu
- 2013-2017: High School – *Andrei Șaguna* National College, Brașov, Romania (valedictorian)
- 2010-2017: *Performance in Mathematics for Secondary and High School* centre in Brașov

3 Working Experience

- 2021 - present: Research Assistant at "Simion Stoilow" Mathematical Institute of the Romanian Academy, Bucharest
- 2020: Teacher at Centre for Excellence in Mathematics *Hai la olimpiada – Emag Foundation*, Brașov, Romania
- 2019-2020: Teacher at Centre for Excellence in Mathematics *Hai la olimpiada – Emag Foundation*, Bucharest

4 Grants

- January 2023 - present – member in the national Grant TE 146/2022 "Fine analysis of PDEs" PN-III-P1-1.1-TE-2021-1539
- May 2021 - December 2023 – member in the national Grant 0794/2020 "Spectral Methods in Hyperbolic Geometry" PN-III-P4-ID-PCE-2020-0794.

5 Publications

- Cristian Cazacu, Liviu I. Ignat and Dragoș Manea, *The Hardy inequality and large time behaviour of the heat equation on $\mathbb{R}^{N-k} \times (0, \infty)^k$* , Journal of Differential Equations, vol. 375, 2023, pag. 682-705, DOI 10.1016/j.jde.2023.09.007.

6 Preprints

- María del Mar González, Liviu I. Ignat, Dragoş Manea and Sergiu Moroianu, *Concentration limit for non-local dissipative convection-diffusion kernels on the hyperbolic space*, submitted, preprint arXiv:2302.02624.

7 Conferences and talks

- 5 - 9 February 2024 – “Final Conference of the Action *Mathematical Models for Interacting Dynamics on Networks*” at University of Minho, Braga, Portugal, <https://w3.math.uminho.pt/FinalConfMatDynNet>:
 - presentation entitled *A Payne–Whitham model of urban traffic networks in the presence of traffic lights* – joint work with Mauritz Cartier van Dissel (Vienna) and Paweł Gora (Warsaw).
- 30 June - 5 July 2023 – “The Tenth Congress of Romanian Mathematicians ” in Piteşti, Romania, <http://www.imar.ro/~congrmatro10/>:
 - presentation entitled *Concentration limit for non-local dissipative convection-diffusion kernels on the hyperbolic space* – based on a collaboration with Prof. María del Mar González (Universidad Autónoma de Madrid), Prof. Ioan-Liviu Ignat (Bucharest) and Prof. Sergiu Moroianu (Bucharest).
- 6 - 10 March 2023 – “Nonlocal Equations: Analysis and Numerics” at Bielefeld University, Bielefeld, Germany, https://www.sfb1283.uni-bielefeld.de/2023_BI-nonlocal/:
 - presentation entitled *Concentration limit for non-local dissipative convection-diffusion kernels on the hyperbolic space*.
- 5 - 10 October 2022 – “Heating up networks - analysis meets applications meeting” at Fraunhofer Institute for Industrial Mathematics, Keiserslautern, Germany, <https://mat-dyn-net.eu/en/activities/ca18232-heating-up-networks-analysis-meets-applications-workshop>:
 - presentation entitled *A Non-local non-linear convection-diffusion problem on metric trees* – based on a joint work with Prof. Ioan-Liviu Ignat (Bucharest).
- 21 August - 02 September 2022 – “IX Partial differential equations, optimal design and numerics” at Centro de Ciencias de Benasque “Pedro Pascual”, Aragon, Spain, <https://www.benasque.org/2022pde/>:
 - presentation entitled *A Non-local non-linear convection-diffusion problem on the Hyperbolic space* – based on a collaboration with Prof. María del Mar González (Universidad Autónoma de Madrid) Prof. Ioan-Liviu Ignat (Bucharest), Prof. Sergiu Moroianu (Bucharest);
 - presentation entitled *A Non-local non-linear convection-diffusion problem on metric trees*.
- 19 May - 20 May 2022 – “Workshop for Young Researchers in Mathematics – 11th Edition” at “Simion Stoilow” Mathematical Institute of the Romanian Academy, <https://fmi.univ-ovidius.ro/cercetare/wyrm2022/>:
 - presentation entitled *A Non-local non-linear convection-diffusion problem on the Hyperbolic space*.

8 Summer Schools and Internships

- 5 - 13 July 2023 – “8th French-Romanian Summer School on Applied Mathematics”, Sinaia, Romania (participant).
- 1 May - 29 June 2023 – Internship at the “Chair for Dynamics, Control, Machine Learning and Numerics - Alexander von Humboldt Professorship” at Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany – founded by the COST Action CA18232 “Mathematical models for interacting dynamics on networks”.

- 20 - 24 March 2023 – Spring School “Recent trends in the mathematics of complex materials”, Bonn, Germany (participant).
- 6 - 12 July 2022 – ”7th French-Romanian Summer School on Applied Mathematics”, Sinaia, Romania (participant).

9 Awards

- 2020: *Best Bachelor Thesis Award in Exact Sciences and Engineering* – University of Bucharest Senate Awards.

10 Competitions

- 2017-2019: Proofreader and teacher at the *Mathematical Gazette and ViitoriOlimpici.ro* competition <https://www.viitoriolumpici.ro>
- 2018: Coordinator at the *59th International Mathematical Olympiad*, Cluj-Napoca, Romania.
- 2018-2020: Coordinator at *Romanian Master in Mathematics* competition – <http://rmms.lbi.ro/>
- 2011-2017: *National Mathematical Olympiad of Romania* – first prize (2017), honourable mention (2016)
- 2017: *Balkan Mathematical Olympiad* – silver medal
- 2019-2020: *International Mathematics Competition for University Students* (IMC) – first prize
- 2018-2019: *South Eastern European Mathematical Competition for University Students* (SEEMOUS) – gold medal (2019), silver medal (2018)
- 2011-2017: *Mathematical Gazette and ViitoriOlimpici.ro* competition (<https://www.viitoriolumpici.ro>) – from 9th grade to 12th grade – first prize

11 Language Skills

- Mother tongue: Romanian
- English: C1 level (International English Language Testing System – IELTS – 2019; Cambridge Certificate in Advanced English – CAE – 2016)
- German: B1

12 Digital Skills

- Web Design (HTML, CSS, JavaScript, PHP): advanced skills
- C, C++, Python, MATLAB: good skills
- Java, MySQL: basic skills