Alessio Cela

PhD student in Mathematics at ETHZ

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Personal Information

Date of birth	25/03/1996
Citizenship	Italian citizen

Education

2020-present **PhD student in Mathematics**, *ETH Zurich*
Field of Study: Algebraic Geometry
Supervisor: Prof. Dr. Rahul Pandharipande

2018–2020 **Laurea Magistrale (Master degree)**, *La Sapienza University*, Rome, *Grade:110 with honours/110*
Field of Study: Mathematics
Thesis: The virtual cohomological dimension of the Mapping Class Groups
Supervisor: Prof. Dr. Gabriele Mondello

2015-2018 **Laurea Triennale (Bachelor degree)**, *La Sapienza University*, Rome, *Grade:110 with honours/110*
Field of Study: Mathematics
Thesis: The Poincaré-Hopf Theorem for smooth manifolds
Supervisor: Prof. Dr. Paolo Piazza

2015-2018 **Diploma di Maturità**, *Liceo Scientifico Statale Labriola*, Rome, *Grade:100 with honours/100*

Fellowships & Awards

12/2023 I was awarded an SNSF Grant (CHF 116000) for a project titled "Moduli spaces of stable, logarithmic, and tropical maps"

02/2022 Excellent student at La Sapienza University of Rome, award reserved to the 400 best students (among all disciplines) of the academic years 2019/2020 from La Sapienza University

07/2020 INdAM master thesis award 2020 (€ 2000), master thesis awarded for its value

2018-2020 Student of the Excellence Program in Mathematics at La Sapienza during my Master's degree. I passed extra Math courses

2018-2020 Honor Student at La Sapienza University during my Master's degree because of my curriculum studiorum. I was exempted from all tax payments

2018-2020	3rd classified for one of the 8 national fellowships 'n. 8 borse di studio e n. 5 aggiuntive per l'avviamento alla ricerca riservate a iscritti ai corsi di laurea magistrale in matematica' (€ 2500 and additional € 1000 for travel expenses), granted by INdAM. For this reason I became part of the national research group GNSAGA. See http://www.altamatematica.it/blog/2018/05/21/bando-di-concorso-borse-di-studio-per-lavviamento-alla-ricerca-riservate-a-iscritti-ai-corsi-di-laurea-magistrale-in-matematica-a-a-2018-19/
2016-2018	Scholarship 'Emanuela Schiavo ' (€ 1700), granted by Fondazione Roma Sapienza. See https://www.fondazionesapienza.uniroma1.it/node/33
2015-2018	Student of the Excellence Program in Mathematics at La Sapienza during my Bachelor's degree. I passed extra Math courses
2015-2018	Honor Student at La Sapienza University during my Bachelor's degree because of my curriculum studiorum. I was exempted from all tax payments
2015	Scholarship National Excellence Register because I gained the scientific high school degree with 100 cum Laude/100

Pubblications and preprints

1) A. Cela, R. Pandharipande and J. Schmitt, Tevelev degrees and Hurwitz moduli spaces, Mathematical Proceedings of the Cambridge Philosophical Society, 173(3), 479-510

2) A. Cela, C. Lian, Generalized Tevelev degrees of P1, Journal of Pure and Applied Algebra, Volume 227, Issue 7, 2023

3) A. Cela, Quantum Euler class and virtual Tevelev degrees of Fano complete intersections, Arkiv for Matematik, Volume 61 (2023), Number 2, 301 − 322

4) A. Cela, C. Lian, Fixed-domain curve counts for blow-ups of projective space, arXiv:2303.03433, submitted

5) A. Cela, A. Iribar Lopez, Genus 0 logarithmic and tropical fixed-domain counts for Hirzebruch surfaces, J. London Math. Soc., 109: e12892.

Teaching Experiences

Spring 2023	Lecturer of Riemann Surfaces (for mathematicians) at ETHZ
Autumn 2022	Coordinator of Algebraic Topology I (for mathematicians) at ETHZ
Spring 2022	Freelance Teaching Assistant of Linear Algebra II and Analysis II (for mechanical engineers) and of Linear Algebra II (for mathematicians) at ETHZ
Spring 2021	Teaching Assistant of Topology (for mathematicians) at ETHZ
Autumn 2020	Teaching Assistant of Algebraic Geometry I (for mathematicians) at ETHZ

Mentoring

2023	Supervised a Bachelor Thesis by Adrian Spiess entitled 'Classification of Holomorphic Vector Bundles on the Riemann Sphere'
2021	Co-supervised with Rahul Pandharipande Bachelor Thesis by Pavlakovic Ana entitled 'On the Moduli Space of Curves'

Mathematical Service

Referee for Michigan Mathematical Journal

Talks

April 2024	'Fixed-curve counts in algebraic varieties' Seminario di Algebra and Geometria at La Sapienza University of Rome
, Oct 2023	'Algebraic and tropical curves', Geometry Graduate Colloquium (ETH)
May 2023	'What is ... Gromov-Witten Theory?', Zurich Graduate Colloquium (UZH)
March 2023	'Fixed-domain curve counts for blow-ups of projective space', Lausanne (EPFL)
March 2023	'Fixed-domain curve counts for blow-ups of projective space', Zurich (ETHZ), Algebraic Geometry and Moduli Seminar
May 2022	'Tevelev degrees' (short talk), workshop 'Curves and K3 surface' at the University of Bonn
March 2022	'Tevelev degrees', workshop 'Recent Advances on Moduli Spaces of Curves' in Les Diablarets
March 2022	'Virtual Tevelev degrees and quantum Euler class of Fano complete intersections', Zurich (ETHZ), Algebraic Geometry and Moduli Seminar

Workshops/Conferences and Summer schools

March 2024	'Enumerative Geometry and Arithmetic', at the Lorentz Center (Leiden)
Feb 2024	'A panorama of moduli spaces', in Goethe University Frankfurt am Main
July 2023	'AGNES Summer School on Intersection Theory on Moduli Spaces', Brown University, Providence, RI
June 2023	'Helvetic Algebraic Geometry Seminar' in Les Diablarets (Switzerland)
Feb 2023	'Moduli spaces: theory and coding' in Les Diablarets(Switzerland)
Feb 2023	'Logarithmic geometry & moduli spaces', in Goethe University Frankfurt
Feb 2023	'Northern German Algebraic Geometry Seminar and the award of the Algebraic Geometry Prize and the Compositio Prize', in HU Berlin
Nov 2022	'Resonance, topological invariance of groups and moduli' in HU Berlin
August 2022	'Tropical Geometry' in St. Mary's College, Moraga, California (organised by MSRI)
June 2022	'Algebraic Geometry' in Roma Tre on the occasion of Sandro Verra's 70th birthday (Italy)
June 2022	'Helvetic Algebraic Geometry Seminar' in Les Diablarets (Switzerland)
May 2022	'Curves and K3 surfaces' in Bonn (Germany)
March 2022	'Recent Advances on Moduli Spaces of Curves' in Leysin (Switzerland)
March 2022	'Admcycles: coding intersection theory' in Les Diablarets (Switzerland)
August 2021	'Helvetic Algebraic Geometry Seminar' in Geneva (Switzerland)
July 2019	'Perugia summer school' (SMI) in Perugia (Italy)

References

[1] Prof. Dr. Rahul Pandharipande
ETH Zurich
Contact: rahul.pandharipande@math.ethz.ch

[2] Prof. Dr. Dhruv Ranganathan
Cambridge University
Contact: dr508@cam.ac.uk

[3] Prof. Dr. Renzo Cavalieri
Colorado State University
Contact: renzo@math.colostate.edu

[4] Dr. Samir Canning
ETH Zurich
Contact: samir.canning@math.ethz.ch