

# Filippos Ilarion Sytilidis

---

<b>EDUCATION</b>	<b>Oxford University</b> October 2020 - 2024 DPhil in Mathematics
	<b>Harvard College</b> September 2016 - May 2020 A.B in Mathematics and Physics, magna cum laude with highest honors in field GPA: 3.91/4.00
	<b>Mandoulides Schools, Thessaloniki (Greece)</b> September 2013 - June 2016 Graduated as valedictorian
<b>RESEARCH EXPERIENCE</b>	<b>Harvard PRISE Fellow</b> June 2018 - August 2018 Researched the distribution of binary quadratic forms associated to the Seifert matrix of genus 1 knots with given Alexander module and Blanchfield pairing under Dr. Alison Miller.
	<b>Harvard Herchel Smith Fellow</b> June 2019 - August 2019 Researched manifold invariants from configuration space integrals under Prof. Peter Kronheimer. In particular, the Kontsevich characteristic classes and their relation with Watanabe's Morse homotopy invariants.
<b>TEACHING EXPERIENCE</b>	<b>Course Assistant</b> September 2017 - May 2020 • Graded problem sets, staffed problem solving sessions and held office hours for the following classes: - Math 1b (Calculus II) - Math 131 (Topological spaces - First semester undergraduate topology course) - Math 231br (Advanced Algebraic Topology - Second semester graduate algebraic topology course)
	<b>Harvard Summit for Young Leaders in China</b> August 2019 • Taught a one - week seminar on Knot theory addressed to high school students in Hangzhou, China. • Designed the syllabus, wrote lecture notes and problem sets, held office hours and provided mentoring.
	<b>Mandoulides Schools Mathematics Week</b> September 2017 • Taught a workshop on Euclidean geometry addressed to high school students preparing for mathematical Olympiads.
<b>AWARDS AND HONORS</b>	<b>Ioan and Rosemary James Scholarship, Oxford</b> October 2020
	<b>David Mumford Undergraduate Mathematics Prize, Harvard</b> May 2020 Given annually to the most promising senior concentrator in mathematics, provided such concentrator is outstanding.
	<b>Certification of Distinction and Excellence in Teaching</b> March 2019 The Derek Bok Center for Teaching and Learning at Harvard University.
	<b>Detur Book Prize</b> March 2018 Recognizes sophomores who attained very high academic standing
	<b>John Harvard Scholar</b> May 2018 Recognizes sophomores in the top 5% of their class.
	<b>Greek National Mathematical Olympiad</b> 2013-2016 Gold (2013), Silver (2014, 2016) medals
	<b>Honorable Mention JBMO</b> July 2013 Participated in Junior Balkan Mathematical Olympiad.
	<b>Greek National Physics Olympiad</b> 2014 Third place.
	<b>AIME qualifier</b> 2015
	<b>Greek National Poetry competition</b> 2016 First place

**TALKS**

Kan seminar, MIT (19.919)

2019 Fall

- “Steenrod’s realization problem and the unoriented cobordism ring”
- “Brown’s representability theorem”
- “ $\pi_*(MU)$  and Quillen’s Theorem”

**EXPOSITORY  
WRITINGS**

- “A proof of the Bott periodicity theorem using the Serre spectral sequence”, Final paper for Math 231br (Advanced Algebraic Topology)
- “Dehn’s Lemma and its applications”, Final paper for Math 99r (Tutorial on Knot theory)
- “The Blanchfield pairing and an arithmetic invariant for genus 1 knots”, summer research project - in preparation
- “Kontsevich characteristic classes and Morse homotopy invariants for homology  $d$  spheres”, undergraduate thesis - in preparation