

Carlos Andrés Cortez Lemos

BIOGRAPHICAL INFORMATION	Date of birth: January 3rd, 1996 Citizenship: Ecuadorian	
CONTACT INFORMATION	1460 W Fargo Ave. Chicago, IL 60626	+33 7 77 97 70 17 carloscortez2023@u.northwestern.edu
EDUCATION	Northwestern University, Evanston, IL Ph.D. in Mathematics	09/18-(present)
	Université Paris-Sud 11, Orsay, France Master 2 in Mathematics, parcours “Analyse, Arithmétique, Géométrie” <ul style="list-style-type: none">• Master’s thesis advisor: Geoffroy Horel• Master’s thesis title: Formal Moduli Problems	09/17-06/18
	Massachusetts Institute of Technology, Cambridge, MA B.S. Mathematics <ul style="list-style-type: none">• Concentration: Russian Language• GPA: 4.7/5.0• In-major GPA: 5.0/5.0	09/13-06/17
	University of Cambridge, Cambridge, UK Read Part II of the Mathematical Tripos as part of the Cambridge-MIT Exchange program	10/15-06/16
UNDERGRADUATE RESEARCH EXPERIENCE	Undergraduate Research Opportunities Program (UROP+), MIT Supervisor: Prof. Emmy Murphy. Mentor: Aleksandr Berdnikov. <ul style="list-style-type: none">• Project title: <i>Approximation of smooth surfaces by polyhedra with hidden vertices.</i>• Investigated the relation between the space of PL-mappings of a 2-manifold such that all vertices are hidden from the origin (i.e. segments from the origin to each vertex intersect the 2-skeleton) and smooth mappings with at least one principal curvature pointing away from the origin at each point.	06/16-08/16
	Independent Internship, Austria Institute of Science and Technology Supervisor: Prof. Herbert Edelsbrunner <ul style="list-style-type: none">• Researched the expected number of critical simplices and intervals of the radius function of the wrap complex of a Poisson point process.	03/16-04/16
	Summer Program in Undergraduate Research (SPUR), MIT Supervisor: Prof. Andrew Sutherland. Mentor: David Corwin. <ul style="list-style-type: none">• Project title: <i>Combinatorial interpretations of the trace moment sequences of certain compact Lie subgroups of $USp(4)$.</i>• Constructed combinatorial interpretations for the trace moment sequences arising for Sato-Tate groups of abelian surface.	06/14-08/14

SELECTED AWARDS AND HONORS	Putnam Mathematics Competition Honorable Mention 2013	
	International Mathematical Olympiad Bronze Medal 2013, 2012, 2011	
OTHER EXPERIENCE AND ACTIVITIES	IV Conference for Ecuadorian Mathematicians in Paris (ConMatE-P) held in Paris, France. Participant.	04/18
	Summer Mathematics School: Algebra and Geometry held in Yaroslavl, Russia. Participant.	08/17
	Tutor for undergraduate mathematics courses at the MIT Office of Minority Education.	02/17-05/17
	IAP Directed Reading Program in Mathematics. Followed “Differential forms in Algebraic Topology”. Mentor: Jiewon Park.	01/17
	Introduction to Knot Theory instructor. Taught a 7-week introduction to Classical Knot Theory to high school students through MIT’s HSSP	07/16-08/16
	Harvard Summer Tutorial on Category Theory , taught by graduate student Meng Guo. Participant.	07/16-08/16
	II Conference for Ecuadorian Mathematicians in Paris (ConMatE-P) held in Paris, France. Participant.	04/16
	Tutor for Differential Equations (18.03) at the MIT Office of Minority Education.	03/15-05/15
	IAP Directed Reading Program in Mathematics. Followed “P-adic Numbers, P-adic Analysis, and Zeta -functions”. Mentor: David Corwin.	01/15
	Grader for Algebra I (18.701) Weekly grading of 1 of 6 problems for ~20 students.	09/14-12/14
	IAP Directed Reading Program in Mathematics. Followed “Complex Variables and Applications”. Mentor: Anand Oza.	01/14
	International Summer School of Mathematics for Young Students held in Lyon, France. Participant.	08/12
	Organizer and instructor of weekly Math Circle Introduced motivated high school students from Quito, Ecuador, to topics from Mathematical Olympiads.	09/11-05/12
MISCELLANEOUS	Languages: English (fluent), Spanish (native), Russian (intermediate), French (intermediate)	