Hi, my name is Wilson Forero.

I work on higher category theory in connection with combinatorics (that it involves a lot of operads and Hopf algebras). My Ph.D thesis is on the Galvez-Kock-Tonks conjecture on the universal decomposition space of intervals, I hope to finish it in the fall of 2021; on other hand in my master thesis was about presheaf categories and semitopological categories.

Respect to my project preferences: in first place is the Spivak project and the second one is the Fritz Project. I am very interested in the school because I work at the interface of higher category theory and combinatorics, and it is important to get some perspective towards possible applications. This would enhance my research goals. Spivak and his collaborators mention possible use of decomposition spaces in their work: specifically, the interaction between parts and the notion of restriction of behaviour might well admit an interpretation in terms of decomposition spaces. More generally, having experience in applied category theory will enhance my career perspectives beyond the Ph.D degree. My funding situation is not clear yet. Other than that I am fully committed to the school.

Wilson Forero

Curriculum Vitae

Education

2018 -	**Ph.D. student in Mathematics**, *Universitat Autonoma de Barcelona*, Barcelona.
2015 - 2018	**MSc. in Mathematics**, *National University of Colombia*, Bogota, *GPA - 4.3*.
2010 - 2015	**Mathematical**, *Distrital University Francisco Jose de Caldas*, *GPA - 3.7*.

Complementary Education

2018	**Catalan Course**, *32 Hours*, Universitat Autonoma de Barcelona, Barcelona.
2018	**Course of correction in editorial, corporate and academic style, level I**, *National University of Colombia*, Bogota.
2017	**Seminar workshop grammar, writing and spelling, level I**, *National University of Colombia*, Bogota.
2017	**Seminar workshop grammar, writing and spelling, level II**, *National University of Colombia*, Bogota.
2016	**Course of Introduction to Scientific Programming and Symbolic Calculation with Python**, *Konrad Lorenz University Foundation*, Bogota.
2012-2013	**English Course**, *384 Hours*, ILUD Distrital University Francisco José de Caldas, Bogota.

Teaching Experiences

Feb 2018 - Jul 2018	**Teacher**, *School Ramon B. Jimeno*, Bogota. Teacher of Geometry and Statistics of the seventh, eighth and ninth grades, tutor in mathematics of the tenth and eleventh grade students.
Feb 2018 - May 2018	**Teacher**, *University Incca of Colombia*, Bogota. Theacher of Stadistics I and Complex Variable.
Feb 2017 - Jun 2017	**Assistant Student**, *National University of Colombia*, Bogota. Tutoring in the area of Mathematics (Differential, Integral, and Multivariate Calculus; Differential Equations, Linear Algebra) to the students of National University of Colombia.

Sept 2016 - Dec 2016	**Assistant Student**, *National University of Colombia*, Bogota. Tutoring in the area of Mathematics (Differential, Integral, and Multivariate Calculus; Differential Equations, Linear Algebra) to the students of National University of Colombia.
Mar 2016 - Jun 2016	**Assistant Student**, *National University of Colombia*, Bogota. Tutoring in the area of Mathematics (Differential, Integral, and Multivariate Calculus; Differential Equations, Linear Algebra) to the students of National University of Colombia.
Feb 2014 - Jun 2014	**Academic Assistant**, *Distrital University Francisco Jose de Caldas*, Bogota. Tutoring in the courses: Linear Algebra I, Fundamentals of Mathematics and Number Theory I.
Feb 2013 - Jun 2013	**Teaching Assistant**, *School Marie Curie*, Mosquera. Support the math area in grades 6 to 9.

Languages

Spanish	**Mothertongue**	
English	**Intermediate**	*Conversationally fluent*
Catalan	**Basic**	

Awards

2009	Best Academic High School

Computer skills

Basic	Adobe Phothoshop, Matlab
Intermediate	PYTHON, JAVA
Advanced	LATEX, OpenOffice, Linux, Microsoft Windows

Publications

2017	**W. J. Forero, C. O. Ochoa**, *On the Fuzzy Opening Morphological Operator*, INGENIERIA, vol. 22, no. 1, pp. 125-139.
2017	**W. J. Forero and C. O. Ochoa**, *Fuzzy logic elements and morphological operators applied to the medical image filter*, In P. Perry (Ed.), Meeting of Geometry and its Applications, 23, pp. 81-86, Bogota, Colombia: National Pedagogical University..
2017	**W. J. Forero and Montanez, R.**, *Semitopological structures: constructions and examples*, In P. Perry (Ed.), Meeting of Geometry and its Applications, 23, pp. 113-117, Bogota, Colombia: National Pedagogical University..
2015	**W. J. Forero and C. O. Ochoa**, *Fuzzy morphological operators*, Meeting of Geometry and its Applications, 22, pp. 149-154, Bogota, Colombia: National Pedagogical University..

Preprints

W. Forero, R. Montañez, *Structural Semicoelevator for semitopological categories*.

W. Forero, R. Montañez, *Presheaves categories associate to semitopological categories*.

Talks

2018	Oral Presentation at the VIII Congress of Algebra, Theory of numbers, Combinatorial and Applications.
2017	Oral Presentation at the XXI Colombian Congress of Mathematics.
2017	Oral Presentation at the Third Encounter of Young Topologists (TOP3-UD).
2017	Oral Presentation at the XXIII Encounter of Geometry and its Applications.
2015	Oral Presentation at the XXII Encounter of Geometry and its Applications.
2015	Oral Presentation at the V National Meeting of Mathematics and Statistics.
2014	Poster at the XVII National Meeting and XI International Research Seminars Redcolsi.
2014	Poster at the XII Redcolsi Seeds Regional Meeting.
2014	Poster at the II International Congress of Applied Mathematics.

Conferences and schools attended

2018	4th BGSMath Junior Meeting, Barcelona, España.
2018	XXV Meeting of Topology Barcelona, España.
2018	VII Young Topologists Meeting, Barcelona, España.
2016	Organizing Committee at the Second Meeting of Young Topologists (TOP2-UD).
2015	Organizing Committee at the First Meeting of Young Topologists (TOP-UD).