
CURRICULUM VITAE

Pablo Cubides Kovacsics

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Birth date : 14/01/1983
Nationality : Colombian/French.

Academical background

- **PhD**, Université Paris Diderot - Paris 7, November 2013. Title: *Definability in C-minimal structures*, under the supervision of Françoise Delon.
- **MSc**, Institute For Logic Language and Computation, Amsterdam University, August 2009. Title: *Abstract decomposition theorem and an application to finite diagrams*, under the supervision of Jouko Väänänen.
- **BSc**, Universidad Nacional de Colombia, June 2005.

Positions

- Postdoctoral fellow. Heinrich-Heine-Universität Düsseldorf, directed by Immanuel Halupczok, January 2020 - present.
- Postdoctoral fellow. TU Dresden, Fachrichtung Mathematik, Institut für Algebra, directed by Manuel Bodirsky and Arno Fehm, January 2019 - December 2019.
- Postdoctoral fellow. Université de Caen, Laboratoire de Mathématiques Nicolas Oresme, as part of the ERC project TOSSIBERG directed by Jérôme Poineau, January 2016 - December 2018.
- Postdoctoral fellow. Université de Lille 1, Laboratoire Painlevé, as part of the ERC project MOTMELSUM directed by Raf Cluckers, March 2014 - December 2015.
- Teaching assistant. École d'ingénieurs ESIEA, September 2013 - February 2014.
- Teaching assistant. Université Paris Diderot - Paris 7, 1 September 2012 - August 2013.
- Teaching assistant. Universidad el Rosario, 2006 -2007.

Honours & awards

- MALOA Scholarship, Marie Curie Initial Training Network in Mathematical Logic, PITN-GA-2009-238381, 2009-2012.
- HSP Huygens Scholarship Programme, Nuffic, 2008-2009

- Amsterdam Merit Scholarship, 2007
- Universidad Antonio Nariño, Colombian University Mathematics Olympiad Finalist, 2004.

Administrative responsibilities

Organisation of conferences and seminars

- Organizer of the “GRK Workshop on C_i -fields”, Heinrich-Heine Universität Düsseldorf, 2020/2021.
- Organizer with Gabriel Conant of the Junior Seminar of the special trimester “Model Theory, Combinatorics and Valued fields” organized at the Institut Henri Poincaré, 8 January - 6 April 2018.
- Organizer with Alexander Berenstein and Jérôme Poineau of the summer school “Berkovich Spaces, Tropical geometry and model theory”, Bogotá, July 22-28, 2017. This summer school was cofunded by Foundation Compositio Mathematica and Institut Henri Poincaré.
- Organizer with Raf Cluckers and Kien Huu Nguyen of the special day “Motivic integration and non-archimedean geometry”, Université de Lille 1, October 10, 2016.
- Organizer with Marie-Hélène Mourgues and Patrick Simonetta of the conference “Théorie des modèles des corps: dérivations, ordres et valuations”, Université Paris Diderot - Paris, June 2-3, 2016.
- Workshop on o-minimality and diophantine applications (with Jérôme Poineau), Université de Caen, second semester 2016-2017.
- Organizer with Raf Cluckers of the arithmetic seminar of Université de Lille 1, March 2014-December 2015.

Academic service

- I have been a referee for various journals of mathematics including Proceedings of the London Mathematical Society, Annals of Pure and Applied Logic, Confluentes Mathematici, Publicacions Matemàtiques, Archive of mathematical logic and Mathematical Logic Quarterly.
- I contribute writing reviews for zbMath and Math Reviews.
- Currently external tutor of PhD students Margherita Piccolo and Florian Felix at Heinrich-Heine Universität Düsseldorf.

Invited talks to conferences and special events

- “Beautiful pairs and pro-definability”, GeSAMT, HHU Düsseldorf, 12-13 November 2021.
- “Beautiful pairs and spaces of definable types”, Logic Colloquium, Poznań, 19-24 Juli 2021.
- “Cohomology of algebraic varieties over non-archimedean fields”, GTM, École Normale Supérieure, December 11, 2020.
- “Towards a model theory of adic spaces”, Model Theory of Valued Fields and Applications, Münster, June 10 – 14, 2019.
- “Pairs and pro-definable spaces of types”, Regional days in Model theory and applications, Münster, April 26, 2019.
- “Definable subsets of Berkovich curves”, GTM, École Normale Supérieure, February 15, 2019.
- “Topological large fields, their generic differential expansions and transfer results”, (with Françoise Point) Workshop on Tame Expansions of O-minimal Structures, Konstanz, October 1-4, 2018.
- “Valuation independence and vs -extensions of valued fields”, Model theory seminar, Model Theory, Combinatorics and Valued fields, A trimester at the Institut Henri Poincaré, January 19, 2018.

- “Exponentiation is easy to avoid (sometimes)”, Rencontres Franco-Colombiennes de Mathématiques, ENS de Lyon, 11-15 December 2017.
- “Definable types and elimination of imaginaries in closed ordered differential fields”, *Model Theory and applications to Geometry*, Università degli Studi di Padova, September 13-15, 2017.
- “Geometría no-arquimediana y espacios de Berkovich”, Coloquio de matemáticas de la Universidad de los Andes, August 10, 2017.
- “Poincaré Series and p -adic Integration”, *ALaNT 4 - Joint Conferences on Algebra, Logic and Number Theory*, Telç, June 13-17, 2016.
- “ P -minimality and p -adic integration”, *Conference of the Belgian, Royal Spanish and Luxembourg Mathematical Societies*, Logroño, June 6-8, 2016.
- “Definable types in algebraically closed valued fields”, GTM, École Normal Supérieure, March 6, 2015.
- “Traces d’ensembles algébriques et semi-algébriques définis avec des paramètres extérieurs”, Journée du laboratoire Painlevé et de la Fédération de Recherche mathématique du Nord pas de Calais, October 10, 2014.
- “Externally definable sets in algebraically closed valued fields”, Conference : “Around valuation theory”, Şirince, May 22-26, 2014.

Invited talks to seminars

- “Definable completeness and applications”, Séminaire structures algébriques ordonnées, University Paris 7, November 9, 2021.
- “ t^2 -stratifications”, Marseille Singularity Seminar, Marseille, October 7, 2021.
- “Pairs and pro-definability of type spaces”, Séminaire de Logique Lyon-Paris, April 15, 2020.
- “Analytification of algebraic curves and definability”, Algebra seminar, Madrid, September 26, 2019.
- “Definable sets of Berkovich curves”, Oberseminar Modelltheorie, Geometrie und Gruppentheorie, Münster University, January 24, 2019.
- “Ensembles définissables d’une courbe de Berkovich”, Séminaire structures algébriques ordonnées, Université Paris 7, December 4, 2018.
- “Polynomially bounded valued fields”, Seminar algebra-geometry-combinatorics, TU Dresden, October 25, 2018.
- “On iso-definability of curves in Hrushovski-Loeser spaces”, Lancashire Yorkshire Model Theory Seminar, Leeds University, July 3, 2018.
- “Bornes polynomiales et théorie des modèles”, Séminaire d’algèbre, Université de Caen, April 3, 2018.
- “Bornes polynomiales sur des expansions de corps non-archimédiens”, Séminaire de Topologie, Géométrie et Algèbre, Université de Nantes, January 22, 2018.
- “Autour des extensions séparées de corps valués”, séminaire de théories de modèles et groupes, Université Paris 7, November 6, 2017.
- “Densité forte des types définissables”, Séminaire général de logique, Université Paris 7, Paris, November 6, 2017.
- “Polynomially bounded C -minimal valued fields”, Logic seminar, Universidade de Lisboa, October 27, 2017.
- “Une invitation à la P -minimalité”, séminaire de géométrie de Bordeaux, Université de Bordeaux, October 21, 2016.

- “On externally definable sets in algebraically closed valued fields”, Model theory seminar, Konstanz University, January 25, 2016.
- “ p -adic integrals and Poincaré series”, Logic Seminar, University of Leeds, December 14, 2015.
- “Quelques remarques sur la géométrie P -minimale”, Séminaire général de logique, Université Paris 7, November 23, 2015.
- “Intégration et P -minimalité”, Séminaire de théorie des modèles et groupes, Université Paris 7, February 3, 2015.

Contributed talks

- “Tipos definibles en campos valuados algebraicamente cerrados”, XX Congreso Colombiano de Matemáticas, Manizales, July 21-24, 2015.
- “Locally constant functions in C -minimal structures”, Third MALOA Training Workshop, Oxford University, August 26-3, 2012.
- “ C -minimal structures”, *15th Latin American Symposium on Mathematical Logic (XV SLALM)*, Bogotá, June 4-8, 2012.
- “Abstract decomposition theorem”, *Model Theory Kirishima 2010: New developments of independence notions in model theory*, Kirishima, March 1-5, 2010.

Mini courses

- “Introduction to model theory”, SEAMS school “Arithmetic, Geometry and Model Theory”, Institute of Mathematics (VAST), Hanoi, 17–28 February 2020. The notes this course can be found here: http://www.math.uni-duesseldorf.de/~cubides/model_theory_seams.pdf.
- “Introduction to Berkovich spaces”, Summer School on Berkovich spaces, tropical geometry and model theory, Universidad de Los Andes, Bogotá, July 22-28, 2017.

Languages

French, English, Spanish (Fluent)
 German (Intermediate)
 Italian, Portuguese (Beginner)

PUBLICATIONS

Peer-reviewed publications

1. *Definable completeness of P -minimal fields and applications*
with Françoise Delon, to appear in the Journal of Mathematical Logic.
2. *Pro-definability of spaces of definable types*
with Jinhe Ye, Proceedings of the American Mathematical Society, Ser. B 8 (2021), 173-188.
3. *Definable sets of Berkovich curves*
with Jérôme Poineau, Journal of the Institute of Mathematics of Jussieu, 20 (2021), no. 4, 1275–1339.
(published online 2019).
4. *Valuation independence and vs-defectless extensions of valued fields*
with Franz-Viktor Kuhlmann and Anna Rzepka, Journal of Algebra 555 (2020) 69–95.
5. *Real closed valued fields with analytic structure*
with Deirdre Haskell, Proceedings of the Edinburgh Mathematical Society, (2) 63 (2020), no. 1, 249–261.
6. *Exponential-constructible functions in P -minimal structures*
with Saskia Chambille and Eva Leenknegt, Journal of Mathematical Logic, Vol. 20, No. 02, 2050005, 2020.
7. *Definable functions in tame expansions of algebraically closed valued fields.*
with Françoise Delon, Israel Journal of Mathematics. 236 (2020), no. 2, 651–683.
8. *Strong density of definable types and closed ordered differential fields*
with Françoise Point and Quentin Brouette, The Journal of Symbolic Logic, 84(3), 1099-1117, 2019.
9. *Clustered cell decomposition in P -minimal fields*
with Saskia Chambille and Eva Leenknegt, Annals of Pure and Applied Logic, Volume 168, Issue 11, pp. 2050-2086, 2017.
10. *A P -minimal field without definable Skolem functions*
with Huu Kien Nguyen, The Journal of Symbolic Logic, 82(2), pp. 778–786, 2017.
11. *Topological cell decomposition and dimension theory in P -minimal fields*
with Luck Darnière and Eva Leenknegt, The Journal of Symbolic Logic, 82(1), pp. 347-358, 2017 .
12. *Integration and Cell Decomposition in P -minimal Structures, .*
with Eva Leenknegt, The Journal of Symbolic Logic, 81(3), pp. 1124–1141, 2016.
13. *Definable types in algebraically closed valued fields*
with Françoise Delon, Mathematical Logic Quarterly. Vol. 62, No. 1–2, pp. 35–45, 2016.
14. *Locally constant functions in C -minimal structures*
The Journal of Symbolic Logic, (80), pp. 207–220, 2015.
15. *An introduction to C -minimal structures and their cell decomposition theorem*
In *Valuation theory and interaction*, 2014, Editors: Antonio Campillo, Franz-Viktor Kuhlmann and Bernard Teissier, Series of Congress Reports of the EMS, pp. 167-207, 2014.

Proceedings

1. *An application of the decomposition theorem*

RIMS Kokyuroku, proceedings of Model Theory Kirishima 2010: New developments of independence notions in model theory, pp. 114-121.

Books

1. *Lógica y Pensamiento Formal (Logic and formal thought)*

with E.J. Andrade, D. Cancino, C.M. Márquez and E.J. Vargas, Lecciones de Ciencias Humanas, Universidad del Rosario, Bogotá, Colombia, 2008, ISBN 9789588378329.

Research dissemination

1. *Courbes de Berkovich et définissabilité (Berkovich curves and definability)*

with Jérôme Poineau (in French), Lettre de l'INSMI, October 16, 2020.

Preprints

1. *Arc-wise analytic t -stratifications*

with Immanuel Halupczok, [arXiv:2106.11289](#) [math.AG].

2. *Cohomology of algebraic varieties over non-archimedean fields*

with Mário Edmundo and Jihne Ye, [arXiv:2005.11229](#) [math.AG]. Submitted.

3. *Topological fields with a generic derivation*

with Françoise Point, [arXiv: 1912.07912](#) [math.AC]. Submitted.

4. *A proof of Liouville's theorem via o-minimality,*

[arXiv: 1712.07593](#) [math.LO].