

André Belotto da Silva – Curriculum Vitae

Address	3 Henri Montaut, 31400, Toulouse, France	Home Phone	+33 06 51 41 96 45
Date of Birth	4 th March 1987	Email	andre.belotto_da_silva@math.univ-toulouse.fr
Nationality	Brazilian	Website	andrebelotto.com
		Languages	English, French, Portuguese (fluent) and Spanish (basic)

Work Experience

- 2016-** *Postdoctoral Fellow* - University Toulouse III - Paul Sabatier, Toulouse, France.
Fellowship - CIMI LabEx.
Supervisor - Mark Spivakovsky.
- 2013-2016** *Postdoctoral Fellow* - University of Toronto, Toronto, Canada.
Fellowship - University of Toronto.
Supervisor - Edward Bierstone.
Award - 2016 F. V. Atkinson teaching award, Toronto, Canada.

Education

- 2010-2013** PhD of Science in Mathematics - Université de Haute Alsace, Mulhouse, France.
Thesis - Resolution of singularities in foliated spaces.
Thesis adviser - Daniel Panazzolo.
Soutenance de thèse - 28 juin 2013 (33 months).
Grant: Allocation de recherche.
Award - Prix de thèse des Universités de l'Académie de Strasbourg, Strasbourg, France.
- 2008-2010** Master in Applied Mathematics, - Universidade de São Paulo, São Paulo, Brasil,
Master Thesis - Bifurcation analysis of a system of population dynamics.
Master adviser - Jorge Manuel Sotomayor Tello.
Grant: Fapesp.
- 2005-2008** Bachelor degree in Mathematics, - Universidade de São Paulo, São Paulo, Brasil.
Bachelor Project: An overview of Commutative Algebra.
Award: Merit to excel in the bachelor course of Pure Mathematics.

Publications

- *Topological classification of limit periodic sets of polynomial planar vector fields*, A. Belotto da Silva and J. Ginés Espín Buendía, to appear in Publicacions Matemàtiques.
- *Local monomialization of a system of first integrals of Darboux type*, A. Belotto da Silva, to appear in Revista Matematica Iberoamericana, 34, (2018), no. [3].
- *Solutions of quasianalytic equations*, A. Belotto da Silva, I. Biborski and E. Bierstone, Selecta Mathematica, Volume 23, Number 4, (2017), 2523-2552 pp..
- *Resolution of singularities of differential forms and Hsiang-Pati coordinates*, A. Belotto da Silva and E. Bierstone, to appear in Advanced Lectures in Mathematics: Hodge theory and L2 analysis, edited by Lizhen Ji, International Press.
- *Resolution of singularities of the cotangent sheaf of a singular variety*, A. Belotto da Silva, E. Bierstone, V. Granjean and P. Milman, Advances in Mathematics, 307, (2017), 780–832 pp.

- *Local Resolution of Ideals Subordinated to a Foliation*, A. Belotto da Silva, Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales, 110, (2016), no. [2], 841–862 pp.
- *Global resolution of singularities subordinated to a 1-dimensional foliation*, A. Belotto, Journal of Algebra, 447, (2016), 397–423 pp.
- *Examples of infinitesimal non-trivial accumulation of secants in dimension three*, A. Belotto, Journal of Dynamical and Control Systems, 22, (2016), no. [1], 45–54 pp.
- *Analytic varieties as limit periodic sets*, A. Belotto, Qualitative Theory of Dynamical Systems, 11, (2012), no. [2], 449–465 pp.

Preprint (submitted)

- *The Sard conjecture on Martinet surfaces*, A. Belotto da Silva et L. Rifford, arXiv:1608.04122 [math.DG] (2016).
- *Composite quasianalytic functions*, A. Belotto da Silva, E. Bierstone et M. Chow, arXiv:1709.06629, [math.CV] (2017).
- *Generalized Flow-Box property for singular foliations*, A. Belotto da Silva et Daniel Panazzolo, arXiv:1711.09948, [math.CA], (2017).

Communication in Congresses

- *Title*: Monomialization of the cotangent sheaf of a singular variety
Foliations in Strasbourg, Strasbourg, France, 2017.
- *Title*: Monomialization of a system of first integrals of Darboux type
Mathematical Congress of the Americas, Montréal, Canada, 2017.
- *Title*: The Sard Conjecture on Martinet Surfaces
Geometry of Singularities and Differential Equations, Santander, Spain, 2017.
- *Title*: Monomialization of differential forms
Real Analytic Geometry and Trajectories of Vector Fields, Centre International de Rencontres Mathématiques (CIRM), Marseille, France (2015)
- *Title*: Exemplos não triviais de acumulações de secante
I Congresso Brasileiro de Jovens Pesquisadores em Matemática Pura e Aplicada, Universidade de São Paulo, São Paulo, Brésil (2014)
- *Title*: A problem of little return time
Seminário Iberoamericano de Matemáticas em Tordesilhas, Universidad de Valladolid, Tordesilhas, Spain (2013)
- *Title*: 16th Hilbert Problem and Roussarie's Program
Seminário Iberoamericano de Matemáticas em Tordesilhas, Universidad de Valladolid, Tordesilhas, Spain (2011)

To come:

- Satellite Conference of ICM : Complex Foliations, Niteroi, Brasil - (2018).

Minicourse

- *Title*: Resolution of Singularities and the invariant of Bierstone and Milman.
Curso de Doctorado, Universidad de Valladolid, Valladolid, Spain (2017).

Invited Speaker

- *Title:* The Sard Conjecture on Martinet surfaces
Universidad de Murcia, Murcia, Espagne - (2017).
- *Title:* The Sard Conjecture on Martinet surfaces
Université de Poitiers, Poitiers, France - (2017).
- *Title:* The Sard Conjecture on Martinet surfaces
Université Angers, Angers, France - (2017).
- *Title:* The Sard Conjecture on Martinet surfaces
Université de Toulouse, Toulouse, France - (2017).
- *Title:* Topological classification of Limit periodic sets
Université Nice Sophia-Antipolis, Nice, France - (2017).
- *Title:* The Sard Conjecture on Martinet surfaces
University of Jyväskylä, Jyväskylä, Finland - (2017).
- *Title:* Resolution of singularities of the cotangent sheaf of a singular variety
Seminar in Universidad Autonoma de Madrid, Madrid, Spain - (2017).
- *Title:* Resolution of singularities of the cotangent sheaf of a singular variety
Universidad de Valladolid, Valladolid, Spain - (2017).
- *Title:* Solutions des équations quasi-analytiques
Mathematics Research Institute, Casas del Tratado, Tordesillas (Valladolid), Spain - (2017).
- *Title:* Solutions des équations quasi-analytiques
Université Nice Sophia-Antipolis, Nice, France - (2017)
- *Title:* Monomialization of first integrals of Darboux type
Université de Haute-Alsace, Mulhouse, France - (2016)
- *Title:* Solutions des équations quasi-analytiques
Université de Bordeaux, Bordeaux, France - (2016)
- *Title:* Solutions des équations quasi-analytiques
Université Rennes I, Rennes, France - (2016)
- *Title:* Solutions des équations quasi-analytiques
Université Paul-Sabatier, Toulouse, France - (2016)
- *Title:* Solutions des équations quasi-analytiques
Université de Haute-Alsace, Mulhouse, France - (2016)
- *Title:* Resolution of singularities of the cotangent sheaf of a singular variety
Algebra Seminar, Purdue University, West Lafayette, USA - (2016)
- *Title:* Résolution des singularités des formes différentielles
Université Nice Sophia-Antipolis, Nice, France - (2016)
- *Title:* Résolution des singularités des formes différentielles
Université de Bourgogne, Dijon, France - (2016)
- *Title:* Résolution des singularités des formes différentielles
Université Paul Sabatier, Toulouse, France - (2016)
- *Title:* Hsiang-Pati coordinate system
Algebra Seminar, University of Missouri, Columbia, USA - (2015)
- *Title:* Monomialization of first integrals
Logic and Geometry Seminar, Fields Institute, Toronto, Canada - (2014)

- *Title:* Hsiang-Pati coordinate system
Séminaire Equations fonctionnelles, Université de Strasbourg, Strasbourg, France - (2014)
- *Title:* A problem of little return time
Logic and Geometry Seminar, Fields Institute, Toronto, Canada - (2013)
- *Title:* Resolution of singularities in Foliated Spaces
Universidad de Valladolid, Valladolid, Spain - (2013)
- *Title:* Non-trivial examples of Accumulation of secants
Universidad de Valladolid, Valladolid, Spain - (2013)
- *Title:* A problem of little return time
Séminaire de géométrie analytique, Université Rennes 1, Rennes, France - (2013)
- *Title:* A problem of little return time
Séminaire d'équations différentielle, Université Paul Sébatier, Toulouse, France - (2013)
- *Title:* A problem of little return time
Séminaire d'Analyse, Université de Haute-Alsace, Mulhouse, France - (2013)
- *Title:* A problem of little return time
Seminário do Depto de Matemática, Universidade Federal do Ceará, Fortaleza, Brasil - (2012)

To come:

- University of Western Ontario, London, Canada - (2018).
- Université de Chambéry, Chambéry, France - (2018).
- Université Aix-Marseille (Complex Geometry), Marseille, France - (2018).
- Université Aix-Marseille (Singularity), Marseille, France - (2018).
- University of Freiburg, Freiburg, Allemagne - (2018).

Poster Presentation in Congresses

- *Title:* Stand still or go away
Feuilletages et equations différentielles complexes, CIRM, Marseille, France (2012)
- *Title:* Desingularization and limit periodic sets of analytic planar vector fields
Advances in Qualitative Theory of Differential Equations, Castro Urdiales, Spain (2011)

Summer Schools

- Clay Mathematics Institute, "The Resolution of Singular Algebraic Varieties", Austria - (2012)
- Universidad de Valladolid, "V Escuela Doctoral Ecuaciones y Singularidades" Valladolid, Spain - (2011)
- Instituto de Matemática Pura e Aplicada (IMPA), "Escola de Verão", Rio de Janeiro, Brasil - (2009)

Other participation in Congresses

- Resolution of foliations, Université Paris 7, Paris, France - (2016).
- Workshop on Stratified Spaces: Perspectives from Analysis, Geometry and Topology, Fields Institute, Toronto, Canada - (2016).
- Workshop on Model Theory: From Fields to Hardy Fields, Fields Institute, Toronto, Canada - (2016).

- Semaine spéciale M2: Géométrie Algébrique, Université de Strasbourg, Strasbourg, France - (2011)
- Colloque en l'honneur de Cédric Villani, Université de Lyon, Lyon, France - (2010)
- Semaine spéciale M2: Aspects analytiques et géométriques des équations différentielles, Université de Strasbourg, Strasbourg, France - (2010)
- 27^o Colóquio Brasileiro de Matemática, Instituto de Matemática Pura e Aplicada (IMPA), Rio de Janeiro, Brasil - (2009)

Teaching experience

- 2016** Teaching Assistant of *Résolution de problème* at University Paul Sabatier, Toulouse, France.
Course: Preparation for CAPES (Certificat d'aptitude au professorat de l'enseignement du second degré) for third year students of mathematics
Duration: 1 semester
- 2016** Sole Lecturer of *Elements of Analysis* at University of Toronto, Toronto, Canada.
Course: Real analysis for third year students of science
Duration: 1 semester
- 2015** Instructor of *Calculus III* at University of Toronto, Toronto, Canada.
Course: Calculus for second year students of engineer
Duration: 1 semester
- 2014 - 2015** Instructor of *Calculus* at University of Toronto, Toronto, Canada.
Course: Calculus for first year students of science
Duration: 2 semesters
- 2013 - 2014** Instructor of *Calculus* at University of Toronto, Toronto, Canada.
Course: Calculus for first year students of science
Duration: 2 semesters
- 2008** Teaching Assistant of *Introduction to ODEs* at University of São Paulo, São Paulo, Brazil.
Course: Ordinary differential equations for third year students of science
Duration: 1 semester
- 2007** Teaching Assistant of *Algebra* at University of São Paulo, São Paulo, Brazil.
Course: Algebra for second year specialists of mathematics
Duration: 1 semester

Mini courses on teaching

- *La construction d'un plan de cours*, Collège des Ecoles Doctorales, Université de Strasbourg, Strasbourg, France (2013)
- *Moodle 1*, Ecole Doctorale, Université de Haute Alsace, Mulhouse, France (2013)