Valente **Ramírez**

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Profile

Lecturer in mathematics and statistics. Experienced combining analytic and computational methods to solve research problems, and teaching abstract ideas to a diverse audience.

Employment

University of Twente — *Enschede, The Netherlands*
Lecturer - Department of Applied Mathematics — *Aug. 2020 – Present*

Institut de Recherche Mathématique de Rennes (IRMAR) — *Rennes, France*
Postdoctoral Researcher — *Oct. 2017 – Sep. 2019*

Education

Cornell University — *Ithaca NY, United States*
Ph.D. in Mathematics, M.Sc. in Mathematics — *Aug. 2012 – Aug. 2017*

- Thesis: *"Quadratic vector fields on the complex plane: rigidity and analytic invariants"*. doi: 10.7298/X48913Z1.
- Advisor: Prof. dr. Yulij Sergeevich Ilyashenko

Universidad Nacional Autónoma de México (UNAM) — *Mexico City, Mexico*
B.Sc. in Mathematics — *Aug. 2007 – Dec. 2011*

- Thesis: *"Strong topological invariance of the monodromy group at infinity for quadratic vector fields"*.
- Advisor: Prof. dr. Laura Ortiz-Bobadilla

University of California Berkeley — *Berkeley CA, United States*
International Exchange student — *Fall 2009*

Publications

[**8**] F. Loray and V. Ramírez. "A map between moduli spaces of connections". *SIGMA Symmetry Integrability Geom. Methods Appl.* **16**, 125, 42p (2020). doi: 10.3842/SIGMA.2020.125 (2020).

[**7**] A. Guillot and V. Ramírez. "On the multipliers at fixed points of quadratic self-maps of the projective plane with an invariant line". *Comput. Methods Funct. Theory.* **19**, no. 4, 687–716. doi: 10.1007/s40315-019-00293-w (2019).

[**6**] Yu. Kudryashov and V. Ramírez. "Spectra of quadratic vector fields on $\mathbb{C}^2$: The missing relation". To appear in: *Mosc. Math. J.* Preprint: arXiv: 1705.06340v2 (2018).

[**5**] V. Ramírez. "Twin vector fields and independence of spectra for quadratic vector fields". *J. Dynam. Control Syst.* **23**, no. 3, 623–633. doi: 10.1007/s10883-016-9344-5 (2017).

[**4**] V. Ramírez. "The utmost rigidity property for quadratic foliations on $\mathbb{P}^2$ with an invariant line". *Bol. Soc. Mat. Mex.* **23**, no. 2, 759–813. doi: 10.1007/s40590-016-0127-5 (2017).

[**3**] V. Ramírez. "The Woods Hole trace formula and indices for vector fields and foliations on $\mathbb{C}^2$" (*unpublished*). Available at: arXiv: 1608.05321v1 (2016).

[**2**] V. Ramírez. "An example of a non-algebraizable singularity of a holomorphic foliation". *Enseign. Math.* **62**, no. 1/2, 7–14. doi: 10.4171/LEM/62-1/2-3 (2016).

[**1**] V. Ramírez. "Strong topological invariance of the monodromy group at infinity for quadratic vector fields". *J. Singul.* **9**, 193–202. doi: 10.5427/jsing.2014.9n (2014).

Teaching Experience

Department of Applied Mathematics, University of Twente — *Enschede, The Netherlands*

Lecturer — *Sep. 2020 – Present*

Linear Algebra	Block 2A, 2021
Statistical Techniques	Block 1B, 2020
Signal Analysis	Block 1B, 2020
Intro to Mathematics + Calculus 1A	Block 1A, 2020
Medical Statistics	Block 1A, 2020
Statistics & Probability	Block 1A, 2020

Cayuga Correctional Facility via Cornell Prison Education Program — *Moravia NY, United States*

Instructor — *Aug. 2016 – Dec.2016*

Mathematical Explorations	Fall 2016

Department of Mathematics, Cornell University — *Ithaca NY, United States*

Teaching Assistant — *Aug. 2013 – May 2016*

Totally Awesome Mathematics	Spring 2016
Multivariable Calculus for Engineers	Fall 2014
Differential Equations and Dynamical Systems	Fall 2013

Facultad de Ciencias, Universidad Nacional Autónoma de México — *Mexico City, Mexico*

Teaching Assistant — *Aug. 2010 – May 2012*

Ordinary Differential Equations III	Spring 2012
Ordinary Differential Equations II	Fall 2011
Real Analysis II	Spring 2011
Real Analysis I	Fall 2010
Differential Topology I	Fall 2010

Programming Skills

Languages Python, R, LaTeX, Bash
Systems and tools Unix, Git, SageMath, Jupyter, Macaulay2, SciPy, Keras/Tensorflow

Languages

Spanish Native
English Bilingual
French Intermediate (B2 level)
Dutch Intermediate (B1 level)

Outreach and Volunteer Work

Cornell Prison Education Program — *Ithaca NY, United States*

Instructor, Tutor and Consultor

Instructor for the course MATH 1300 “Mathematical Explorations” · Cayuga Correctional Facility	Fall 2016
Tutor for the MATH 102 “Introduction to Algebra” course · Auburn Correctional Facility	Fall 2015
Member of the Mathematics Committee for the Pedagogy in Prison program	2015 – 2017