
Leandro VENDRAMIN
Departamento de Matemática
Facultad de Ciencias Exactas y Naturales (FCEN)
Universidad de Buenos Aires (UBA)
Pabellón I, Ciudad Universitaria (1428) - Buenos Aires, Argentina
(+5411) 5285 7616
lvendramin@dm.uba.ar, lvendramin@gmail.com
<http://mate.dm.uba.ar/~lvendram/>

EDUCATION

- 2010 PhD in Mathematics – FCEN, UBA
Thesis: Nichols algebras over non-abelian groups. Advisor: Matías Graña
- 2004 *Licenciado en Cs. Matemáticas* – FCEN, UBA

POSITIONS

- Professor, FCEN, UBA, from 5/2014
- Investigador Adjunto, CONICET, from 2012
- Regular Associate of the *Abdus Salam International Centre for Theoretical Physics* (ICTP), Trieste, Italy, from 01/2012

PUBLICATIONS

- J. A. Guccione, J. J. Guccione, L. Vendramin. *Set-theoretical solutions of the Yang–Baxter equation in symmetric categories*. Accepted for publication in *Comm. Algebra*
- A. Smoktunowicz, L. Vendramin. *On skew braces* (with an appendix by N. Byott). Accepted for publication in *J. Comb. Algebra*
- D. Bachiller, F. Cedó, L. Vendramin. *A characterization of multipermutation solutions of the Yang–Baxter equation*. Accepted for publication in *Publ. Mat.*
- A. García Iglesias, L. Vendramin. *An explicit description of the second cohomology group of a quandle*. *Math. Z.* 286 (2017), no. 3–4, 1041–1063
- L. Guarnieri, L. Vendramin. *Skew braces and the Yang–Baxter equation*. *Math. Comp.* 86 (2017), no. 307, 2519–2534
- I. Heckenberger, L. Vendramin. *The classification of Nichols algebras with finite root system of rank two*. *J. Eur. Math. Soc. (JEMS)* 19 (2017), no. 7, 1977–2017.
- I. Angiono, C. Galindo, L. Vendramin. *Hopf braces and Yang–Baxter operators*. *Proc. Amer. Math. Soc.* 145 (2017), no. 5, 1981–1995
- I. Heckenberger, L. Vendramin. *A classification of Nichols algebras of semi-simple Yetter–Drinfeld modules over non-abelian groups*. *J. Eur. Math. Soc. (JEMS)* 19 (2017), no. 2, 299–356
- V. Lebed, L. Vendramin. *Homology of left non-degenerate set-theoretic solutions to the Yang–Baxter equation*. *Adv. Math.* 304 (2017), 1219–1261
- V. Lebed, L. Vendramin. *Cohomology and extensions of braces*. *Pacific J. Math.* 284 (2016), no. 1, 191–212

- E. Clark, M. Saito, L. Vendramin. *Quandle coloring and cocycle invariants of composite knots and abelian extensions*
J. Knot Theory Ramifications 25 (2016), no. 5, 1650024, 34 pp.
- L. Vendramin. *Doubly transitive groups and cyclic quandles*
J. Math. Soc. Japan 69 (2017), no. 3, 1051–1057
- L. Vendramin. *Extensions of set-theoretic solutions of the Yang-Baxter equation and a conjecture of Gateva-Ivanova*
J. Pure Appl. Alg. 220 (2016), no. 5, 1681–2076
- I. Heckenberger, A. Lochmann, L. Vendramin. *Nichols algebras with many cubic relations*
Trans. Amer. Math. Soc. 367 (2015), 6315–6356
- I. Heckenberger, L. Vendramin. *Nichols algebras over groups with finite root system of rank two III*
J. Algebra 422 (2015), 223–256
- J. Dong, S. Natale, L. Vendramin. *Frobenius property for fusion categories of small integral dimension*
J. Algebra Appl. 14 (2015), no. 2, 1550011 (17 pages)
- I. Heckenberger, L. Vendramin. *Nichols algebras over groups with finite root system of rank two II*
J. Group Theory 17 (2014), no. 6, 1009–1034
- L. Vendramin. *Nichols algebras associated to the transpositions of the symmetric group are twist-equivalent*
Proc. Amer. Math. Soc. 140 (2012), no. 11, 3715–3723
- L. Vendramin. *On the classification of quandles of low order*
J. Knot Theory Ramifications 21 (2012), no. 9, 1250088
- I. Heckenberger, A. Lochmann, L. Vendramin. *Braided racks, Hurwitz orbits and Nichols algebras with many cubic relations*
Transform. Groups 17 (2012), no. 1, 157–194
- M. Graña, I. Heckenberger, L. Vendramin. *Nichols algebras of group type with many quadratic relations*
Adv. Math. 227 (2011) 1956–1989
- N. Andruskiewitsch, F. Fantino, M. Graña, L. Vendramin. *Pointed Hopf algebras over sporadic simple groups*
J. Algebra 325 (1) (2011) 305–320
- N. Andruskiewitsch, F. Fantino, M. Graña, L. Vendramin. *The logbook of Pointed Hopf algebras over sporadic simple groups*
J. Algebra 325 (1) (2011) 282–304
- N. Andruskiewitsch, F. Fantino, M. Graña, L. Vendramin. *Finite-dimensional pointed Hopf algebras with alternating groups are trivial*
Ann. Mat. Pura Appl (4) 190 (2011), no. 2, 225–245.
- N. Andruskiewitsch, F. Fantino, M. Graña, L. Vendramin. *Pointed Hopf algebras over some sporadic simple groups*
C. R. Math. Acad. Sci. Paris 348 (2010) 605–608
- M. Graña, S. Freyre, L. Vendramin. *On Nichols algebras over $\mathbf{PSL}(2, q)$ and $\mathbf{PGL}(2, q)$*
J. Algebra Appl., Vol. 9, No. 2 (2010) 195–208
- M. Graña, S. Freyre, L. Vendramin. *On Nichols algebras over $\mathbf{SL}(2, \mathbb{F}_q)$ and $\mathbf{GL}(2, \mathbb{F}_q)$*
J. Math. Phys. 48, 123513 (2007) (11 pages)

Proceedings

- L. Vendramin. *Fomin-Kirillov algebras*
Nichols algebras and Weyl groupoids, *Oberwolfach Rep.* 9 (2013), no. 4, 2889–2891
- F. Fantino, L. Vendramin. *On twisted conjugacy classes of type D in sporadic simple groups*
Hopf Algebras and Tensor Categories, Contemp. Math. 585 (2013) 247-259
- N. Andruskiewitsch, F. Fantino, G. García, L. Vendramin. *On Nichols algebras associated to simple racks*
Algebras and Applications, Contemp. Math 537 (2011) 31-56
- N. Andruskiewitsch, F. Fantino, G. García, L. Vendramin. *On twisted homogeneous racks of type D*
The Humboldt Kolleg Colloquium on Hopf Algebras, Quantum Groups and Tensor Categories, Rev. Un. Mat. Argentina, 51 2(2010) 1-16

Preprints

- V. Lebed, L. Vendramin. On structure groups of set-theoretic solutions to the Yang-Baxter equation
- I. Heckenberger, L. Vendramin. PBW deformations of a Fomin-Kirillov algebra and other examples

Software

- **Rig**, GAP package for computations related to racks and their cohomologies
<http://github.com/vendramin/rig>
- **Sarna**, *Arithmetic Root Systems and Nichols algebras*
With M. Graña, I. Heckenberger. Software written in Python for the computation of the Weyl groupoid of a diagonal braiding. <http://github.com/vendramin/sarna>

SELECTED TALKS

- *Skew braces*
Groups, rings and the Yang–Baxter equation. Spa, Belgium, 18/6/2017–24/6/2017
- *Set-theoretical solutions of the Yang–Baxter equation*
MIT, Massachusetts, USA, 19/4/2017
- *The combinatorics of the Yang–Baxter equation*
MAXIMALS Seminar, University of Edinburgh, Edinburgh, Scotland, 28/3/2017
- *Nichols algebras*
Algebra Seminar, Warsaw University, Poland, 4/4/2017
- *Set-theoretical solutions of the Yang–Baxter equation*
Algebra Seminar, Warsaw University, Poland, 6/4/2017
- *Nichols algebras and applications*
Dublin Mathematics Colloquium, Geometry Seminar, Trinity College, Dublin, Ireland, 15/03/2017
- *Set-theoretical solutions of the Yang–Baxter equation*
Séminaire Quantique, Strasbourg, France, 6/2/2017
- *Set-theoretical solutions of the Yang–Baxter equation*
Seminario de álgebra, Universidad autónoma de Barcelona, Spain, 23/1/2017
- *The combinatorics of the Yang–Baxter equation*
Oberseminare am IAZ, Stuttgart, Germany, 18/1/2017
- *Nichols algebras*
XXI Coloquio Latinoamericano de Álgebra, Buenos Aires, Argentina, 25/7/2016–29/7/2016
- *The combinatorics of the Yang–Baxter equation*
Mathematische Gesellschaft in Göttingen, Göttingen, Germany, 23/12/2016

- *The classification of Nichols algebras*
Humboldt Kolleg. Colloquium on Algebras and Representations – Quantum 2016, Córdoba, Argentina, 29/2/2016–4/3/2016
- *Nichols algebras over non-abelian groups*
Nichols Algebras and Their Interactions with Lie Theory, Hopf Algebras and Tensor Categories, Banff, Canada, 6/9/2015–11/9/2015
- *Nichols algebras over non-abelian groups*
Coloquio Latinoamericano de Álgebra, Lima, Perú, 8/12/2014–12/12/2014
- *Introducción al álgebra con GAP (mini-course, 8 hours)*
Minicurso (8 horas), Universidad de Chile, Santiago de Chile, 25/11/2014–29/11/2014
- *The classification of Nichols algebras (mini-course, 6 hours)*
Summer school on Conformal Field Theories and Nichols algebras, Rauischholzhausen, Germany, 25/08/2014–29/08/2014
- *Introducción a la teoría combinatoria de nudos (mini-course, 3 hours)*
EIENA VII, Córdoba, Argentina, 4/08/2014–8/08/2014
- Nichols algebras
Seminario departamental, Universidad de Talca, Talca, Chile, 09/10/2014 (invited by M. Ronco)
- *Nichols algebras and Weyl groupoids of rank two*
Colóquio de Álgebra e Representações - Quantum 2014, Santa Maria, Brazil, 22/3/2014
- *Doubly transitive groups and cyclic quandles*
Università di Ferrara, Ferrara, Italy, 26/02/2014 (Invited by C. Menini)
- *Nichols algebras and a combinatorial model for Schubert calculus*
ICTP, Trieste, Italy, 11/02/2014
- *Fomin-Kirillov algebras*
Nichols algebras and Weyl groupoids, Oberwolfach, Alemania, 2/10/2012
- *Nichols algebras*
Séminaire Lotharingien de Combinatoire 69, Strobl, Austria, 10/09/2012
- *About the classification of finite-dimensional pointed Hopf algebras*
Groups, Rings, Lie and Hopf Algebras. III, Deer Lake, Canada, 13/08/2012
- *Nichols algebras and Weyl groupoids of rank two*
Oberseminar Kombinatorik und Algebra, Philipps Universität, Marburg, Germany, 31/01/2012
- *Introduction to cluster algebras*
Forschungsseminar Mathematische Physik, Philipps Universität, Marburg, Germany, 27/11/2012
- *Nichols algebras and quadratic relations*
Seminario de álgebra, Universidad de Almería, Almería, Spain, 21/09/2012 (invited by J. Cuadra)
- *Nichols algebras and quadratic relations*
Atlantic Algebra Center, Memorial University, St. John's, Canada, 1/08/2012
- *Nichols algebras and quadratic relations*
Hamburg Universität, Hamburg, Germany, 3/07/2012 (invited by C. Schweigert)
- *An introduction to Nichols algebras*
Hamburg Universität, Hamburg, Germany, 2/07/2012 (invited by C. Schweigert)
- *Nichols algebras and Schubert Calculus*
Forschungsseminar Mathematische Physik, Philipps Universität, Marburg, Germany, 8/05/2012
- *Pointed Hopf algebras over non-abelian groups*
RWTH Aachen University, Aachen, Germany, 25/01/2010 (invited by G. Hiss)

- *Quandles and knot invariants*
Forschungsseminar Mathematische Physik, Philipps Universität, Marburg, Germany, 19/01/2010
- *Nichols algebras over non-abelian groups*
XVIII Congreso Latinoamericano de Álgebra. Sao Pedro, Brazil, 08/2009
- *A GAP package for racks and Nichols algebras*
Advanced School and Conference on Knot Theory. ICTP, Trieste, Italy, 05/2009
- *Pointed Hopf algebras over the sporadic simple groups*
First Debrún Workshop on computational algebra. National University of Ireland, Galway, Ireland, 07/2008

PRIZES AND FELLOWSHIPS

- Premio Estímulo ANCEFEN 2016
- ERC Advanced Grant 320974 Fellowship, 2017 (with A. Smoktunowicz)
- *Alexander von Humboldt* Fellowship, 2012–2013 (with I. Heckenberger)
- DAAD Short-term Postdoctoral Fellowship, 2011
- CONICET Postdoctoral Fellowship, 2010–2012
- DAAD Short-term Fellowship, 2009
- CONICET PhD Fellowship, 2005–2010

STUDENTS

- Emiliano Acri
- Leandro Guarnieri
- Juan Orza