

CURRICULUM VITAE

JUAN MARTÍN MOMBELLI

General data

Family name: Mombelli. **given names:** Juan Martín.

Nationality: Argentinean.

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Current position

- Assistant researcher, CONICET- Argentina, since February 2009.
- Adjoint Professor at the National University of Córdoba Fa.M.A.F., since June 2009.

Education

- **Undergraduate degree in mathematics**, National University of Córdoba, Fa.M.A.F., Argentina. From 1996 till 2001. **Average of qualifications:** 9.44 (from 1 to 10, 1 being the lowest, 10 the highest)
- **Ph.D. in mathematics** National University of Córdoba Fa.M.A.F., Argentina, march 2006. Supervisor: Nicolás Andruskiewitsch. Title: *Fusion categories and quantum groupoids*.

Teaching experience

- *Student assistant* in the National University of Córdoba Fa.M.A.F, the years 1998, 1999 and 2000.
- Assistant Professor, at the Chemical Sciences Faculty, National University of Córdoba, Argentina, since August 2001 till March 2002.
- Assistant Professor, at the Chemical Sciences Faculty, National University of Córdoba, Argentina, since April 2003 till March 2005.
- Assistant Professor, at Fa.M.A.F, National University of Córdoba, Argentina, since April 2006 till March 2008.

Awards and Honors

- Fourth prize in the IV National Tournament of Mathematics, University *Blas Pascal*, Córdoba, Argentina (1994).
- Student scholarship FOMECA (financial help), Argentina, 1997; renewed 1998, 1999, 2000.
- First place in the National mathematical competition “El Número de Oro” (“*The Golden Number*”), Argentina, 1998.
- Best average in the qualifications at the Faculty of Mathematics, Astronomy and Physics, National University of Córdoba 1999.
- Second Place in the National mathematical competition “Ernesto Paenza” Argentina, 2000.
- First award in the monograph contest “*Orlando Villamayor*” from the Argentinian Mathematical Society (UMA), 2000. *Theme of the monograph*: Simple and semisimple Rings.
- Best average in the qualifications at the Faculty of Mathematics, Astronomy and Physics, National University of Córdoba, Argentina, 2000.
- Student award from the Government of Córdoba, 2000.
- University Gold Medal Prize 2001.
- PhD fellowship, granted by CONICET, Argentina, since April 2002 until April 2006.
- Postdoctoral fellowship, granted by CONICET, Argentina, since April 2006 until April 2008.
- Postdoctoral fellowship granted by the Deutscher Akademischer Austausch Dienst (DAAD), Germany, 2008.

Scientific meetings attended

- XLI, XLII, XLIII, LIV, LV Argentinean Mathematical Society scientific meetings (UMA) (1996, 1997, 1998, 2004, 2005).
- *Colloquium of Hopf algebras and Quantum groups*, held at La Falda, Córdoba, August 1999.
- *Encuentro Rioplatense de Álgebra y Geometría algebraica*, Montevideo, Uruguay, Junio 2000.
- *Rioplatense meeting of Algebra and Algebraic Geometry*, held at Montevideo, Uruguay, June 2000.
- XIV *Latinamerican Colloquium of Algebra*, held at La Falda, Córdoba, Argentina, August 2001.
- *International Colloquium of representations and Homology*, held at Sierra de la Ventana, Argentina, November 2001.
- *Seventh workshop of group representations*, held at Valparaíso, Chile, January 2002.
- I *National meeting of Algebra*, held at Vaquerias, Córdoba, Argentina, August 2003.
- XI *Rioplatense meeting of algebra and algebraic geometry*, Solís, Uruguay, December 2003.
- II *National meeting of Algebra*, held at Vaquerias, Córdoba, August 2004.

- VIII *Congress Dr. Antonio Monteiro*, held at Bahía Blanca, May 2005.
- XVI *Latinamerican Colloquium of Algebra*, held at Colonia del Sacramento, Uruguay, August 2005.
- LV Annual meeting of the Argentinean mathematical Society (UMA), Córdoba, Salta, September 2005.
- III *National meeting of Algebra*, Córdoba, August 2006.
- *New Techniques in Hopf algebras and Graded Ring Theory*, Brussels, Belgium, September 2006.
- *Homologie et déformations en algèbre, géométrie et représentations*, CIRM, Marseille, France, September 2006.
- XVII *Latinamerican Colloquium of Algebra*, held at Medellín, Colombia, July 2007.
- LVII Annual meeting of the Argentinean mathematical Society (UMA), Córdoba, September 2007.
- *Groupes quantiques dynamiques et catégories de fusion*, CIRM, Marseille, France, April 2008.
- *Hopf algebras, Quantum groups and Tensor categories*, La Falda, Córdoba, September 2009.
- *International Congress of Mathematicians*, Hyderabad, India, August 2010.

Presentations in Scientific meetings

- *Examples of quantum groupoids*, in the LIV annual Argentinean Mathematical Society scientific meeting (UMA), Neuquen, Argentina, October 2004.
- *Braided groupoids*, in the VIII *Congress Dr. Antonio Monteiro*, Bahía Blanca, Argentina, May 2005.
- *Fusion categories coming from vacant double groupoids*, en el XVI Latinamerican Colloquium of algebra, Colonia del Sacramento, Uruguay, August 2005.
- *Yan-Zhu Stabilizers and module categories over Hopf algebras*, in the LV annual Argentinean Mathematical Society scientific meeting (UMA), Salta, Argentina, September 2005.
- *Fusion categories and double vacant groupoids*, in the LV annual Argentinean Mathematical Society scientific meeting (UMA), Salta, Argentina, September 2005.
- *Module categories over Hopf algebras and Yan-Zhu stabilizers*, in the congress *New Techniques in Hopf algebras and Graded Ring Theory*, Brussels, Belgium, September 2006.
- *Module categories over Hopf algebras and Yan-Zhu stabilizers*, in the congress *Homologie et déformations en algèbre, géométrie et représentations*, CIRM, Marseille, France, September 2006.
- *Dynamical twists in finite-dimensional Hopf algebras*, in the XVII Latinamerican Colloquium of algebra, Medellín, Colombia, July 2007.
- *Dynamical twists in finite-dimensional Hopf algebras*, in the LVII annual Argentinean Mathematical Society scientific meeting (UMA), Córdoba, Argentina, September 2007.

Short-term visits

- Université de Reims, Reims, France, February-March 2003.
 - Universidad Sergio Arboleda, Bogotá, Colombia, January-February 2007.
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Research papers

- (1) C. GALINDO and M. MOMBELLI, *Module categories over finite pointed tensor categories*, in preparation.
 - (2) M. MOMBELLI, *Families of finite-dimensional Hopf algebras with the Chevalley property*, preprint [arXiv:1012.0222](#).
 - (3) O. BUERSCHAPER, M. MOMBELLI, M. CHRISTANDL and M. AGUADO, *A hierarchy of topological tensor network states*, preprint [arXiv:1007.5283](#).
 - (4) A. GARCÍA IGLESIAS and M. MOMBELLI *Representations of the category of modules over pointed Hopf algebras over S_3 and S_4* , accepted in Pacific Journal of Mathematics, preprint [arxiv:1006.1857](#)
 - (5) M. MOMBELLI, *Representations of tensor categories coming from liftings of quantum linear spaces*, J. London Math. Soc. to appear, preprint [arXiv:0907.4517](#).
 - (6) M. MOMBELLI, *Module categories over pointed Hopf algebras*, Mathematische Zeitschrift **266** n2 (2010) 319–344.
 - (7) M. MOMBELLI, *Constructing dynamical twists over a non-abelian base*, Applied Categorical Structures Vol. **18** 4 (2010) 407–429.
 - (8) M. MOMBELLI, *Dynamical twists for finite-dimensional Hopf algebras*, International Mathematics Research Notices vol 13 (2007).
 - (9) N. ANDRUSKIEWITSCH and M. MOMBELLI, *Module categories over finite-dimensional Hopf algebras*, Journal of Algebra **314**, (2007), 383–418.
 - (10) M. MOMBELLI and S. NATALE, *Tensor categories and vacant double groupoids*, Mathematical Research Letters **14** (2007) 1–18.
 - (11) C. MALDONADO and M. MOMBELLI, *On Braided Groupoids*, Journal of Algebra **307** (2007), 677-694.
 - (12) N. ANDRUSKIEWITSCH and M. MOMBELLI, *Examples of weak Hopf algebras arising from vacant double groupoids*, Nagoya Mathematical Journal **181** (2006) 1–27.
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Other works

- *Last Fermat theorem*, Revista de Educación Matemática, **22** (2007) No 1. (an historical review).
- *Categorías de fusión y grupoides cuánticos*, Ph.D thesis in spanish, 2006, Fa.M.A.F., U.N.C.
- *Grupos finitos y sus representaciones*, serie *cursillos de profesores visitantes*, Universidad Sergio Arboleda, Bogotá D.C., Colombia. (Notes of a small course given in Colombia).

Human resources

- Co-advisor of the undergraduate thesis in pure mathematics of ADRIANA MEJIA CASTAÑO, Universidad Sergio Arboleda, Bogotá, Colombia: finalized in February 2009. Subject: *Finite group representations of nilpotent groups arising from Lie algebras in positive characteristic*.
- Ph.D. advisor of ADRIANA MEJIA CASTAÑO under a latinamerican fellowship granted by CONICET, Argentina, since March 2009: in progress. Title: *Representations of tensor categories*.

Others

- Member of the organizing committee of the *Colloquium in Hopf algebras, Quantum Groups and Tensor Categories*, Mendoza, Argentina, March 2011.
- Member of the organizing committee of the *Colloquium in Hopf algebras, Quantum Groups and Tensor Categories*, La Falda, Córdoba, Argentina, September 2009.
- Member of the organizing committee of the *V National meeting of algebra*, La Falda, Córdoba, Argentina, August 2010.
- Reviewer for the MATHEMATICAL REVIEWS, since 2006.
- Referee for the JOURNAL OF ALGEBRA, since 2007.
- Referee for the REVISTA COLOMBIANA DE MATEMÁTICA, JOURNAL OF MATHEMATICAL PHYSICS, COMMUNICATIONS IN CONTEMPORARY MATHEMATICS.

Languages

Mother tongue: **Spanish**

Other languages:

English: Writing: adequately with few mistakes.

Reading: read and understand without difficulty.

Speaking: easily understood, but is not always fluent or correct,

Listening Comprehension: understand conversations and lectures without effort.

German: Writing: with difficulty and make many mistakes.

Reading: must read slowly, but understand the context.

Speaking: with difficulty.

Listening Comprehension: understand with difficulty; need repetition and occasional translation.