

CURRICULUM VITAE

Joan Porti Piqué

Address: Departament de Matemàtiques, Universitat Autònoma de Barcelona,

Current Position: “Catedràtic” (Full Professor) at the Math. Dep., UAB, since February 23, 2007.

Education: 1990: Bachelor Degree in Mathematics, Universitat Autònoma de Barcelona (Spain)

1994: PhD in Mathematics, Université Paul Sabatier (Toulouse, France).

Employment: **Jan-Sept 1995** *École Normale Supérieure de Lyon (France)*, postdoctoral fellowship (Spanish funding).

Oct 95-Sept 1996: *École Normale Supérieure de Lyon (France)*, Chargé de Recherches (Centre National de la Recherche Scientifique).

Oct 96 - Sept 1998: *Université Paul Sabatier (Toulouse, France)*, Chargé de Recherches (Centre National de la Recherche Scientifique).

Oct 1998 - Feb 2007: *Universitat Autònoma de Barcelona (Spain)*, “Professor Titular”.

Feb 2007 - present: *U A B (Spain)*, “Catedràtic” (current position).

Advisor: Advisor of 4 and co-advisor of one PhD thesis defended.

Invited talks: More than 50 invited talks in conferences, workshops and mini-courses.

Research grants: I have been scientist in charge of several research grants, including 5 grants from the Spanish ministry of 3 years each. I am currently in charge of the grant “Estructuras Geométricas” (MTM2015-66165-P) founded by the Spanish Minister from 1/1/2016 to 31/12/2018, with 6 researchers.

Icrea Academia prize 2008

Organization: Co-organization of two parallel sessions of Joint Meetings of the Spanish Mathematical Society (with Italy in 2014 and Mexico 2012).

Co-organizer of the conference “Low-dimensional Topology and Geometry in Toulouse” held in Toulouse in June 2013.

Co-organization of 2 advanced courses at the Centre de Recerca Matemàtica, Spain (2002 and 2008) and a research program (2008).

Scientific committees: 3 conferences and workshops (Zaragoza 2015, Luminy 2005 and Barcelona 2004).

Scientific Advisory Board of the Centre de Recerca Matemàtica (Barcelona), 2003-2007 and 2011–2016, of the Catalan Mathematical Society since February 2015 and of the Barcelona Graduate School of Mathematics, 2013-2017

Member of the *ANEP* (Spanish agency for evaluation). I coordinate the evaluation of research projects and grants in geometry. From January 2015 to June 2018.

Services: Coordinator of the postgraduate studies of the Department from March 2001 to June 2004.

Managing editor of *Publicacions Matemàtiques de la UAB* since January 2012

List of publicaciones

- [1] J. Porti and S. Tillmann, “Projective Structures on a Hyperbolic 3-orbifold,” *Acta Math. Vietnam.*, vol. 46, no. 2, pp. 347–355, 2021.
- [2] L. Paoluzzi and J. Porti, “Examples of character varieties in characteristic p and ramification,” in *Characters in low-dimensional topology*, vol. 760 of *Contemp. Math.*, pp. 229–261, Amer. Math. Soc., [Providence], RI, [2020] ©2020.
- [3] M. Heusener and J. Porti, “Holomorphic volume forms on representation varieties of surfaces with boundary,” *Ann. H. Lebesgue*, vol. 3, pp. 341–380, 2020.
- [4] W. Pitsch and J. Porti, “Volumes of $SL_n(\mathbb{C})$ -representations of hyperbolic 3-manifolds,” *Geom. Topol.*, vol. 22, no. 7, pp. 4067–4112, 2018.
- [5] M. Kapovich, B. Leeb, and J. Porti, “Dynamics on flag manifolds: domains of proper discontinuity and cocompactness,” *Geom. Topol.*, vol. 22, no. 1, pp. 157–234, 2018.
- [6] M. Heusener, V. Muñoz, and J. Porti, “The $SL(3, \mathbb{C})$ -character variety of the figure eight knot,” *Illinois J. Math.*, vol. 60, no. 1, pp. 55–98, 2016.
- [7] M. Kapovich, B. Leeb, and J. Porti, “Some recent results on Anosov representations,” *Transform. Groups*, vol. 21, no. 4, pp. 1105–1121, 2016.
- [8] J. Porti, “Nontrivial twisted Alexander polynomials,” in *A mathematical tribute to Professor José María Montesinos Amilibia*, pp. 547–558, Dep. Geom. Topol. Fac. Cien. Mat. UCM, Madrid, 2016.
- [9] V. Muñoz and J. Porti, “Geometry of the $SL(3, \mathbb{C})$ -character variety of torus knots,” *Algebr. Geom. Topol.*, vol. 16, no. 1, pp. 397–426, 2016.
- [10] M. Heusener and J. Porti, “Representations of knot groups into $SL_n(\mathbb{C})$ and twisted Alexander polynomials,” *Pacific J. Math.*, vol. 277, no. 2, pp. 313–354, 2015.
- [11] P. Menal-Ferrer and J. Porti, “Higher-dimensional Reidemeister torsion invariants for cusped hyperbolic 3-manifolds,” *J. Topol.*, vol. 7, no. 1, pp. 69–119, 2014.
- [12] J. Porti, “Regenerating hyperbolic cone 3-manifolds from dimension 2,” *Ann. Inst. Fourier (Grenoble)*, vol. 63, no. 5, pp. 1971–2015, 2013.
- [13] L. Paoluzzi and J. Porti, “Non-standard components of the character variety for a family of Montesinos knots,” *Proc. Lond. Math. Soc. (3)*, vol. 107, no. 3, pp. 655–679, 2013.
- [14] P. Menal-Ferrer and J. Porti, “Mutation and $SL(2, \mathbb{C})$ -Reidemeister torsion for hyperbolic knots,” *Algebr. Geom. Topol.*, vol. 12, no. 4, pp. 2049–2067, 2012.
- [15] P. Menal-Ferrer and J. Porti, “Twisted cohomology for hyperbolic three manifolds,” *Osaka J. Math.*, vol. 49, no. 3, pp. 741–769, 2012.
- [16] P. Menal-Ferrer and J. Porti, “Local coordinates for $SL(n, \mathbb{C})$ -character varieties of finite-volume hyperbolic 3-manifolds,” *Ann. Math. Blaise Pascal*, vol. 19, no. 1, pp. 107–122, 2012.
- [17] L. Paoluzzi and J. Porti, “Conway spheres as ideal points of the character variety,” *Math. Ann.*, vol. 354, no. 2, pp. 707–726, 2012.
- [18] J. Porti, “Hyperbolic polygons of minimal perimeter with given angles,” *Geom. Dedicata*, vol. 156, pp. 165–170, 2012.
- [19] J. Porti, “John Milnor: 2011 Abel Prize,” *SCM Not.*, no. 31, pp. 32–36, 2011.
- [20] M. Heusener and J. Porti, “Infinitesimal projective rigidity under Dehn filling,” *Geom. Topol.*, vol. 15, no. 4, pp. 2017–2071, 2011.
- [21] L. Bessières, G. Besson, S. Maillot, M. Boileau, and J. Porti, *Geometrisation of 3-manifolds*, vol. 13 of *EMS Tracts in Mathematics*. European Mathematical Society (EMS), Zürich, 2010.
- [22] L. Bessières, G. Besson, M. Boileau, S. Maillot, and J. Porti, “Collapsing irreducible 3-manifolds with nontrivial fundamental group,” *Invent. Math.*, vol. 179, no. 2, pp. 435–460, 2010.
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- [24] D. Cooper and J. Porti, “Non compact Euclidean cone 3-manifolds with cone angles less than 2π ,” in *The Zieschang Gedenkschrift*, vol. 14 of *Geom. Topol. Monogr.*, pp. 173–192, Geom. Topol. Publ., Coventry, 2008.
- [25] S. Francaviglia and J. Porti, “Rigidity of representations in $SO(4, 1)$ for Dehn fillings on 2-bridge knots,” *Pacific J. Math.*, vol. 238, no. 2, pp. 249–274, 2008.
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- [27] J. Porti, “Hamilton-Ricci flow in three-dimensional manifolds,” *Butl. Soc. Catalana Mat.*, vol. 22, no. 2, pp. 165–195, 230 (2008), 2007.
- [28] J. Porti, “2006 Fields Medal: Grigori Perelman,” *SCM Not.*, no. 23, pp. 50–51, 2007.
- [29] J. Porti and H. Weiss, “Deforming Euclidean cone 3-manifolds,” *Geom. Topol.*, vol. 11, pp. 1507–1538, 2007.
- [30] J. Porti, “Hamilton-Ricci flow on three dimensional manifolds,” in *XIV Fall Workshop on Geometry and Physics*, vol. 10 of *Publ. R. Soc. Mat. Esp.*, pp. 127–139, R. Soc. Mat. Esp., Madrid, 2006.

- [31] M. Boileau, B. Leeb, and J. Porti, “Geometrization of 3-dimensional orbifolds,” *Ann. of Math. (2)*, vol. 162, no. 1, pp. 195–290, 2005.
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- [33] M. Heusener and J. Porti, “The variety of characters in $\mathrm{PSL}_2(\mathbb{C})$,” *Bol. Soc. Mat. Mexicana (3)*, vol. 10, no. Special Issue, pp. 221–237, 2004.
- [34] J. Porti, “Spherical cone structures on 2-bridge knots and links,” *Kobe J. Math.*, vol. 21, no. 1-2, pp. 61–70, 2004.
- [35] J. Porti, “Mayberry-Murasugi’s formula for links in homology 3-spheres,” *Proc. Amer. Math. Soc.*, vol. 132, no. 11, pp. 3423–3431, 2004.
- [36] M. Boileau, S. Maillot, and J. Porti, *Three-dimensional orbifolds and their geometric structures*, vol. 15 of *Panoramas et Synthèses [Panoramas and Syntheses]*. Société Mathématique de France, Paris, 2003.
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- [41] M. Heusener, J. Porti, and E. Suárez Peiró, “Deformations of reducible representations of 3-manifold groups into $\mathrm{SL}_2(\mathbb{C})$,” *J. Reine Angew. Math.*, vol. 530, pp. 191–227, 2001.
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- [44] J. Porti, “The topology of DNA,” *Butl. Soc. Catalana Mat.*, vol. 14, no. 2, pp. 93–102, 1999.
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