

## Curriculum Vitae of Stefano Francaviglia (February 24, 2014)

More informations available online at <http://www.dm.unibo.it/~francavi>

### PERSONAL DATA

Born the 19/08/1973 in Pistoia, Italy; address: Dip. di Matematica, p.zza Porta San Donato 5, 40126 Bologna; phones: +39 051 2094468, e-mail: stefano.francaviglia@unibo.it. Research fields: Geometry, Topology, Geometric group theory.

### POSITIONS AND TITOLS

since 01/11/2008. Researcher at the University of Bologna, Italy.

02/2007 - 10/2008. Research fellow at the DMA of the University of Pisa, Italy.

02/2005 - 01/2007. Postdoc Marie Curie at the UAB (Barcellona, SP.)

21/05/2004. PhD in Mathematics at SNS of Pisa (punctuation: 70/70 cum laude.)

07/2003 - 02/2005. INdAM researcher at the DMA of the University of Pisa, IT.

01-06/2003. Research fellow C.R.M. through the program *Marie Curie Training site* (Barcelona, SP.)

16/07/1998. *Laurea in Matematica* at the University of Pisa (punctuation: 110/110 cum laude.)

### FOUNDED RESEARCH PROJECTS AND GRANTS

2011-2014 “FIRB” National Grant for young reseach-teams. Investigator. 610.000 Euros.

2009 - 2010 “Azione Integrata Italia-Spagna”. Investigator. 22.560 Euros.

02/2007 - 01/2008. Marie Curie Reintegration Grant. Principal Investigator. 40.000 Euros.

01-12/2003. INdAM reseach project *Flussi di metriche e convergenze di Varietà*. Investigator. 12.000 Euros.

### TEACHING

Since 2009. Regular teaching at the Bologna University; Mathematics Degree courses of Geometry and Algebra.

1999 - 2009. Collaborations to the teaching activity of the SNS and the University of Pisa. Courses of Linear Algebra, Geometry, Logic, Analysis. External collaborations with UMI for stages for preparation to Mathematical Olympic Games. Teaching activity in the Prison of Pisa.

### PUBBLICATIONS

1. (With A. Martino) Stretching factors, metrics and train tracks for free products. Preprint, December 2013 (arXiv:1312.4172.)
2. (with G. Calsamiglia and B. Deroin) The oriented graph of multi-graftings in the Fuchsian case; *Pub. Mat.* 58, 2014, 31—46.
3. (—) Branched projective structures with Fuchsian holonomy; *Geom. & Top.* 18(1), 2014, 379—446.
4. (with R. Frigerio and B. Martelli) Stable complexity and simplicial volume of manifolds; *J. of Topology* 5, 2012, 977—1010.
- 5,6. (with M. Carette, I. Kapovich, and A. Martino) Spectral rigidity of automorphic orbits in free groups. *Algebraic and Geometric Topology* 12(3), 2012 1457-1486. Plus a *corrigendum* to appear on the same journal.
7. (with J.F. Lafont) Large scale detection of half-flats in CAT(0)-spaces. *Indiana University Mathematical Journal* 59(2), 2010 395-416.
8. (with A. Martino) The isometry group of Outer space. *Advances in Mathematics* 231(3-4), 2012, 1940-1973.
9. (with A. Martino) Metric properties of Outer space. *Pub. Mat.* 55(2), 2011, 433-473
10. (with J. Lafont) Asymptotic cones, bi-Lipschitz ultraflats, and the geometric rank of geodesics. Preprint, January 2008 (arXiv:0801.3636.)
11. (with J. Porti) Rigidity of representations in  $SO(4, 1)$  for Dehn fillings on 2-bridge knots. *Pacific Journal of Mathematics* 238 (2008), No. 2, 249-274.
12. Geodesic currents and length compactness for automorphisms of free groups. *Trans. of AMS* 361(1) 2009, 161-176.
13. (with B. Klaff) Maximal volume representations are Fuchsian. *Geometriae Dedicata*, 117:111-124, 2006.
14. Constructing equivariant maps for representations. *Ann. Inst. Fourier* (2009) 59(1):393-428.
15. Algebraic and geometric solutions of hyperbolicity equations. *Topology and its Applications*, 145(1-3):91-118, 2004.
16. *Hyperbolicity equations for cusped 3-manifolds and volume-rigidity of representations*. PhD thesis, Scuola Normale Superiore, Pisa, 2003. Appeared in *Tesi*, vol. 2, Edizioni Scuola Normale Superiore di Pisa, 2005.
17. Hyperbolic volume of representations of fundamental groups of cusped 3-manifolds. *Int. Math. Res. Not.*, (9):425-459, 2004.
18. Similarity structures on the torus and the Klein bottle via triangulations. *Adv. in Geom.*, 6(3):397-421,2006.
19. Tautness of codimension-1 foliations in dimension 3 and transversality with embedded surfaces. *Rend. Accad. Naz. Sci. XL Mem. Mat. Appl.* (5), 24:121-157,

### PARTECIPATIONS TO CONFERENCES

60 partecipazioni; of whose: 1 as main speaker, 6 as invited speaker, 5 as speaker.

### Others Math Activities

Referee and Reviewer for international journals.