Marcelo Viana

Birth: March 4, 1962 - Rio de Janeiro, Brazil

Degrees: B. Sc. University of Porto, 1984
Ph. D. Instituto de Matemática Pura e Aplicada, 1990

Affiliation: Professor of Mathematics and Deputy Director
Instituto de Matemática Pura e Aplicada (IMPA)
Est. D. Castorina 110, Jardim Botânico, 22460-320 Rio de Janeiro, Brazil
Tel: +55 21 2529 5272   Fax: +55 21 5112 4115   Email viana@impa.br

Selected Invited Lectures

- Invited Speaker, *Intern. Congr. of Mathematicians*, ICM-Zurich, 1994.
- Plenary Speaker, *Intern. Congr. of Mathematical Physics*, Paris, 1994.
- Plenary Speaker, *Intern. Congr. of Mathematicians*, ICM-Berlin, 1998.
- Medal Lecture, *1st Latin American Congress of Mathematicians*, Rio de Janeiro, 2000.
- *Petrovskii Centenary Conference,* Moscow, 2001.
- *Colloque Michael Herman*, Institut Henri Poincaré, Paris, Paris, 2002.
- *Equadiff*, Hasselt, 2003.
- *Clay Institute Conference on Dynamical Systems*, MSRI, Berkeley, 2004.
- *Nonlinear Science in Three Continents*, Consortium for the Americas, Santa Fé, 2005.

Ph.D. Students

José F. Alves, 1997; Maria João Costa, 1998; Isabel L. Rios, 1998; Armando Castro, 1998; Vítor Domingos Araújo, 1998; Vanderlei M. Horita, 1999; Alexandre T. Baraviera, 2000; Paulo R. Sabini, 2001; Nivaldo C. Muniz, 2001; Jairo Bochi, 2001; Fávio Abdenur, 2002; Krerley Oliveira, 2002; Mychelle Dysman, 2003, Alexander Arbieto, 2004, Carlos Matheus, 2004, Nuno Luzia, 2005, Mário Bessa, 2005.

Grants and Distinctions

- Ramanujan Prize, ICTP, 2005.
- Great Cross of Scientific Merit, granted by the President of Brazil, 2000.
- Third World Academy of Sciences, elected in 2000.
- Third World Academy of Sciences Award in Mathematics, 1998
- Brazilian Academy of Sciences, elected in 1997
- Guggenheim Foundation Fellowship, 1993-1994
- Calouste Gulbenkian Foundation Fellowship, 1988-1990

Editorial

Editor or Editorial Board Member for Dynamics and Stability of Systems, Nonlinearity, Ergodic Theory & Dynamical Systems, Dynamical Systems: An International Journal, Portugaliae Mathematica, Discrete and Continuous Dynamical Systems, Journal of Stochastics and Dynamics, Dynamics of Partial Differential Equations.

Selected Publications (total list includes some 50 scientific publications)

•*Abundance of strange attractors*, with L. Mora, Acta Math. 171 (1993), 1-71.

•*High dimension diffeomorphisms displaying infinitely many periodic attractors*, with J. Palis, Annals of Math. 140 (1994), 207-250.

•*Strange attractors in saddle-node cycles: prevalence and globality*, with L. J. Díaz and J. Rocha, Invent. Math. 125 (1996), 37-74.

•*Multidimensional nonhyperbolic attractors*, Publ. Math. IHES. 85 (1997), 63-96.

•*Infinite-modal maps with global chaotic behavior*, with M. J. Pacifico and A. Rovella, Annals of Math. 148 (1998), 1-44.

•*Dynamics: a probabilistic and geometric perspective*, Documenta Mathematica - ICM98 vol. 1 (1998), 557-578.

•*SRB measures for partially hyperbolic systems whose central direction is mostly expanding*, with J. F. Alves and C. Bonatti, Invent. Math. 140 (2000), 351-398.

•*Solution of the basin problem for Hénon-like attractors*, with M. Benedicks, Invent. Math. 143 (2001), 375–434.

•*Généricité d'exposants de Lyapunov non-nuls pour des produits déterministes de matrices*, with C. Bonatti and X. Gomez-Mont, Annales Inst. Henri Poincaré - Analyse Non-Linéaire 20 (2003), 579-624

•*Lyapunov exponents with multiplicity* 1 *for deterministic products of matrices*, with C. Bonatti, Ergod. Th. & Dynam. Sys. 24 (2004), 1295-1330.

•*Dynamics beyond uniform hyperbolicity*, with C. Bonatti and L. J. Díaz, vol 102 of Enc. Math. Sciences, Springer Verlag, Heidelberg, 2004.

•*Abundance of stable ergodicity*, with C. Bonatti, C. Matheus, A. Wilkinson, Commentarii Math. Helvetici 79 (2004), 753-757.

•*Lyapunov exponents of generic volume preserving and symplectic systems*, with J. Bochi, Annals of Math. 161 (2005).

Administration

• Chair for Scientific Activities (1996–2003) and then Deputy Director (since 2004) of IMPA

• Scientific Coordinator of Latin American Mathematical Union - UMALCA (2001–2008)

• Chair of the Committee for Mathematics at Brazil's National Research Council - CNPq (1998–2001 and 2004–2007)

• Organizer of some 15 scientific meetings, in Brazil and abroad.

Marcelo Viana