

My research concerns low-dimensional dynamical systems, quantitative studies in Thurston's earthquake theory, and real Teichmüller theory motivated by rigidity problems in smooth or conformal dynamical systems.

## PUBLICATIONS

- Finite earthquakes and the associahedron. Preprint, 2006, to appear in the colloquium publication of the “Year on Teichmüller Theory and Moduli Problems,” Harish-Chandra Research Institute, 2005-06, Allahabad, India (co-authored with Frederick P. Gardiner).
- A short course on Teichmüller's theorem. Lecture notes, 2006, to appear in the colloquium publication of the “Year on Teichmüller Theory and Moduli Problems,” Harish-Chandra Research Institute, 2005-06, Allahabad, India (co-authored with Frederick P. Gardiner).
- From left earthquakes to right. *Contemporary Mathematics*, **432**, 75-92, 2007.
- Thurston unbounded earthquake maps. *Ann. Acad. Sci. Fenn.*, **32**, 125-139, 2007 (co-authored with Meiyu Su).
- An earthquake version of the Jackson-Zygmund theorem. *Ann. Acad. Sci. Fenn.*, **Vol. 30**, 237-260, 2005 (co-authored with Frederick P. Gardiner).
- Norms on earthquake measures and Zygmund functions. *Proc. of AMS*, **133**, 193-202, 2005.
- Earthquake measure and cross-ratio distortion. *Contemporary Mathematics*, **Vol. 355**, 285-308, 2004.
- Continuous extensions are not Hölder. *Inter. Journal of Bifurcation and Chaos*, **Vol. 14**, No. 4, 1501-1505, 2004.
- On a norm of tangent vectors to earthquake curves. *Advances in Mathematics, Sinica*, **Vol. 33**, No. 4, 401-414, 2004.
- Feigenbaum quadratic map: External rays and non-Hölder continuity. *Complex Dynamics and Related topics*, New Studies in Advanced Mathematics, **Vol. 5**, edited by Y. Jiang and Y. Wang, pp. 218-235. International Press, Somerville, MA, 2004.
- Thurston's earthquake measures of Sullivan's circle diffeomorphisms. *Complex Dynamics and Related topics*, New Studies in Advanced Mathematics, **Vol. 5**, edited by Y. Jiang and Y. Wang, pp. 198-217. International Press, Somerville, MA, 2004.
- Earthquake curves. *Contemporary Mathematics*, Vol 311, 141–195, 2002 (co-authored with Frederick P. Gardiner and Niklai Lakic).
- The Julia set of the Feigenbaum quadratic polynomial. *Dynamical Systems*, Proceedings of the International Conference on Dynamical Systems in Honor of Professor Shantao Liao (Beijing, August 1998; Editors: Yunping Jiang and Wen Lan), 99-124, World Scientific, 1999 (co-authored with Yunping Jiang).
- Period doubling, entropy, and renormalization, *Fundamenta Mathematicae*. **155**, No. 3, 237-249, 1998 (co-authored with Charles Tresser).

- Bounded geometry in the supports of ergodic invariant probability measures. *The Inter. Journal of Bifurcation and Chaos*, **Vol. 8**, No. 10, 1957-1973, 1998.
- Feigenbaum's rigidities and dynamical systems between simple and chaotic. *Advances in Mathematics, Sinica*, **Vol. 27**, No. 5, 385-402, 1998.
- Topological conjugacy of circle diffeomorphisms. *Ergod. Th. & Dynam. Sys.*, **17**, 173-186, 1997 (co-authored with Dennis P Sullivan).
- Commuting polynomials and polynomials with same Julia sets. *The Inter. Journal of Bifurcation and Chaos*, **Vol. 6**, No. 12A, 2427-2432, 1996 (co-authored with Pau Atela).

#### UNPUBLISHED PREPRINTS

- Local connectivity of Julia sets of real multimodal polynomials. Preprint in polishing, Dept. of Math., Brooklyn College of CUNY, 2000 (co-authored with Eduardo A. Prado and Edson Vargas).
- Renormalization, rigidity, and universality in bifurcation theory. Ph.D. thesis, Graduate Center of CUNY, Spring 1995.
- The Julia set of the Couillet-Feigenbaum-Tresser quadratic polynomial is locally connected. Preprint, Dept. of Math., Graduate Center of CUNY, May 1993.

#### LECTURE NOTES

- Lecture Notes of Complex Analysis of One Variable, Preprint, Dept. of Math., Graduate Center of CUNY, Fall 2005.
- Lecture Notes of Dynamical Systems: an introduction to the flows of autonomous systems, Preprint, Dept. of Math., Rutgers-Newark, 1998.