



Roya Makrooni

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Education

- ✓ B.Sc, Pure Mathematics, University of Tehran - 2004
- ✓ MS, Pure Mathematics - Topology and Geometry, Amirkabir University of Technology - 2007
- ✓ PhD, Applied Mathematics tendency of differential equa, Shahid Beheshti University - 2015

Courses

- | | |
|--------------------------------------|---|
| 1. Mathematics1 | 2. Applied mathematics (2) |
| 3. Mathematical analysis 2 | 4. Mathematics2 |
| 5. Special topics in dynamic systems | 6. 0 |
| 7. Mathematics 2 | 8. Differential equations |
| 9. Applied Mathematics 2 | 10. Basic Mathematics |
| 11. 5Dynamical systems (I) | 12. Fundamental of dynamic systems |
| 13. Special topics | 14. Mathematics and its applications in gavernmental management |
| 15. Mathematics for Economics (1) | 16. Methods of Teaching Mathematics |

Master Thesis

1. Influence of a square-root singularity on the behavior of piecewise smooth maps
مجید سارانی محتشم, [Roya Makrooni, Zahra Shabani Siahkalde]
نیمسال دوم سال تحصیلی 98-99
2. A remark on sensitivity and Li-yorke sensitivity of itrated function systems
فاطمه شهرکی, [Zahra Shabani Siahkalde, Roya Makrooni]
نیمسال دوم سال تحصیلی 97-98

Journals Papers

2022

1. Bifurcation Analysis of a Piecewise Smooth Map with Two Asymptotes

Roya Makrooni

Armenian Journal of Mathematics Volume: (14) 1 - 12

2019

2. Necessary and sufficient conditions of full chaos for expanding Baker-like maps and their use in non-expanding Lorenz maps

Laura Gardini, Roya Makrooni

Communications in Nonlinear Science and Numerical Simulation Volume: (67) 272 - 289

3. آشوب در دستگاه هاي ديناميكي قطعه اي هموار با يك نقطه ي ناپيوستگي

Mehdi Pourbarat, Neda Abbasi, Roya Makrooni

Volume: (9) 93 - 105

2018

4. Cascades of alternating smooth bifurcations and border collision bifurcations with singularity in a family of discontinuous linear-power maps

Laura Gardini, Roya Makrooni, Iryna Sushko

DISCRETE AND CONTINUOUS DYNAMICAL SYSTEMS-SERIES B Volume: (23) 701 - 729

2015

5. Bifurcation Structures in a Family of 1D Discontinuous Linear-Hyperbolic Invertible Maps

Roya Makrooni, Laura Gardini, Iryna Sushko

INTERNATIONAL JOURNAL OF BIFURCATION AND CHAOS Volume: (25) 1530039-1 - 1530039-21

6. Robust unbounded chaotic attractors in 1D discontinuous maps

Roya Makrooni, Neda Abbasi, Mehdi Pourbarat, Laura Gardini

CHAOS SOLITONS and FRACTALS Volume: (77) 310 - 318

7. Border collision and fold bifurcations in a family of one-dimensional discontinuous piecewise smooth maps: unbounded chaotic sets

Roya Makrooni, Farhad Khellat, Laura Gardini

JOURNAL OF DIFFERENCE EQUATIONS AND APPLICATIONS Volume: (21) 660 - 695

8. Border collision and fold bifurcations in a family of one-dimensional discontinuous piecewise smooth maps: divergence and bounded dynamics

Roya Makrooni, Farhad Khellat, Laura Gardini

JOURNAL OF DIFFERENCE EQUATIONS AND APPLICATIONS Volume: (21) 791 - 824

Conferences Papers

2018

1. [Chaos in Expanding Baker like Maps](#)

2nd Conference on Dynamical Systems and Geometric Theories

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