

CURRICULUM VITAE

JORDAN ALAN WATTS

ADDRESS

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PERSONAL DETAILS

Citizenship: Canadian (Permanent Resident of USA) Languages: English

RESEARCH INTERESTS

differential topology, generalisations of smooth structures (Sikorski differential spaces, subcartesian spaces, diffeology, Lie groupoids, stacks), Lie group actions, symplectic geometry, Hamiltonian group actions, orbifolds; applications of topological techniques in data analysis

APPOINTMENTS

2018- **Central Michigan University** (Mount Pleasant, MI, USA)
— Assistant Professor

2018 **University of Nebraska-Lincoln** (Lincoln, NE, USA)
— Postdoc at the National Drought Mitigation Center (data scientist)

Fall, 2017 **University of Colorado Boulder** (Boulder, CO, USA)
— Lecturer

2015-2017 **University of Colorado Boulder** (Boulder, CO, USA)
— Burnett Meyer Postdoc

2012-2015 **University of Illinois at Urbana-Champaign** (Champaign-Urbana, IL, USA)
— J. J. Uhl Research Assistant Professor

EDUCATION

2012 **University of Toronto** (Toronto, ON, Canada)
PhD in Mathematics
— Supervisor: Yael Karshon (University of Toronto)

2007 **University of Toronto** (Toronto, ON, Canada)
MSc in Mathematics (Course-based)
— Mentor: Yael Karshon (University of Toronto)

2006 **University of Calgary** (Calgary, AB, Canada)
MSc in Applied Mathematics (Thesis-based)
— Supervisor: Jędrzej Śniatycki (University of Calgary)

AWARDS AND GRANTS

“University-wide data science program”, part of the President’s and Provost’s Fund for Program Innovation and Excellence

NSF Grant DMS 1543812 for the Gone Fishing 2016 Conference (co-PI)

PAPERS AND PUBLICATIONS

My Erdős number is 4:

Jordan Watts \rightsquigarrow Yael Karshon \rightsquigarrow Shlomo Sternberg \rightsquigarrow Fan Chung \rightsquigarrow Paul Erdős

Published

Jordan Watts, “The orbit space and basic forms of a proper Lie groupoid”, In: *Current Trends in Analysis, its Applications and Computation: Proceedings of the 12th ISAAC Congress, Aveiro, Portugal, 2019; Trends in Mathematics: Research Perspectives*, Birkhäuser, 2022.

Carla Farsi, Laura Scull, and Jordan Watts, “Classifying spaces and Bredon (co)homology for transitive groupoids”, *Proc. Amer. Math. Soc.*, **148** (2020), 2717–2737.

Suzanne Craig, Naiche Downey, Lucas Goad, Michael J. Mahoney, Jordan Watts, “Orbit spaces of linear circle actions”, *Involve* **12** (2019), 941–959.

Derek Krepski and Jordan Watts, “Gerbes as Dixmier-Douady bundles and differential characters”, *J. Geom. Phys.*, **130** (2018), 168–183.

Jean-Pierre Magnot and Jordan Watts, “The diffeology of Milnor’s classifying space”, *Topol. Appl.* **232** (2017), 189–213.

Susan Tolman and Jordan Watts, “Tame circle actions”, *Trans. Amer. Math. Soc.* **369** (2017), 7443–7467.

Yael Karshon and Jordan Watts, “Basic forms and orbit spaces: a diffeological approach”, *SIGMA Symmetry Integrability Geom. Methods Appl.* **12** (2016), 026, 19 pages.

Jordan Watts, “The differential structure of an orbifold”, *Rocky Mountain J. Math.* **47** (2017), 289–327.

Jiayong Li and Jordan Watts, “The orientation-preserving diffeomorphism group of S^2 deforms to $SO(3)$ smoothly”, *Transformation Groups (Springer)* **16** (2011), no. 2, pp. 537–553.

Tsasa Lusala, Jędrzej Śniatycki, and Jordan Watts, “Regular points of a subcartesian space”, *Canad. Math. Bull.* **53** (2010), no. 2, pp. 340–346.

Submitted for Publication

Yael Karshon and Jordan Watts, “Smooth maps on convex sets”, 16 pages.

Carla Farsi, Laura Scull, and Jordan Watts, “Bicategories of action groupoids”, 45 pages.

Jordan Watts and Seth Wolbert, “The diffeological coarse moduli space of a stack”, 15 pages.

Yael Karshon, David Miyamoto, and Jordan Watts, “Diffeological submanifolds and their friends”, 15 pages.

Derek Krepski, Jordan Watts, and Seth Wolbert, “Sheaves, principal bundles, and Čech cohomology for diffeological spaces”, 25 pages.

Augustin Batubenge, Patrick Iglesias-Zemmour, Yael Karshon, and Jordan Watts, “Diffeological, Frölicher, and differential spaces”, 21 pages.

Preprints

Jordan Watts, “Bicategories of diffeological groupoids”, 84 pages.

Jordan Watts, “Symplectic quotients and representability: the circle action case”, 19 pages.

Theses

Jordan Watts, *Diffeologies, Differential Spaces, and Symplectic Geometry*, Ph.D. Thesis, Department of Mathematics, University of Toronto, 2012, 108 pages.

Jordan Watts, *The Calculus on Subcartesian Spaces*, M.Sc. Thesis, Department of Mathematics and Statistics, University of Calgary, 2006, 116 pages.