

Stefan Müller

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Korea Institute for Advanced Study

School of Mathematics

Hoegiro 87 (207-43 Cheongnyangni 2-dong), Dongdaemun-gu

Seoul 130-722, Republic of Korea

positions

- *Korea Institute for Advanced Study*, Seoul, Republic of Korea, july 2008-present
 - research fellow (postdoc), school of mathematics

education

- *University of Wisconsin - Madison*, WI, USA, 2002-2008
 - Ph.D. in mathematics, 18 may 2008
 - thesis title: the group of Hamiltonian homeomorphisms and C^0 -symplectic topology
 - thesis advisor: Yong-Geun Oh
 - M.A. in mathematics, 21 december 2003
- *Rheinische Friedrich-Wilhelms Universität*, Bonn, Germany, 1999-2002
 - Diplomstudiengang Mathematik, Vordiplom september 2001

research and interests

- Topological Hamiltonian and contact dynamics
- Symplectic and contact geometry and topology
- Topological dynamics

publications

- *Helicity of vector fields preserving a regular contact form and topologically conjugate smooth dynamical systems*, with Peter Spaeth, to appear in *Ergod. Th. & Dynam. Sys.*, 35 pages, preprint at [arXiv:1106.1968v2](https://arxiv.org/abs/1106.1968v2) [math.SG]
- *On properly essential classical conformal diffeomorphism groups*, with Peter Spaeth, to appear in *Ann. of Global Anal. and Geom.*, 11 pages, online first DOI 10.1007/s10455-011-9304-y, November 2011
- *The group of Hamiltonian homeomorphisms in the L^∞ -norm*, *J. Korean Math. Soc.* 45 (2008), no. 6, 1769-1784

- *The group of Hamiltonian homeomorphisms and C^0 -symplectic topology*, with Yong-Geun Oh, J. Symp. Geom. 5 (2007), no. 2, 167-219 (Festschrift in honor of Dusa McDuff)

arXiv preprints

- *Topological contact dynamics II: topological automorphisms, contact homeomorphisms, and non-smooth contact dynamical systems*, with Peter Spaeth, 39 pages, arXiv:1203.4655v1 [math.SG]
- *Topological contact dynamics I: symplectization and applications of the energy-capacity inequality*, with Peter Spaeth, 44 pages, arXiv:1110.6705v2 [math.SG]
- *A note on the volume flux of smooth and continuous strictly contact isotopies*, 8 pages, arXiv:1107.4869v1 [math.SG]
- *Approximation of volume preserving homeomorphisms by volume preserving diffeomorphisms*, 8 pages, arXiv:0901.1002v3 [math.DS]

invited and contributed talks

- *Jahrestagung der Deutschen Mathematiker-Vereinigung*, Geometrie und Topologie Sektion, Universität zu Köln, Germany, 21 september 2011
- *GESTA 2011: New Trends in Symplectic and Contact Geometry*, CIEM in Castro Urdiales, Spain, 29 june 2011
- *Geometry Seminar*, Seoul National University, Republic of Korea, fall 2010
- *International Conference on Symplectic, Contact, and Low Dimensional Topology*, Seoul National University, Republic of Korea, 10 november 2009
- *Algebra/Geometry/Topology Seminar*, University of Melbourne, Australia, 16 july 2009
- *The 6th KWMS International Conference*, Korea Institute for Advanced Study, Seoul, Republic of Korea, 19 june 2009
- *East Asian Symplectic Conference 2009*, Institute of Mathematics, Academia Sinica, Taipei, Taiwan, 6 may 2009
- *Symplectic Seminar Lecture Series: spectral invariants in Hamiltonian Floer theory*, Seoul National University, Republic of Korea, fall / winter 2008 (twelve lectures)
- *Symplectic Topology Seminar*, Penn State University, State College, PA, USA, 29 november 2007
- *Joint Summer Research Conference*, Snowbird Resort, Utah, USA, 2 july 2007

teaching and mentoring experience

- *Symplectic Seminar Lecture Series*, fall / winter 2008 (see invited talks)
- *VIGRE summer enhancement program* for first and second year graduate students, summer 2007; prepared and taught 5-week geometry and topology qualifying exam preparation
- *lectures* (teacher)
 - summer collegiate experience, calculus with algebra & trigonometry, 2007
 - intermediate algebra, spring 2007
 - trigonometry, spring 2004, fall 2004, summer 2005
- *discussion sections* (teaching assistant)
 - finite mathematics, fall 2006
 - calculus & analytic geometry I and II, fall 2003, 2005, 2007, spring 2005
- *MathLab* drop-in tutorial program, fall and spring 2005 and 2007
- "*What are you expected to know in your math class?*" workshop for students in calculus & analytic geometry III, fall 2007
- *VIGRE graduate participation seminar* geometry & topology, University of Wisconsin - Madison, organizer, spring and fall 2007

fellowships and miscellaneous

- *research fellowship*, Korea Institute for Advanced Study, july 2008-2012
- *VIGRE summer enhancement program teaching fellowship*, University of Wisconsin - Madison, summer 2007
- *research assistant*, University of Wisconsin - Madison, spring 2006, 2008
- Rheinische Friedrich-Wilhelms Universität Bonn *international office fellowship* to visit the University of Wisconsin - Madison, 2002-2003
- *referee* for several research papers
- *editor* of KIAS newsletter, 2009 and 2010
- *member* of the American Mathematical Society, since early graduate school
- *member* of the Korean Mathematical Society 대한수학회, since 2008
- *languages*: English, deutsch (German), français (French), 한국어 (Korean)