Xiudi Tang

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Employment

2021–present *Assistant Professor*, Beijing Institute of Technology, Beijing, China
2019–2021 *Postdoctoral Fellow*, University of Toronto, Toronto, ON, Canada
2018–2019 *Visiting Assistant Professor*, Cornell University, Ithaca, NY, USA

Education

2014–2018 PHD in Mathematics, University of California San Diego, USA
Dissertation: *Symplectic stability and new symplectic invariants of integrable systems* (advisor: Álvaro Pelayo)
2010–2014 BS in Mathematics, Tsinghua University, Beijing, China
Thesis: *Atiyah-Singer Index Theorem of Dirac Operators* (advisor: Pin Yu)

Research Interests

Differential Geometry; Symplectic Geometry, Integrable Systems, Hamiltonian Dynamics

Publications & Preprints

Preprints

2021 [7] Symplectic excision (with Yael Karshon), arXiv:2101.03534 [math.SG], preprint.
2019 [6] Semitoric systems of non-simple type (with Joseph Palmer, Álvaro Pelayo),
arXiv:1909.03501 [math.SG], preprint.
2018 [4] Vũ Ngọc's Conjecture on focus-focus singular fibers with multiple pinched points (with Álvaro Pelayo), arXiv:1803.00998 [math.SG], preprint.

Journal articles

2020 [5] Removing a ray from a noncompact symplectic manifold, *International Mathematics Research Notices* 2020(22):8878–8895.
2019 [3] Symplectic stability on manifolds with cylindrical ends (with Sean Curry, Álvaro Pelayo), *Journal of Geometric Analysis* 29(2):1660–1675.
2019 [2] Moser stability for volume forms on noncompact fiber bundles (with Álvaro Pelayo), *Differential Geometry and its Applications* 63:120–136.
2019 [1] Moser-Greene-Shiohama stability for families (with Álvaro Pelayo), *Journal of Symplectic Geometry* 17(5):1427–1446.

Honors & Awards

2019	Honorable Mention of Doctor Thesis, New World Mathematics Awards
2010-2014	Fellowship in the Tsinghua Xuetang Talents Program
2012	Honorable Mention in Probability and Statistics, S.-T. Yau College Student Mathematics Contests

Teaching

2021 Winter	MAT136H5S: Integral Calculus
2020 Fall	MAT236H5F: Vector Calculus
2020 Winter	MAT102H5S: Introduction to Mathematical Proofs
2019 Fall	MAT1375Y5: Calculus!
2019 Summer	Math 1920: Multivariable Calculus for Engineers
2019 Spring	Math 1120: Calculus II
2018 Fall	Math 1110: Calculus I
2018 Spring	Math 20E: Vector Calculus (TA)
2018 Winter	Math 155A: Geometric Computer Graphics (TA)
2017 Fall	Math 102: Applied Linear Algebra (TA)
2017.8	Math 20E: Vector Calculus
2016 Spring	Math 240C: Real Analysis III (TA)
2016 Winter	Math 240B: Real Analysis II (TA)
2015 Fall	Math 240A: Real Analysis I (TA)
2015 Fall	Math 20B: Calculus for Science and Engineering (TA)
2015.7	Math 20E: Vector Calculus (TA)
2015 Spring	Math 20C: Calculus and Analytic Geometry for Science and Engineering (TA)
2015 Winter	Math 20E: Vector Calculus (TA)

Mentoring

2018	*Supervisor*, S. -T. Yau High School Science Award (Mathematics)
	I have supervised a team of high school students Ritwick Bhargava, Sunay Joshi, and Luchen Shi. They are among ten of the teams which achieved the Honorable Mention in the global final competition.

Presentations & Posters

Conference & Invited Presentations

2021.8.5	Symplectic excision (POSTER). *New Developments of Momentum Polytopes Theory*, The Instituto de Ciencias Matemáticas, Online
2021.7.8	Combinatorial classification of semitoric systems. *Mathematical Research Seminar*, Duke Kunshan University, Suzhou, Jiangsu, China
2021.6.15	Symplectic excision. *Geometry and Physics Seminar*, Tsinghua University, Haidian, Beijing, China
2021.5.5	Symplectic excision. *Junior Global Poisson Workshop II*, Online

2021.1.12	Towards the classification of noncompact symplectic manifolds II. *Mathematical Physics Seminar*, Peking University, Online
2021.1.7	Towards the classification of noncompact symplectic manifolds I. *Mathematical Physics Seminar*, Peking University, Haidian, Beijing, China
2020.12.8	Symplectic ray removal. *Canadian Mathematical Society Winter Meeting 2020*, Online
2020.6.7	Semitoric systems with multi-pinched fibers. *Workshop on Lie Theory and Integrable Systems in Symplectic and Poisson Geometry*, Online
2020.5.18	Semitoric systems with multi-pinched fibers. *The 5th Nanjing University Young Scholar Forum*, Online
2020.5.14	Semitoric systems with multi-pinched fibers. *Gone Fishing 2020*, Online
2020.2.21	Semitoric systems with multi-pinched fibers. *Dynamical Systems Seminar*, Cornell University, Ithaca, NY, USA
2019.10.4	Symplectic ray removal and its applications. *Séminaire symplectique*, Centre de recherches mathématique, Montréal, QC, Canada
2019.6.11	The flexibility of symplectic forms and the semiglobal structure of integrable systems. *The 8th International Congress of Chinese Mathematicians*, Tsinghua University, Beijing, China
2019.4.28	Integrable systems, focus-focus singularities, and ray removal. *Geometry and Topology Seminar*, Syracuse University, Syracuse, NY, USA
2018.12.4	Integrable systems and focus-focus singularities. *Informal Talk for Graduate Students*, Boston University, Boston, MA, USA
2018.7.17	Semilocal invariants of multi-pinched focus-focus singularities (POSTER). *Poisson 2018*, University of Toronto, Toronto, Ontario, Canada
2018.6.26	Focus-focus singular fibers in integrable systems. *Geometry and Physics Seminar*, Tsinghua University, Beijing, China
2018.4.10	Semilocal invariants of multi-pinched focus-focus singularities (POSTER). *Geometric aspects of momentum maps and integrability*, Congressi Stefano Franscini, Ascona, Switzerland
2018.3.30	Semiglobal Symplectic Structures Near Fibers with Multiple Focus-Focus Singular Points. *Gone Fishing 2018*, University of California, La Jolla, CA, USA
2018.3.1 2018.2.27	Focus-focus fibres in symplectic geometry, *Geometric Structures Laboratory*, University of Toronto, Toronto, ON, Canada
2017.7.3	Semilocal invariants of multi-pinched focus-focus singularities (POSTER). *Finite Dimensional Integrable Systems in Geometry and Mathematical Physics*, Centre de Recerca Matemàtica, Barcelona, Spain
2017.5.5	Stability of symplectic forms on noncompact manifolds. *Yau's Students' Seminar*, Harvard University, Cambridge, MA, USA
2016.12.5	Moser stability for volume forms on noncompact fiber bundles. *Séminaire de Géométrie Analytique*, Institut de Recherche Mathématiques de Rennes, Rennes, France
2016.7.14	Moser stability for volume forms on noncompact fiber bundles. *Lecture*, Instituto de Ciencias Matemáticas, Madrid, Spain
2016.7.5	Stability of volume forms on noncompact bundles (POSTER). *Poisson 2016*, Eidgenössische Technische Hochschule, Zürich, Switzerland
2016.6.21	Stability of volume forms on noncompact bundles (POSTER). *Integrable Systems Conference 2016*, Congressi Stefano Franscini, Ascona, Switzerland
2016.3.12	Noncompact Moser Stability. *Gone Fishing 2016*, University of Colorado, Boulder, CO, USA

Seminar Talks

University of Toronto

2021	Geometric Structures Laboratory (2021.2.15)
2020	Toric Topology Research Seminar (2020.2.25)
2019	Geometric Structures Laboratory (2019.10.23)
2019	Symplectic Geometry Seminar (2019.2.27)

Cornell University

2019	Topology and Geometric Group Theory Seminar (2019.4.23)
2018	Dynamical Systems Seminar (2018.10.19, 2018.10.12)
2018	Symplectic Geometry Seminar (2018.10.4, 2018.10.2)

University of California San Diego

2016–2018	Symplectic Geometry Seminar (2018.2.13, 2018.1.30, 2018.1.23, 2017.2.10, 2017.2.3, 2016.10.21, 2016.3.4)
2016	Differential Geometry Seminar (2016.5.3, 2016.4.26, 2016.1.19)

Conferences Attended

2019.12	*Canadian Mathematical Society Winter Meeting 2019*, Chelsea Hotel, Toronto, ON, Canada
2018.1	*25th Southern California Geometric Analysis Seminar*, University of California, Irvine, CA, USA
2017.6	*15th School on Interactions between Dynamical Systems, Geometry, and Partial Differential Equations*, Centre de Recerca Matemàtica, Barcelona, Spain
2017.4	*JDG Conference on Geometry and Topology 2017*, Harvard University, Cambridge, MA, USA
2017.4	*Southern California Analysis and PDE Conference 2017*, University of California, La Jolla, CA, USA
2017.2	*24th Southern California Geometric Analysis Seminar*, University of California, La Jolla, CA, USA
2016.6	*Summer School on Poisson Geometry*, Université de Genève, Geneva, Switzerland
2016.4	*Graduate Student Topology and Geometry Conference 2016*, Indiana University, Bloomington, IN, USA
2016.1	*23rd Southern California Geometric Analysis Seminar*, University of California, Irvine, CA, USA
2016.1	*SCGAS Winter School 2016*, University of California, Irvine, CA, USA
2015.2	*22nd Southern California Geometric Analysis Seminar*, University of California, La Jolla, CA, USA