

Xiudi Tang

Department of Mathematics
University of Toronto
Room 6290, 40 St. George St.
Toronto, Ontario M5S 2E4, Canada

Email: xdtang.math@gmail.com
URL: xiudi-tang.github.io

Employment

2019–present *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

Publications & Preprints

JOURNAL ARTICLES

2019 [1] Moser stability for volume forms on noncompact fiber bundles (with Álvaro Pelayo), *Differential Geometry and its Applications* 63:120–136.
2019 [2] Moser-Greene-Shiohama stability for families (with Álvaro Pelayo), to appear in *Journal of Symplectic Geometry*.
2019 [3] Symplectic stability on manifolds with cylindrical ends (with Sean Curry, Álvaro Pelayo), *Journal of Geometric Analysis* 29(2):1660–1675.

PREPRINTS

2019 [4] Semitoric systems of non-simple type (with Joseph Palmer, Álvaro Pelayo), [arXiv:1909.03501 \[math.SG\]](https://arxiv.org/abs/1909.03501), preprint.
2018 [5] Removing a ray from a noncompact symplectic manifold, [arXiv:1812.00444 \[math.SG\]](https://arxiv.org/abs/1812.00444), preprint.
2018 [6] Vũ Ngọc’s Conjecture on focus-focus singular fibers with multiple pinched points (with Álvaro Pelayo), [arXiv:1803.00998 \[math.SG\]](https://arxiv.org/abs/1803.00998), preprint.

Honors & Awards

2019 Honorable Mention of Doctor thesis, New World Mathematics Awards
2014–2018 Fellowship in the Tsinghua Xuetang Talents Program
2012 Honorable Mention in Probability and Statistics, S.-T. Yau College Student Mathematics Contests

Teaching

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	<i>Supervisor</i> , 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.
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Presentations & Posters

CONFERENCE & INVITED PRESENTATIONS

2019.10.4	Symplectic ray removal and its applications. <i>Séminaire symplectique</i> , Centre de recherches mathématique, Montréal, QC, Canada
2019.6.11	The flexibility of symplectic forms and the semiglobal structure of integrable systems. <i>The 8th International Congress of Chinese Mathematicians</i> , Tsinghua University, Beijing, China
2019.4.28	Integrable systems, focus-focus singularities, and ray removal. <i>Geometry and Topology Seminar</i> , Syracuse University, Syracuse, NY, USA
2018.12.4	Integrable systems and focus-focus singularities. <i>Informal Talk for Graduate Students</i> , Boston University, Boston, MA, USA
2018.7.17	Semilocal invariants of multi-pinched focus-focus singularities (POSTER). <i>Poisson 2018</i> , University of Toronto, Toronto, Ontario, Canada
2018.6.26	Focus-focus singular fibers in integrable systems. <i>Geometry and Physics Seminar</i> , Tsinghua University, Beijing, China
2018.4.10	Semilocal invariants of multi-pinched focus-focus singularities (POSTER). <i>Geometric aspects of momentum maps and integrability</i> , Congressi Stefano Franscini, Ascona, Switzerland
2018.3.30	Semiglobal Symplectic Structures Near Fibers with Multiple Focus-Focus Singular Points. <i>Gone Fishing 2018</i> , University of California, La Jolla, CA, USA
2018.3.1	Focus-focus fibres in symplectic geometry, <i>Geometric Structures Laboratory</i> , University of Toronto,
2018.2.27	Toronto, ON, Canada

- 2017.7.3 Semilocal invariants of multi-pinned 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

- 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

- 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