

## Xi Sisi Shen

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BASIC INFORMATION	Department of Mathematics Columbia University 2990 Broadway, New York, NY	<a href="mailto:xss@math.columbia.edu">xss@math.columbia.edu</a> <a href="http://www.columbia.edu/~xss2000/">http://www.columbia.edu/~xss2000/</a>
RESEARCH INTERESTS	Complex geometry, partial differential equations, complex geometric flows, canonical metrics in Hermitian geometry.	
ACADEMIC APPOINTMENTS	<b>Columbia University</b> Joseph Fels Ritt Assistant Professor	July 2021 –
EDUCATION	<b>Northwestern University</b> Ph.D. in Mathematics, advised by Ben Weinkove	2016 – 2021
	<b>Columbia University</b> M.S. in Financial Engineering	2013 – 2014
	<b>McGill University</b> B.S. in Honours Probability and Statistics, minor in Computer Science	2009 – 2013
PUBLICATIONS	<ol style="list-style-type: none"><li>1. X. S. Shen, <i>Estimates for metrics of constant Chern scalar curvature</i>, To appear in <i>Mathematical Research Letters</i>, arXiv: 1909.13445.</li><li>2. X. S. Shen, <i>A Chern-Calabi flow on Hermitian manifolds</i>, <i>The Journal of Geometric Analysis</i> <b>32</b> (2022), arXiv: 2011.09683.</li><li>3. X. S. Shen, <i>The Kähler-Ricci flow, holomorphic vector fields and Fano bundles</i>, <i>Transactions of the American Mathematical Society</i> <b>374</b> (2021), 6751-6768.</li><li>4. X. S. Shen, A. Williams, <i>A <math>k</math>-ary middle levels conjecture</i>, <i>Proceedings of the 23rd Thailand-Japan Conference on Discrete and Computational Geometry, Graphs, and Games</i> (2021).</li><li>5. X. S. Shen, A. Williams, <i>A middle levels conjecture for multiset permutations with uniform frequency</i>, Williams College Technical Report CSTR-201901.</li><li>6. P. Guan, X. S. Shen, <i>A rigidity theorem for hypersurfaces in higher dimensional space forms</i>, <i>Contemporary Mathematics</i>, AMS. <b>644</b> (2015), 61-65.</li><li>7. X. S. Shen, A. Williams, <i>A ‘Hot Potato’ transposition Gray code for permutations</i>, <i>Electronic Notes in Discrete Mathematics</i>. <b>44</b> (2013), 89-94.</li></ol>	
INVITED TALKS	<ul style="list-style-type: none"><li>• Special Metrics in Complex Geometry, University of Texas Dallas. <i>May 2022</i></li><li>• JMM, <i>MSRI Special Session: Metric geometry and topology</i>. <i>Apr 2022</i></li><li>• McGill Geometric Analysis Seminar. <i>Mar 2022</i></li><li>• Rutgers Geometric Analysis Seminar. <i>Mar 2022</i></li><li>• Torino Geometric Analysis Seminar. <i>Feb 2022</i></li><li>• University of Firenze Geometry Seminar. <i>Feb 2022</i></li><li>• CUHK Seminar in Geometric Analysis. <i>Feb 2022</i></li><li>• CIRGET Seminar. <i>Jan 2022</i></li><li>• Workshop on Complex Geometry, Vanderbilt University. <i>Dec 2021</i></li></ul>	

- CMS Winter Meeting, *Recent Developments in Complex Geometry and Geometric Analysis*. Dec 2021
- Stony Brook Geometry and Topology Seminar. October 2021
- The 3rd Geometric Analysis Festival. July 2021
- CMS 75th Anniversary Summer Meeting. Jun 2021
- CUNY Almost Complex Geometry Seminar. Mar 2021
- University of Maryland Informal Geometric Analysis Seminar. Dec 2020
- UBC Differential Geometry, Mathematical Physics & PDE Seminar. Nov 2020
- Columbia University Informal Complex Geometry and PDE Seminar. Nov 2020
- Florida International University Geometry Seminar. Jun 2020
- Waterloo University Geometry and Topology Seminar. Jan 2020
- JMM, *AMS Special Session on De Bruijn Sequences and Their Generalizations, II*. Jan 2014
- Canadian Discrete and Algorithmic Mathematics Conference. Jun 2013
- McGill Undergraduate Research Conference. Oct 2012

EXPERIENCE	2021– 2017–2020 2014–2016 2015 2014 2011–2012	Instructor for <i>MATHUN1101</i> at Columbia University TA for <i>MATH 220, 224, 300, 310-1,2,3</i> at Northwestern University Data Scientist at Facebook Inc. Instructor at General Assembly for <i>Intro to SQL</i> course Options Trading Intern at Sun Trading LLC Mathematics Help Desk Tutor at McGill University
HONOURS AND AWARDS	2021 2019 2014 2013 2013 2012	Best Thesis Award in Mathematics, Northwestern University US Junior Oberwolfach Fellow Columbia Engineering Student Council Travel Scholarship McGill Science Undergraduate Society Travel Award William Moser Memorial Prize for 2012 Putnam Math Competition Research Scholarship granted by l’Institut des Sciences Mathematiques (ISM)
CONFERENCE ORGANIZATION SERVICE	2021 2021 2022	Member of Geometry and TACoS organizational committee Co-organizer of Columbia University Informal Complex Geometry and PDE Seminar Served on the Qualifying Exam Committee of Shuang Liang (Columbia University)
MENTORSHIP	2021	Directed reading program on algorithmic game theory with undergraduate Robert Winter at Northwestern