

Jiayin Pan

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| CONTACT INFORMATION | Mathematics Department University of California, Santa Cruz 1156 High Street Santa Cruz, CA 95064 | jpan53@ucsc.edu jypan10@gmail.com https://jypan10.github.io/ |
| RESEARCH INTEREST | Riemannian geometry, Ricci curvature and topology, Gromov-Hausdorff convergence. | |
| EMPLOYMENT | July 2022 - present <i>Assistant Professor</i> , Department of Mathematics, University of California, Santa Cruz, CA, USA. | |
| | July 2021 - June 2022 <i>Fields Postdoctoral Fellowship</i> , Fields Institute for Research in Mathematical Sciences, Toronto, ON, Canada. | |
| | July 2018 - June 2021 <i>Visiting Assistant Professor</i> , Department of Mathematics, University of California, Santa Barbara, CA, USA. | |
| EDUCATION | September 2012 - May 2018 <i>Ph.D. in Mathematics</i> , Rutgers University, New Brunswick, NJ, USA. Advisor: Xiaochun Rong | |
| | September 2008 - May 2012 <i>B.S. in Mathematics</i> , Shanghai Jiao Tong University, China. | |
| RESEARCH ARTICLES | <i>Nonnegative Ricci curvature, stability at infinity and finite generation of fundamental groups.</i> Geometry & Topology 23-6 (2019), 3203-3231. | |
| | <i>A proof of Milnor conjecture in dimension 3.</i> Journal für die Reine und Angewandte Mathematik 758 (2020), 253-260. | |
| | <i>On the escape rate of geodesic loops in an open manifold with nonnegative Ricci curvature.</i> Geometry & Topology 25 (2021), 1059-1085. | |
| | <i>Semi-local simple connectedness of non-collapsing Ricci limit spaces</i> (with Guofang Wei). Journal of the European Mathematical Society. DOI:10.4171/JEMS/1166 | |
| | <i>Nonnegative Ricci curvature and escape rate gap.</i> Journal für die Reine und Angewandte Mathematik 782 (2022) 195-196. | |
| | <i>Examples of Ricci limit spaces with non-integer Hausdorff dimension</i> (with Guofang Wei). Geometric and Functional Analysis 32 (2022) 676-685. | |
| | <i>Some topological results of Ricci limit spaces</i> (with Jikang Wang). arXiv:2103.11344, to appear in Transactions of the American Mathematical Society. | |
| | <i>Nonnegative Ricci curvature, metric cones, and virtual abelianness.</i> arXiv:2201.07852, to appear in Geometry and Topology. | |
| | <i>Ricci curvature and isometric actions with scaling nonvanishing property</i> (with Xiaochun Rong). arXiv:1808.02329 | |
| | <i>Nonnegative Ricci curvature, almost stability at infinity, and structure of fundamental groups.</i> arXiv:1809.10220 | |

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| | <p><i>Examples of open manifolds with positive Ricci curvature and non-proper Busemann functions</i> (with Guofang Wei). arXiv:2203.15211</p> <p><i>Singular Weyl's law with Ricci curvature bounded below</i> (with Xianzhe Dai, Shouhei Honda, and Guofang Wei). arXiv:2208.13962</p> |
| SURVEY ARTICLES | <p><i>The fundamental groups of open manifolds with nonnegative Ricci curvature.</i> SIGMA 16 (2020), 078, 16 pages.</p> <p><i>Universal covers of Ricci limit and RCD spaces</i> (with Guofang Wei). Differential Geometry in the Large, London Mathematical Society Lecture Note Series (463), Cambridge University Press, 2020, Page 352-372.</p> |
| AWARDS | <p>Fields Postdoctoral Fellowship, 7/1/2021 to 6/30/2022</p> <p>AMS Simons Travel Grant, 7/1/2019 to 6/30/2021</p> <p>Excellence Fellowship for Dissertation Work, Rutgers University, Fall 2017</p> |
| ACADEMIC ACTIVITIES | <p>Referee for Proceedings of the American Mathematical Society</p> <p>Referee for Advances in Mathematics</p> <p>Referee for International Mathematics Research Notices</p> <p>Referee for Calculus of Variations and Partial Differential Equations</p> <p>Referee for Journal of Differential Geometry</p> <p>Referee for Special Issue of SIGMA on Scalar and Ricci Curvature</p> <p>Co-organizer of UCSB Differential Geometry Seminar (2019-2021 academic years)</p> <p>Organizer of UCSC Geometry & Analysis Seminar (2022-2023 academic year)</p> |
| SEMINAR/ CONFERENCE TALKS | <p>MSRI Special Session on Differential and Metric Geometry, Joint Mathematics Meetings (January 7, 2023)</p> <p>AMS Special Session on Riemannian Manifolds with Lower Scalar Curvature Bounds, Joint Mathematics Meetings (January 4-5, 2023)</p> <p>Online BIRS-CMO Workshop on metric measure spaces with symmetry and lower Ricci curvature bounds (August 7-12, 2022)</p> <p>Pacific Rim Complex & Symplectic Geometry Conference (August 1-5, 2022)</p> <p>The 51st Barrett Memorial Lectures: Exotic continua in modern mathematics (June 9-12, 2022)</p> <p>Hua-Luo-Gen Young Mathematician Forum, Chinese Academy of Sciences (May 27, May 30, June 2, 2022)</p> <p>Metric measure spaces & convergence seminar (May 6, 2022)</p> <p>Geometry/Topology Seminar, Indian Institute of Science (May 4, 2022)</p> <p>MSRI Special Session on Metric Geometry and Topology, Joint Mathematics Meetings (April 8-9, 2022)</p> <p>Geometry Seminar, Capital Normal University (April 7, 2022)</p> <p>Graduate Students Topology Geometry Conference, Georgia Tech (April 1-3, 2022)</p> <p>Geometry/Topology Seminar, University of Toronto (March 7, 2022)</p> <p>Geometric Analysis Seminar, CUNY Graduate Center (February 24, 2022)</p> <p>Topology/Geometry Seminar, University of Oregon (February 8, 2022)</p> <p>Differential Geometry and Symplectic Topology Seminar, University of Minnesota, Twin Cities (February 3, 2022)</p> <p>Geometric Analysis Seminar, University of Chicago (February 1, 2022)</p> <p>Differential Geometry Seminar, Nanjing University (November 5, 2021)</p> <p>Geometry/Topology Seminar, University of Science and Technology of China (November 4, 2021)</p> <p>Geometry/Topology Seminar, Rutgers University (September 14, 2021)</p> <p>Geometry/Topology Seminar, University of Toronto (September 13, 2021)</p> |

Fields Postdoc Colloquium, The Fields Institute (September 10, 2021)
 Mini course, Sun Yat-sen University (August 18 20 22, 2021)
 Geometry Seminar, Capital Normal University (June 11, 2021)
 Differential Geometry and Geometric Analysis Seminar, Princeton University (May 5, 2021)
 Virtual seminar on geometry with symmetries (April 7, 2021)
 Geometry/Topology Seminar, Rutgers University (November 3, 2020)
 Differential Geometry Seminar, University of California, Santa Barbara (October 16, 2020)
 Differential Geometry Seminar, Centro de Investigacion en Matematicas (October 12, 2020)
 2020 Virtual Workshop on Ricci and Scalar curvature (August, 2020)
 Geometry/Topology Seminar, Stony Brook University (May 26, 2020)
 Differential Geometry Seminar, University of California, Santa Barbara (February 21, 2020)
 Differential Geometry Seminar, Nanjing University (December 21, 2019)
 AMS Special Session on Topics in Global Geometric Analysis, University of California, Riverside (November 9 - 10, 2019)
 Geometry/Topology Seminar, University of Toronto (October 28, 2019)
 Differential Geometry Seminar, University of California, Berkeley (September 16, 2019)
 Geometry/Topology Seminar, Rutgers University (September 10, 2019)
 Differential Geometry Seminar, University of California, Santa Barbara (April 19, 2019)
 Differential Geometry Seminar, University of California, Irvine (February 12, 2019)
 Differential Geometry Seminar, University of California, Santa Barbara (October 26, 2018)
 Lecture series, Capital Normal University (July 27 - August 6, 2018)
 Geometry Seminar, Eastern China Normal University (July 19, 2018)
 Geometry Seminar, ZheJiang University (July 2, 2018)
 Geometry/Topology Seminar, Rutgers University (March 20, 2018)
 Geometry/Topology Seminar, Stony Brook University (February 13, 2018)
 Geometry/Topology Seminar, Rutgers University (October 17, 2017)
 Geometric Analysis Seminar, Fudan University (August 24, 2017)
 Young Mathematician Workshop on Differential and Metric Geometry, Capital Normal University (August 12-13, 2017)
 Geometric Analysis Seminar, CUNY Graduate Center (May 11, 2017)
 Geometry/Topology Seminar, Rutgers University (November 15, 2016)
 Workshop on Geometry and Analysis on Manifolds, Eastern China Normal University (July 16-17, 2016)