

Yang Li

CONTACT INFORMATION

Email: yangmit@mit.edu

EDUCATION

- 2011-2014: University of Cambridge, Downing College, BA degree in mathematics, first class in each year, senior wrangler in 2014
- 2014-2015: University of Cambridge, MMath degree ('Cambridge Part III'), with Distinction
- 2015-2019: Imperial College London, CDT London school of Geometry and Number Theory, Ph.D. study supervised by Professor Simon Donaldson and co-supervised by Professor Mark Haskins
- 2019-2020: postdoc at Institute for Advanced Study
- 2020-present: postdoc at MIT, sponsored by Clay Mathematics Institute

AWARDS AND ACHIEVEMENTS

- 2011-2015: Jardine Scholarship (4-year full scholarship), by Jardine Foundation
- 2012: Unwin Scholarship, Platt Prize, by Downing College, Cambridge University
- 2013: Jan Hruska Scholarship, Platt Prize, by Downing College
- 2014: Downing College Medal for Extraordinary Achievement in the Mathematics Tripos, by Downing College
- 2015: Downing College Foundation Scholar, by Downing College
- 2019: Doris Chen award, by Imperial College London

RESEARCH INTERESTS

- Calabi-Yau metrics
- Special holonomy, G_2 geometry
- geometric analysis, Einstein manifolds, degeneration in Riemannian and complex geometry
- gauge theory

PUBLICATIONS

- *A new complete Calabi-Yau metric on \mathbb{C}^3* , *Inventiones mathematicae*, July 2019, Volume 217, Issue 1, pp 1-34.
- *Local Nahm transform and singularity formation of ASD connections*, *Communications in Mathematical Physics*, pp 1-38.
- *A gluing construction of collapsing Calabi-Yau metrics on K3 fibred 3-folds*, *Geometric and Functional Analysis*, August 2019, Volume 29, Issue 4, pp 1002-1047.
- *On collapsing Calabi-Yau fibrations*, [arXiv:1706.10250](https://arxiv.org/abs/1706.10250), accepted by *Journal of Differential Geometry*.
- *Bubbling phenomenon for Hermitian Yang-Mills connections*, [arXiv:1910.11732](https://arxiv.org/abs/1910.11732), accepted by IMRN.
- *Dirichlet problem for maximal graphs of higher codimension*, [arXiv:1807.11795](https://arxiv.org/abs/1807.11795), accepted by IMRN.

PREPRINTS

- *SYZ conjecture for Calabi-Yau hypersurfaces in the Fermat family*, [arXiv:1912.02360](https://arxiv.org/abs/1912.02360).
- *SYZ geometry for Calabi-Yau 3-folds: Taub-NUT and Ooguri-Vafa type metrics*, [arXiv:1902.08770](https://arxiv.org/abs/1902.08770).
- *Metric SYZ conjecture and non-archimedean geometry*, [arXiv:2007.01384](https://arxiv.org/abs/2007.01384).
- *Uniform Skoda integrability and Calabi-Yau degeneration*, [arXiv:2006.16961](https://arxiv.org/abs/2006.16961).
- *Diameter bounds for degenerating Calabi-Yau metrics*, [arXiv:2006.13068](https://arxiv.org/abs/2006.13068).
- *A note on singular Hermitian Yang-Mills connections*, [arXiv:1906.10565](https://arxiv.org/abs/1906.10565).

- *Mukai duality on adiabatic coassociative fibrations*,
arXiv:1908.08268.
- *Mukai duality on K3 surfaces from the differential geometric perspective*,
arXiv:1908.05017.
- *Collapsing Calabi-Yau fibrations and uniform diameter bounds*,
arXiv:2101.09787.
- *Iterated collapsing phenomenon on G_2 -manifolds*,
arXiv:2011.11168.

INVITED SEMINAR
AND CONFERENCE
TALKS

- Simons Collaboration meeting, 12 Jan 2017, Imperial College London
- Stony Brook Geometry and Topology seminar, 9 May 2017, Stony Brook University Maths department
- Simons Collaboration meeting, 7 June 2017, Imperial College London
- Imperial Geometry and Topology seminar, 23 Feb 2018, Imperial College London
- Simons Collaboration meeting, 12 April 2018, Durham, North Carolina, US
- Simons Collaboration meeting, 13 April 2018, Durham, North Carolina, US
- Workshop on degenerations of Calabi-Yau manifolds, 14 May 2018, IHP Paris
- Colloquium talk, 1 August 2018, Institute of Mathematical Sciences, Shanghai Tech University
- Geometry and Topology seminar, 30 Oct 2018, Stony Brook University
- Geometry seminar, 5 Dec 2018, Leeds University
- QGM seminar, 13 Dec 2018, Aarhus University
- Simons Collaboration meeting, 10 Jan 2019, Imperial College
- Simons Collaboration meeting, 11 Jan 2019, Imperial College
- Geometry seminar, 13 March 2019, Orsay, University Paris-Sud
- Simons Collaboration meeting, 11 April 2019, Santa Barbara
- Simons Collaboration meeting, 6 June 2019, Imperial College London
- Princeton geometric analysis seminar, 23 Oct 2019, Princeton
- Rutgers maths colloquium, 30 Oct 2019, Rutgers University
- Geometry seminar, 15 November 2019, Northwestern University
- Geometric analysis seminar, 19 November 2019, Chicago University
- Simons Collaboration meeting, 10 January 2020, Imperial College London
- Harvard differential geometry seminar, 28 April 2020, via zoom
- Simons Collaboration meeting, 14 September 2020, via zoom
- Lisbon geometry seminar, 22 September 2020, via zoom
- Floer-theoretic and algebro-geometric aspects of SYZ mirror symmetry, 29 Sep, 2020
- CUHK-Harvard-YMSC differential geometry seminar, 24 Nov 2020, via zoom
- Geometry and Topology seminar at UW-Madison, 4 Dec 2020, via zoom
- Chicago Maths Colloquium, 27 Jan 2021, via zoom
- Banff Geometry, Analysis, and Quantum Physics of Monopoles conference, 5 Feb 2021, via zoom