

Ved V. Datar

Curriculum Vitae

CONTACT AND PERSONAL INFORMATION

- **Address.** Dept. Of Math., Indian Institute of Science (IISc), Bangalore, KA - 560012, India
- **Email Address.** vvdatar@iisc.ac.in
- **Webpage.** www.math.iisc.ac.in/~vvdatar
- **Citizenship.** USA, OCI card holder

RESEARCH INTERESTS

- Geometric Analysis
- Complex differential geometry

EMPLOYEE- MENT

- *Assistant Professor* September 2018 - Present
Indian Institute of Science (IISc), Bangalore, India
- *Summer Lecturer* June 2018 - August 2018
UC Berkeley, Berkeley, USA
- *RTG postdoc* July 2015 - June 2018
UC Berkeley, Berkeley, USA
- *Visiting Instructor* August 2014 - May 2015
University of Notre Dame, Notre Dame, USA
- *Teaching Assistant and Graduate student* Fall 2008-July 2014
Rutgers, The State University of New Jersey, New Brunswick, USA

EDUCATION

- *Ph.D.*, Mathematics, May 2014
Rutgers, The State University of New Jersey, New Brunswick, NJ
Advisor. Jian Song
Thesis title. *Canonical Kähler metrics with cone singularities*
<https://rucore.libraries.rutgers.edu/rutgers-lib/44071/>.
- *Bachelor of Science (Honors)*, Mathematics and Computer Science, August 2008
Chennai Mathematical Institute, India.

PUBLICATIONS AND PREPRINTS

7. *Adiabatic limits of anti-self-dual connections on collapsed K3 surfaces* (with Adam Jacob and Yuguang Zhang), arXiv:1809.08583, submitted.
6. *Hermitian-Yang-Mills connections on collapsing elliptically fibered K3 surfaces* (with Adam Jacob), arXiv:1710.03898, submitted.
5. *Expansions of solutions to extremal metric type equations on blow-ups of cscK surfaces*, preprint, arXiv:1708.01024, to appear in Ann. Global Anal. Geom.
4. *Kähler-Einstein metrics along the smooth continuity method* (with Gábor Székelyhidi), Geom. Funct. Anal. (GAFA) 26 (2016), no. 4, 975–1010.
3. *On convexity of the regular set of conical Kähler-Einstein metrics*, Math. Res. Lett. 23 (2016), no. 1, 105–126.
2. *A remark on Kähler metrics with conical singularities along a simple normal crossing divisor* (with Jian Song), Bull. Lond. Math. Soc. 47 (2015), no. 6, 1010–1013.

1. *Connecting toric manifolds by conical Kähler-Einstein metrics* (with Bin Guo, Jian Song and Xiaowei Wang), *Advances in Math.* 323 (2018), 38-83.

AWARDS and HONORS

- *AMS travel award for attending Joint Mathematics Meetings* November 2013
- *SAS Excellence Fellowship for dissertation work in Mathematics* Fall 2013
School of Arts and Sciences (SAS), Rutgers University
- *TA Teaching Excellence Award*, Spring 2012
Department of Mathematics, Rutgers University
- *Fellowship from National Board for Higher Mathematics, India*, 2005-2008
Awarded based on performance in the Indian National Mathematics Olympiad

SERVICE

- Referee for *Annales de l'Institut Fourier*, *American journal of mathematics* and *Mathematical Research Letters*
- Organized the UC Berkeley Differential geometry seminar in Fall 2016 and Spring 2018.
- Co-organized (with Richard Bamler) the student differential geometry seminar at Berkeley in Spring 2017

CONFERENCE TALKS

- *Constant scalar curvature metrics on blow-ups of Kähler surfaces*, Nov. 2017
AMS Special session on Geometric Analysis, Fall Western sectional meeting, UC Riverside
- *Extremal metrics on blow-ups*, Jul. 2017
Trends In Modern Geometry 2017, Tokyo, Japan
- *Kähler-Einstein metrics along the smooth continuity method*, Jun. 2016
Recent advances in complex differential geometry, Toulouse, France
- *Kähler-Einstein metrics along the smooth continuity method*, Jun. 2015
Jagiellonian University, Krakow, Poland
- *Conical soliton metrics on Kähler manifolds*, Mar. 2014
Special Session on Interaction between Complex and Geometric Analysis, Spring Eastern Sectional Meeting of the AMS, Maryland
- *Conical soliton metrics on Kähler manifolds*, Jan. 2014
Special Session on Recent Progress in Geometric and Complex Analysis, Joint Mathematics Meetings of AMS, Maryland
- *Connectedness of the space of singular KE metrics on toric varieties*, Apr. 2013
Graduate Student Topology and Geometry Conference, Notre Dame

OTHER TALKS

- *Constant scalar curvature metrics on blow-ups of Kähler surfaces*, Oct. 2017
Geometry/Topology Seminar, UC Davis
- *Constant scalar curvature metrics on blow-ups of Kähler surfaces*, Sept. 2017
Differential geometry seminar, UC Berkeley
- *Kähler-Einstein metrics on Fano manifolds*, January 2016
Geometry/Topology Seminar, UC Davis
- *Kähler-Einstein metrics along the smooth continuity method*, Dec. 2015
Bay Area Differential Geometry Seminar, MSRI, Berkeley
- *Kähler-Einstein metrics along the smooth continuity method.*, Nov. 2015
Geometry and Analysis seminar, UC Santa Cruz
- *Kähler-Einstein metrics along the smooth continuity method.*, Sept. 2015
Differential geometry seminar, UC Berkeley

- *Kähler-einstein metrics along the smooth continuity method*, Jul. 2015
Chennai Mathematical Institute, Chennai, India
- *Connecting toric manifolds by conical KE metrics*, Apr. 2015
JHU-UMD Complex geometry seminar, Johns Hopkins
- *Convexity of regular set of singular KE metrics*, Nov. 2014
Analysis Seminar, Northwestern University
- *Conical soliton metrics on Kähler manifolds*, Sept. 2013
Complex Analysis and Geometry Seminar, Rutgers University

TEACHING EXPERIENCE

UC Berkeley.

- *Honors single variable calculus 1B* Fall 2015
- *Honors Multivariable Calculus* Fall 2015
Spring 2018
- *Real Analysis* Spring 2017
Fall 2017
Summer 2018
- *Complex Analysis* Fall 2016

University of Notre Dame.

- *Calculus-2 and Linear algebra and differential equations* Spring 2015
- *Calculus-1 and Calculus-3* Fall 2014

Rutgers University as Instructor.

- *Advanced Calculus for Engineering* Summer 2014
- *Mathematical Theory of Probability* Summer 2011

Rutgers University as TA.

- *Differential Equations for Engineering and Physics* Fall 2011 - Spring 2014
- *Calculus-2 for the Mathematical and Physical Sciences* Spring 2010
Fall 2009
- *Calculus-1 for the Mathematical and Physical Sciences* Fall 2010

REFERENCES

- Jian Song, Rutgers University (advisor)
– jiansong@math.rutgers.edu
- John Lott, UC Berkeley
– lott@berkeley.edu
- Gábor Székelyhidi, University of Notre Dame
– gszekely@nd.edu
- Valentino Tosatti, Northwestern University
– tosatti@math.northwestern.edu
- Alexander Paulin, UC Berkeley (teaching)
– apaulin@berkeley.edu