
Education

University of California, Irvine — Irvine, CA*Ph.D. Mathematics, June 2015*Dissertation: *On the asymptotic expansion of the Bergman kernel*

Advisor: Zhiqin Lu

University of California, Irvine — Irvine, CA*M.S. Mathematics, December 2011***University of California, Berkeley** — Berkeley, CA*B.A. Mathematics (with departmental honors), May 2009*

Research Interests

Geometric Analysis, Spectral Geometry, Kähler Geometry

Honors and Awards

AMS-Simons Travel Grant	2016–2018
UCI Mathematics Department Connelly Award (UC Irvine)	Spring 2015
<i>For maintaining an excellent record of teaching and research</i>	
Dissertation Fellowship (UC Irvine)	Fall 2015
Departmental Fellowship (UC Irvine)	Winter 2014
Dean's Honor List (UC Berkeley)	Fall 2008

Positions Held

University of California, Santa Barbara — Santa Barbara, CA	Fall 2015 – Present
<i>Visiting Assistant Professor</i>	
University of California, Irvine — Irvine, CA	Summer 2015
<i>Lecturer</i>	

Papers and Preprints

1. *Asymptotic expansion of the Bergman kernel via perturbation of the Bargmann-Fock model* (with H. Hezari, C. Kelleher, and H. Xu), *J. Geom. Anal.* **26**, (2016) no.4, 2602–2638
2. *Sharp Fundamental Gap Estimate on Convex Domains of Sphere* (with L. Wang and G. Wei) arXiv:1606.01212, 2016
3. *Bergman kernel asymptotics through perturbation* Analysis and geometry in several complex variables, 179–184, *Contemp. Math.*, **681**, Amer. Math. Soc. 2017
4. *First eigenvalue of the p -Laplacian under integral curvature condition*(with G. Wei) *Nonlinear Anal.* **163** 2017, pp 60-70,

5. *Fundamental gap estimate for convex domains on sphere – the case $n = 2$, (with X. Dai, G. Wei)* arXiv:1803.01115 2018
6. *Agmon-type estimate of the Bergman kernel, (with Z. Lu), (preprint), 2018*

Teaching Experience

Visiting Assistant Professor:	Fall 2015 – Present
Math 3A/3B/6A (Calculus Sequence)	
Math 4B (Differential Equations)	
Math 122B (Complex Analysis)	
Math 124A/B (Partial Differential Equations)	
Math 147A (Differential Geometry)	
Math 199 (Independent Study on Lie groups and Lie algebras)	
Lecturer at University of California, Irvine:	Summer 2015
Math 2B (Integral Calculus)	
Teaching Assistant at University of California, Irvine:	Fall 2009–Fall 2014
Math 2 A/B/D/E/J (Calculus Sequence)	
Math 3A (Elementary Linear Algebra)	
Math 4 (Math for Economists)	
Math 114A (Applied Complex Analysis)	
Math 121 A/B (Linear Algebra)	
Math 140 A/C (Real Analysis)	
Math 162B (Differential Geometry)	
Grader at University of California, Berkeley:	Fall 2007–Spring 2009
Math 128A & Numerical Analysis	

Selected Seminar and Conference Talks

<i>The first eigenvalue of the p-Laplacian with integral curvature condition</i>	January 2018
Joint Mathematics Meeting, San Diego, California	
<i>Fundamental Gap on convex domain of spheres (elliptic approach)</i>	November 2017
AMS Western Sectional Meeting, University of California, Riverside, California	
<i>First eigenvalue of the p-Laplacian on Riemannian manifolds</i>	September 2017
52nd Kansuron Summer Seminar, Kyushu, Japan	
<i>First eigenvalue of closed manifolds</i>	April 2017
Geometry and Analysis on Manifolds Conference, University of California, Santa Barbara, California	
<i>Fundamental Gap for convex domain of the sphere</i>	February 2017
Differential Geometry Seminar, University of California, Irvine, California	
<i>Fundamental Gap for convex domain of the sphere</i>	January 2017
Young Geometric Analyst Forum, Tsinghua Sanya International Mathematics Forum, China	

<i>Kodaira Vanishing and Embedding</i> Algebraic Geometry Seminar University of California, Santa Barbara, California	October 2016
<i>Fundamental Gap for convex domains of the sphere</i> ECNU Workshop of Geometry and Analysis on Manifolds, East China Normal University, China	July 2016
<i>Agmon-type Estimate of the off-diagonal Bergman kernel</i> 62nd Geometry Symposium, Tokyo University of Science, Japan	August 2015
<i>Agmon-type Estimate of the off-diagonal Bergman kernel</i> Young Mathematician Workshop on Several Complex Variables, Tongji University, China	August 2015
<i>Asymptotic Expansion and Agmon Estimate of the Bergman kernel</i> Geometry Seminar, University of California, Santa Barbara	May 2015
<i>Introduction to Kähler geometry</i> Geometry-Topology Seminar, California State University, Fullerton	April 2015
<i>Asymptotic expansion of the Bergman kernel</i> Analysis and Geometry in Several Complex Variables, Texas A & M at Qatar	January 2015
<i>Asymptotic expansion of the Bergman kernel via perturbation of the Bargmann-Fock model</i> Young Mathematician Workshop on Several Complex Variables, POSTECH, Korea	August 2014

Service and Professional Activities

Judge for MAA Student Poster Session , Judge Joint Mathematics Meeting, San Diego	January 2018
Kähler geometry learning seminar , Organizer University of California, Santa Barbara	September 2017 – December 2017
Differential Geometry Seminar , Organizer University of California, Santa Barbara	April – June 2017
Extremal Kähler metrics learning seminar , Organizer University of California, Santa Barbara	January–March 2016
Referee for the Proceedings of the AMS UCI Math Circle UC, Irvine	June 2016 – Present October 2014–June 2015
Intel 2014 Science Fair Judge UC, Irvine	April 2014

Other Skills

Fluent in Japanese
Computer languages
 Basic programming in: C++, Java
 Experience in MATLAB, Mathematica, Python