Xiaokui Yang **(February 26, 2018)**

CONTACT INFORMATION Academy of Mathematics and Systems Science, Chinese Academy of Sciences

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RESEARCH INTERESTS differential geometry, complex algebraic geometry, geometric analysis

EDUCATION **UCLA**, PhD., 2012

ACADEMIC APPOINTMENTS

Professor March 2016 to present
Academy of Mathematics and Systems Science,
Chinese Academy of Sciences, Beijing, China

Associate Professor July 2015 to March 2016
Academy of Mathematics and Systems Science,
Chinese Academy of Sciences, Beijing, China

Boas Assistant Professor Semptember 2012 to July 2015
Northwestern University, Evanston, IL, USA

Lecturer June 2012 to August 2012
UCLA, Los Angeles, CA, USA

GRANTS Recruit Program for Global Young Experts (青年千人计划), Principal Investigator, 2015–2017.

HONOUR “中国科学院特聘研究员”(特聘骨干人才)，2017年。

PREPRINTS

30. Xiaokui Yang(joint with Kefeng Liu, Xueyuan Wan), Logarithmic vanishing theorems for effective q-ample divisors.

29. Xiaokui Yang (joint with Duo Li, Wenhao Ou), On projective varieties with strictly nef tangent bundles.
arXiv:1801.09191.

28. Xiaokui Yang (joint with Bing-Long Chen), On Euler characteristic and fundamental groups of compact manifolds.
arXiv:1711.03309

27. Xiaokui Yang, RC-positivity, rational connectedness and Yau's conjecture.
arXiv:1708.06713.

26. Xiaokui Yang, A partial converse to the Andreotti-Grauert theorem.
arXiv:1707.08006

25. Xiaokui Yang, Scalar curvature, Kodaira dimension and $\hat{A}$-genus.
arXiv:1706.01122

24. Xiaokui Yang (joint with Chunle Huang, Kefeng Liu, Xueyuan Wan), Logarithmic vanishing theorems on compact Kähler manifolds I.
arXiv:1611.07671.

23. Xiaokui Yang(joint with Xiaoyu Su), Global generation and very ampleness for adjoint linear series.
arXiv:1606.02046.

22. Xiaokui Yang (Joint with Kefeng Liu), Minimal complex surface with Levi-Civita Ricci flat metrics.
arXiv:1706.01219
To appear in Acta. Math. Sinica. In Memory of Professor Lu Qi-Keng

21. Xiaokui Yang, Scalar curvature on compact complex manifolds.
arXiv:1705.02672
To appear in Trans. Amer. Math. Soc.

20. Xiaokui Yang (joint with Fangyang Zheng), On real bisectional curvature for Hermitian manifolds.
arXiv:1610.07165.
To appear in Trans. Amer. Math. Soc.

19. Xiaokui Yang (Joint with Valentino Tosatti and Ben Weinkove), The Kähler-Ricci flow, Ricci-flat metrics and collapsing limits.
arXiv:1408.0161.
To appear in Amer. J. Math.

Publications

18. Xiaokui Yang (joint with Bing-Long Chen), Compact Kähler manifolds homotopic to negatively curved Riemannian manifolds.
Math. Ann. 370 (2018), 1477–1489.

17. Xiaokui Yang (Joint with Kefeng Liu, Xiaofeng Sun and Shing-Tung Yau), Curvatures of moduli space of curves and applications.
Asian J. Math. 21 (2017), no.5, 241–254.

16. Xiaokui Yang(Joint with V. Tosatti), An extension of a theorem of Wu-Yau.
J. Differential Geom. 107 (2017), no.3, 573–579.

15. Xiaokui Yang (Joint with Kefeng Liu), Ricci curvatures on Hermitian manifolds.
Trans. Amer. Math. Soc. 369 (2017), 5157–5196.

14. Xiaokui Yang, Big vector bundles and compact complex manifolds with semi-positive tangent bundles.
Math. Ann. 267 (2017), no.1, 251–282.

13. Xiaokui Yang, The Chern-Ricci flow and holomorphic bisectional curvature.
Sci. China Math. 59 (2016), no.11, 2199–2204.

12. Xiaokui Yang, Hermitian manifolds with semi-positive holomorphic sectional curvature.
Math. Res. Lett. 23 (2016), no.3, 939–952.

11. Xiaokui Yang (Joint with Kefeng Liu), Effective vanishing theorems for ample and globally generated vector bundles.
Comm. Anal. Geom. 23 (2015), no.4, 797–818.

10. Xiaokui Yang (Joint with Valentino Tosatti, Yu Wang and Ben Weinkove), $C^{2,\alpha}$ estimates for nonlinear elliptic equations in complex and almost complex geometry.
Calc. Var. Partial Differential Equations. 54 (2015), no.1, 431–453.

9. Xiaokui Yang (Joint with Valentino Tosatti and Ben Weinkove), Collapsing of the Chern-Ricci flow on elliptic surfaces.
Math. Ann. 362 (2015), no.3, 1223–1271.

8. Xiaokui Yang (Joint with Kefeng Liu and Sheng Rao), Quasi-isometry and deformations of Calabi-Yau manifolds.
Invent. Math. 199 (2015), no. 2, 423–453.

7. Xiaokui Yang (Joint with Kefeng Liu), Hermitian harmonic maps and non-degenerate curvatures.
Math. Res. Lett. 21 (2014), no. **4**, 831–862.

6. Xiaokui Yang (Joint with Kefeng Liu), Curvatures of direct image sheaves of vector bundles and applications I.
J. Differential Geom. 98 (2014), 117–145.

5. Xiaokui Yang (Joint with Kefeng Liu and Xiaofeng Sun), Positivity and vanishing theorems for ample vector bundles.
J. Algebraic Geom. **22** (2013), 303–331.

4. Xiaokui Yang (Joint with Kefeng Liu), Geometry of Hermitian manifolds.
Internat. J. Math. 23, (2012). 1250055

3. Xiaokui Yang (Joint with Min Dai), Mappings of bounded distortion between complex manifolds.
Pure Appl. Math. Q. 8 (2012), no. 4 835–850.

2. Xiaokui Yang (Joint with Min Dai), Bochner formulas on Hermitian manifolds and applications.
Appl. Math. J. Chinese Univ. Ser. A 24 (2009), no. 4, 462–472.

1. Xiaokui Yang (Joint with Kefeng Liu), Harmonic maps between compact Hermitian manifolds.
Science in China Ser. A. 51 (2008), no. 12, 2149–2160.

Selected Research Talks

20. International conference on geometry and topology, Capital Normal University, Beijing, December 2016
19. Workshop on Analysis and Geometry, Xiamen University, Xiamen, November 2016
18. Several variable conference annual meeting, Hebei Normal University, Shijiazhuang, August, 016
17. Workshop in complex geometry, Capital Normal University, Beijing, May 2016
16. The Forum of Young Geometers, Sanya. January, 2016
15. Shanghai Jiaotong University, Shanghai. December, 2015
14. China University of Mining and Technology. December, 2015.
13. Yangzhou University, Yangzhou. November, 2015.
12. Nanjing University, Nanjing. November, 2015.
11. Workshop on symplectic geometry and global analysis, USTC, Hefei. August 2015
10. The conference on Geometry and Analysis, USTC, Hefei. August 2015
9. The conference on Ricci Curvature, Northwestern University, Evanston. May, 2015
8. University of Maryland, College Park. April, 2015
7. Notre Dame University, South Bend. April, 2015
6. Math Institute of Chinese Academy of Science, Beijing. January, 2015
5. Huazhong University of Science and Technology, Wuhan. December, 2013
4. Center of Mathematical Science, Zhejiang University. December, 2013.
3. Northwestern University, Evanston. January, 2013
2. UCR, Riverside. Aril, 2011
1. UCLA, Los Angeles. October, 2010.

Teaching Experience

Department of Mathematics, Northwestern University, Evanston, IL, USA

- Math 240: *Linear Algebra* , Spring 2015
- Math 220: *Differential Calculus of one-variable Functions* , Fall 2014
- Math 325: *Complex analysis* , Spring 2014
- Math 230: *Differential Calculus of Multivariable Functions* , Winter 2014
- Math 220: *Differential Calculus of one-variable Functions* , Fall 2013
- Math 224: *Integral Calculus of one-variable Functions* , Summer 2013

- Math 325: *Complex analysis* , Spring 2013
- Math 230: *Differential Calculus of Multivariable Functions* , Winter 2013
- Math 230: *Differential Calculus of Multivariable Functions* , Fall 2012

UCLA Department of Mathematics, Los Angeles, CA, USA

- Math 32A: *Calculus of Several Variables*, Summer 2012
- Math 33B: *Differential equations*, TA, Fall 2011
- Math 32A: *Calculus of Several Variables*, TA, Spring 2011
- Math 255B (Graduate): *Differential Geometry*, TA, Winter 2011
- Math 120A: *Differential Geometry*, TA, Fall 2010
- Math 120B: *Differential Geometry*, TA, Spring 2010
- Math 120A: *Differential Geometry*, TA, Winter 2010
- Math 32B: *Calculus of Several Variables*, TA, Fall 2009
- Math 3A: *Calculus for Life Sciences Students*, TA, Spring 2009.

Zhejiang University, Hangzhou, Zhejiang, China

- *Introduction to Complex Geometry*, Spring term 2008
- *Introduction to Partial Differential Equations*, Fall term 2007

Professional Service

Referee Service:

- Journal Differential Geometry
- Algebraic Geometry
- Math Ann.
- Pacific Journal of Mathematics
- Communications in Analysis and Geometry
- IMRN
- Internat. J. Math.
- J. Geom. Anal.
- Forum Math.
- Math Z.
- Pure and Applied Math Quarterly
- Science China Math.
- Tokyo J. Math.