CURRICULUM VITAE

Changzheng Li

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EDUCATION

The Chinese University of Hong Kong, Hong Kong

Ph.D. in Mathematics, The Institute of Mathematical Sciences, 2005 – 2009.
Thesis supervisor: Naichung Conan Leung.
Thesis Title: *Quantum cohomology of homogeneous varieties.*

The Chinese University of Hong Kong, Hong Kong

M.Phil. in Mathematics, The Institute of Mathematical Sciences, 2003-2005.
Thesis supervisor: Naichung Conan Leung.
Thesis Title: *Geometry of the Lefschetz actions.*

University of Science and Technology of China, HeFei, P. R. China

B.Sc. in Mathematics, School of Science, 1999–2003.
Thesis supervisor: Sen Hu.
Thesis Title: *Enumerative geometry and mirror principle.*

Jian'ou No. 1 Middle School, Jian'ou, Fujian, China, 1996–1999.

WORKING
EXPERIENCE

09/2014–present: IBS Fellow at IBS-CGP on the campus of POSTECH, Korea.
09/2011–08/2014: Project Researcher in Kavli IPMU, The University of Tokyo, Japan.
09/2009–08/2011: Research Fellow in Korea Institute for Advanced Study, Korea.

RESEARCH
INTERESTS

- Algebraic geometry, Kähler geometry, geometry of special structures related to mathematical physics.
- Gromov-Witten invariants and (K-theoretic) quantum Schubert calculus.
- Primitive forms and Landau-Ginzburg B-model.
- Mirror symmetry.

PUBLICATIONS AND
PREPRINTS

1. (with Naichung Conan Leung) *Hard Lefschetz actions in Riemannian geometry with special holonomy*, **Math. Res. Lett.** 15 (2008), no. 4, 683–698.

2. (with Naichung Conan Leung) *Functorial relationships between $QH^*(G/B)$ and $QH^*(G/P)$*, **J. Differential Geom.** 86 (2010), no. 2, 303–354.

3. (with Naichung Conan Leung) *Gromov-Witten invariants for G/B and Pontryagin product for ΩK*, **Trans. Amer. Math. Soc.** 364 (2012), no.5, 2567–2599.

4. (with Naichung Conan Leung) *Classical aspects of quantum cohomology of generalized flag varieties*, **Int. Math. Res. Not.** IMRN 2012, no. 16, 3706–3722.

5. (with Naichung Conan Leung) *Quantum Pieri rules for tautological subbundles*, **Adv. Math.** 248 (2013), 279–307.

6. (with Leonardo Constantin Mihalcea) *K-theoretic Gromov-Witten invariants of lines in homogeneous spaces*, **Int. Math. Res. Not.** IMRN 2014, no. 17, 4625–4664.

7. *Functorial relationships between $QH^*(G/B)$ and $QH^*(G/P)$, (II)*, **Asian J. Math**. 19 (2014), no.2, 203–234.

8. (with Yongdong Huang) *On equivariant quantum Schubert calculus for G/P*, **J. Algebra** 441 (2015), 21–56.

9. (with Vijay Ravikumar) *Equivariant Pieri rules for isotropic Grassmannians*, accepted by **Math. Ann.**; DOI: 10.1007/s00208-015-1266-0.

10. (with Si Li, Kyoji Saito and Yefeng Shen) *Mirror symmetry for exceptional unimodular singularities*, accepted by **J. Eur. Math. Soc.**; preprint at arxiv: math.AG/1405.4530.

11. (with Si Li and Kyoji Saito) *Primitive forms via polyvector fields*, preprint at arxiv: math.AG/1311.1659.

12. (with Naichung Conan Leung) *An update of quantum cohomology of homogeneous varieties*, preprint at arxiv: math.AG/1407.5905.

13. (with Daewoong Cheong) *On Conjecture $\mathcal{O}$ for G/P*, preprint at arxiv: math.AG/1412.2475.

HONORS AND AWARDS

- JSPS Grant-in-Aid for Young Scientists (B), No. 25870175.
- Award of Excellence in Korea Institute for Advanced Study, 2010.
- Outstanding graduate of Anhui Province of China, 2003.
- Bao Gang Education Scholarship, 2001-2002.
- Guanghua Education Scholarship, 2000-2001.
- China Goodwill & Peace Development Foundation Panasonic Electronics Talent Cultiuotion Foundation Scholarship, 1999-2000.

INVITED TALKS

- *International Conference on Symplectic Geometry and Mathematical Physics at Chengdu 2015*, Sichuan University, Chengdu, China, June 2015.
- *Seminars on Symplectic Geometry and Mathematical Physics*, Beijing International Center for Mathematical Research, Peking University, China, May 2015.
- *IMPANGA 15*, Bedlewo, Poland, April 2015.
- *The 3rd workshop in Schubert Calculus*, Okayama University of Science, Okayama, Japan, August 2014.
- *Seoul ICM 2014 Satellite Conference on Topology of Torus Actions and Applications to Geometry and Combinatorics* (Contributed talk), Daejeon, Korea, August 2014.
- *Homological mirror symmetry and symplectic topology*, IBS-CGP, POSTECH, Pohang, Korea, August, 2014.
- *Geometry seminar*, IBS-CGP, POSTECH, Pohang, Korea, February, 2014.
- *Calabi-Yau Geometry and Mirror Symmetry conference*, National Taiwan University, January 2014.
- *International conference on algebraic geometry and symplectic geometry*, University of Science and Technology of China, Hefei, China, December 2013.
- *East Asian Symplectic Conference 2013*, Kagoshima, Japan, September 2013.
- *Math Seminar*, Tongji University, Shanghai, China, May 2013.

- *Seminars on Pure Mathematics*, The Hong Kong University of Science and Technology, Hong Kong, April 2013.
- *The International Workshop on Complex Geometry*, Chinese University of Hong Kong, Hong Kong, April 2013.
- *Workshop on Lie Theory and Algebraic Geometry*, Chinese University of Hong Kong, Hong Kong, November 2012.
- *Colloquium*, Osaka City University Advanced Mathematical Institute, Osaka City University, Osaka, Japan, October 2012.
- *Mirror Symmetry and Related Topics*, Kunming University of Science and Technology, Kunming, China, August 2012.
- *Math Seminar*, KIAS, Seoul, Korea, August 2012.
- *Algebra Seminar*, Virginia Tech, U.S.A., April 2012.
- *Geometry and Physics Seminar*, University of Michigan, U.S.A., April 2012.
- *Algebra Seminar*, Michigan State University, U.S.A., March 2012.
- *Algebraic Geometry Seminar*, Texas A&M University, U.S.A., February 2012.
- *Geometry Seminar*, University of California, Los Angeles, U.S.A., February 2012.
- *Geometry/Topology Seminar*, University of Southern California, U.S.A., February 2012.
- *Math Seminar*, Ajou university, Suwon, Korea, December 2011.
- *The 17th International Symposium on Complex Geometry*, Sugadaira, Japan, November 2011.
- *International Workshop on Geometry and Mathematical Physics*, Chinese University of Hong Kong, Hong Kong, October 2011.
- *Seminars on Pure Mathematics*, The Hong Kong University of Science and Technology, Hong Kong, October 2011.
- *Topology Seminar*, Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Beijing, China, October 2011.
- *Math Seminar*, Johannes Gutenberg Universität Mainz, Mainz, Germany, July 2011.
- *KIAS Summer School on Mirror Symmetry*, Anmyundo, Korea, June 2011.
- *Topology Seminar*, Seoul National University, Seoul, Korea, November 2010.
- *Math Seminar*, University of Science and Technology of China, Hefei, China, September 2010.
- *2010 NIMS Workshop on Differential Geometry, Gravitation and String Theory*, Ewha Woman's University, Seoul, Korea, August 2010.
- *The 5th Pacific Rim Complex and Symplectic Geometry Conference*, Nagoya University, Nagoya, Japan, July 2010.
- *Affine Schubert Calculus Summer School and Workshop*, Fields Institute, Toronto, Canada, July 2010.
- *Algebraic Geometry Day*, Chinese Academy of Sciences, Beijing, China, June 2010.
- *Geometry Seminar*, The University of Hong Kong, Hong Kong, April 2007.

SELECTED
CONFERENCES
ATTENDED

- *Geometry and Physics XIII - Derived Geometry*, POSTECH, Pohang, July 2015.
- *Mirror Symmetry and Related Topics 2014*, Kyoto University, Japan, December 2014.
- *Mathematics Inspired by String Theory*, Tsinghua Sanya International Mathematics Forum, Sanya, China, December 2014.
- *The 9th Geometry Conference for the Friendship of Japan and China*, Hokkaido University, Sapporo, Japan, September 2013.
- *The 6th Pacific RIM Conference on Mathematics 2013*, Hokkaido University, Sapporo, Japan, July 2013.
- *International Summer School and Conference on Schubert Calculus*, Osaka City University, Osaka, Japan, July 2012.
- *Workshop on Geometry and Physics of the Landau-Ginzburg Model*, Kavli IPMU, Japan, June 2012.
- *The 10th Pacific Rim Geometry Conference*, Osaka City University, Osaka, Japan, December 2011.

- *Toric topology 2011 in Osaka*, Osaka City University, Osaka, Japan, November 2011.
- *KIAS Summer School on Derived Categories*, Gangwondo, Korea, July 2011.
- *Summer school and conference on moduli of curves and Gromov-Witten theory*, Institut Fourier, Grenoble, France, June 25–July 8, 2011.
- *East Asia Symplectic Conference 2011*, KIAS, Seoul, Korea, June 2011.
- *Workshop in Complex and Algebraic Geometry*, Chinese Academy of Sciences, Beijing, China, April 2011.
- *Winter School on Algebraic Geometry 2011,* Byeonsan, Korea, February 2011.
- *The Fifth International Congress of Chinese Mathematicians,* Tsinghua University, Beijing, China, December 2010.
- *RIMS International Conference on Noncommutative Geometry and Physics*, Research Institute for Mathematical Sciences, Kyoto University, Japan, November 2010.
- *Workshop on Curves and Jacobians*, Yangyang, Korea, October 2010.
- *Categorical Methods in Geometry and Gauge Theory*, Chern Institute, Nankai University, Tianjin, China, August 2010.
- *International Conference on Mirror Symmetry and Gromov-Witten Theory,* Seoul National University, Seoul, Korea, January 2010.
- *Winter School on Mirror Symmetry 2010,* Pyeongchang, Korea, January 2010.
- *Mirror Symmetry and Gromov-Witten Invariants,* University of Tokyo, Tokyo, Japan, December 2009.
- *Workshop on Complex Geometry,* Korea Institute for Advanced Study, Seoul, Korea, September 2009.
- *K-Theory and the Index of Elliptic Operators,* The Hong Kong University of Science and Technology, September 2008.
- *The Fourth International Congress of Chinese Mathematicians,* Zhejiang University, Hangzhou, China, December 2007.

PROFESSIONAL ACTIVITIES

- Reviewer for Math Reviews.
- Co-organizer of an international workshop *Primitive forms and related subjects* at Kavli IPMU, University of Tokyo, February 2014.
- Co-organizer of *KIAS Summer School on Mirror Symmetry* at Anmyundo, Korea, June 2011.
- Co-organizer of *Summer School on Mirror Symmetry* at Korea Institute for Advanced Study, June 2010.
- Co-organizer of a Mini-workshop on *Del Pezzo Surfaces and Vector Bundles* at Korea Institute for Advanced Study, June 2010.

TEACHING EXPERIENCE

Teaching Assistant (Department of Mathematics, CUHK):
- MATH 2050A, *Elementary Analysis I*, Fall 2004 and Fall 2005.
- MATH 3030, *Algebra I*, Fall 2006 and Fall 2007.
- MATH 3070, *Introduction to Topology*, Springs of 2005, 2006, 2007 and 2008.
- MATH 3080, *Number Theory*, Fall 2003.

Duties include conducting tutorials, grading homework and exams, and holding regular office hours with students.