

## *Curriculum Vitae*

# YON-SEO KIM

### Contact Information

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### Citizenship

Permanent Resident of U.S.A.

### Education

- **University of California, Los Angeles**  
Ph.D in Mathematics, June 2006  
Thesis advisor: Kefeng Liu
- **Seoul National University, Seoul, Korea**  
Master of Science in Mathematics, February 2000  
Thesis advisor: Jaigyoung Choe  
Bachelor of Science in Mathematics, February 1998

### Honors

- Clay Summer Lift-off Fellowship from the Clay Institute, 2006
- VIGRE fellowship from National Science Foundation, Fall quarter of 2000 - Spring quarter of 2004
- Seoul National University Mathematics Department Alumni Fellowship, Fall Semester of 1994 - Winter Semester of 1999

### Employment

L.E. Dickson Instructor, Department of Mathematics, University of Chicago,  
Autumn quarter of 2006 - Present

### Research Interests

1. Gromov-Witten invariants and the structure of the moduli space of curves.
2. Relation between the Gromov-Witten invariants and the Symplectic Homology.

### Preprints and publications

- "On a relationship between the Gromov-Witten invariants and the Symplectic Homology", Proceedings of UKC 2008.

- "Localization, Asymptotics, and Moduli Spaces I", submitted to Pacific J. Math.
- "A new approach to deriving recursion relations for the Gromov-Witten theory", Nankai Tracts in Mathematics, Vol 12. 181-203.
- "A simple proof of Witten conjecture through localization", Preprint: [arXiv.org/math.AG/0508384](http://arXiv.org/math.AG/0508384)
- "Computing linear Hodge integrals", Comm. in Analysis and Geometry Vol.15 No.3

## Presentations

- "On a relationship between the Gromov-Witten invariants and the Symplectic Homology", APM in UKC 2008, San Diego, August 15, 2008
- "Relative Gromov-Witten invariants and its applications", Washington Univ. at St. Louis, Algebraic Geometry Seminar, March 9, 2007
- "A new proof of the Witten-Kontsevich theorem via localization", UC Davis Algebraic Geometric Seminar, December 12, 2006
- "A new proof of Witten's Conjecture and future problems", Harvard Geometry Seminar, July 19, 2006
- "Unified Proof of Witten's Conjecture, ELSV formula, and Virasoro Constraints", UCLA Geometry & Topology Seminar, April, 2006
- "Witten's Conjecture through Cut-and-Join Equation", USC Geometry and Topology Seminar, December 5, 2005
- "Localization proof of Witten's Conjecture", UCLA Geometry Seminar, November 14, 2005
- "Computing Hodge integrals with one lambda class", Workshop on Topological Strings, Fields Institute, January 10, 2005
- "Computing all Hodge integrals with one Hodge class", UCLA Geometry Seminar, November 2004
- "On a proof of Marino-Vafa formula using Double Hurwitz Numbers", CMS Geometry Seminar, Hangzhou, China, July 2004
- "On a proof of Marino-Vafa Conjecture", UCLA Geometry Seminar, February 2004

## Teaching Experience

- **University of Chicago**

Basic Algebra 2 - Math 25500, Winter 2008  
 Integration in Several Variables - Math 20500, Autumn 2007  
 Honor Calculus - Math16200, Winter 2007  
 Analysis in  $R^n$  - Math 20300 & 20400, Winter/Spring 2007

- **University of California, Los Angeles**

Mathematics Instructor, Spring 2006  
 Mathematics Teaching Associate, Fall 2004 - Winter 2006  
 Mathematics Teaching Assistant, Fall 2001 - Winter 2003

- **Seoul National University, Korea**

Mathematics Teaching Assistant, Fall Semester 1998 - Winter Semester 1999

## Conferences Attended

- Holomorphic Curves: algebraic structures and geometric application, Stanford, August 18 - 29, 2008
- US-Korea Conference on Science, Technology, and Entrepreneurship, San Diego, August 14 - 17, 2008
- Clay Research Conference, MIT, May 12 - 13, 2008
- String Topology and the Topology of Moduli Spaces, Stanford, March 24 - 27, 2008
- New Perspectives and Challenges in Symplectic Field Theory, Stanford, June 25 - 29, 2007
- Symposium to Honor David Mumford on the Occasion of his 70th Birthday, Brown Univ., June 1-2, 2007
- Ricci Flow, 3-Manifolds, and Geometry, MSRI, June 20 - July 15, 2005
- Workshop on Topological Strings, Fields Institute, January 10 - 14, 2005
- The 2nd Yamabe Memorial Symposium, University of Minnesota, Sept. 17 - 19, 2004
- 2004 International Conference in Memory of Armand Borel, July 26 - 30, CMS, Hangzhou, 2004
- International Conference on Infinite Dimensional Lie Theory, July 17 - 23, CAS, Beijing, 2004
- International Summer School on Mathematical Physics, Algebraic Geometry, and Analysis, June 20 - July 20, CMS, Hangzhou, 2004
- The 9th Southern California Geometric Analysis Seminar, UC Irvine, February 21 - 22, 2004
- Symplectic Geometry and Physics, IPAM, UCLA, March 17 - June 13, 2003
- Conformal Field Theory and Applications, IPAM, UCLA, Sept. 10 - Dec. 14, 2001

## Miscellaneous Skills

- Programming Language: C/C++, Java, Perl
- Mathematical Software: Mathematica, MatLab