Curriculum Vitae

Nan-Kuo HO

Department of Mathematics,
National Tsing-Hua University, Hsinchu, Taiwan R.O.C.

February 27, 2012

Personal Data

Address Department of Mathematics,
National Tsing-Hua University,
No. 101, Sec. 2, Guangfu Rd., Hsinchu, 300, Taiwan
Phone +886-3-5715131 ext. 33017
E-mail nankuo@math.nthu.edu.tw

Education

Ph. D. University of Toronto, 1998 - 2003.
Thesis: On the moduli space of gauge equivalence flat G-connections on a nonorientable surface.
Advisor: Lisa C. Jeffrey

M. Sc. National Taiwan University, 1996 - 1999.
Thesis: An estimate for the Gauss curvature of minimal surfaces in R^m.
Advisor: Ai-Nung Wang

B. Sc. National Taiwan University, 1992 - 1996.

Employment

1. **Professor** (2011 - current) Department of Mathematics, National Tsing-Hua University, Taiwan, R.O.C.

2. **Associate Professor** (2009 - 2011) Department of Mathematics, National Tsing-Hua University, Taiwan, R.O.C.

3. **Associate Professor** (2007 - 2009) Department of Mathematics, National Cheng-Kung University, Taiwan, R.O.C.

4. **Assistant Professor** (2003 - 2007) Department of Mathematics, National Cheng-Kung University, Taiwan, R.O.C. (On leave 2004 - 2006)

5. **NSERC Postdoctoral Fellow** (2004 - 2006) Fields Institute for Research in Mathematical Sciences, Toronto, Canada.

Honors and Awards

1. **T.-Y. Wu Award** (2009) granted by National Science Council, Taiwan.

2. **Young Theorists Award** (2008) granted by National Center for Theoretical Sciences, Taiwan.

3. **Young Mathematician Award** (2008) granted by the Mathematical Society of the Republic of China, Taiwan.

4. **Young Investigator Merit Award** (2008) granted by National Science Council, Taiwan.

5. **NSERC PDF fellowship** (2004 - 2006) granted by Natural Sciences and Engineering Research Council of Canada.

6. **Ontario Graduate Scholarships** (2002 - 2003) granted by Ontario government, Canada.

7. **Government of Ontario-Israel Halperin Graduate Scholarships in Science and Technology** (1999 - 2000, 2000 - 2001) granted by Ontario government, Canada.

8. **Chow Hong-Ging Scholarship** (1997) granted by Academia Sinica of the Republic of China, Taiwan.

9. **Research Creativity Award** (1996) granted by National Science Council, Taiwan.

Teaching experiences

I. Undergraduate course:

1. Calculus (Instructor), Spring 2012, Fall 2011, Fall 2010, Fall 2009, National Tsing-Hua University

2. Differential Geometry on Surfaces (Instructor), Fall 2009, National Tsing-Hua University.

3. Calculus (Instructor), Fall 2008, Spring 2009, Fall 2007, Spring 2008, Fall 2006, Spring 2007, Fall 2003, Spring 2004, National Cheng-Kung University.

4. Topology (Instructor), Spring 2007, National Cheng-Kung University.

5. Differential Geometry on Surfaces (Instructor), Fall 2006, National Cheng-Kung University.

6. Course Assistant (Tutor) of Several Variables Calculus, Fall 1999-2002, Spring 2000-2003, University of Toronto.

7. Course Assistant (Tutor) of Linear Algebra, Fall 1998-2001, Spring 1999-2002, University of Toronto.

8. Course Assistant (Tutor) of Calculus, Fall 1999-2002, Spring 2000-2003, University of Toronto.

II. Graduate course:

1. Introduction to Symplectic Geometry (Instructor), Fall 2010, National Tsing-Hua University.

2. Introduction to Differential Geometry (Instructor), Spring 2012, National Tsing-Hua University.

3. Introduction to Differential Geometry (Instructor), Fall 2008, Fall 2003, National Cheng-Kung University.

4. Riemannian Geometry (Instructor), Spring 2004, National Cheng-Kung University.

5. Riemannian Geometry (Course Assistant), Spring 2002, University of Toronto.

Publications

1. N.-K. Ho and C.-C. M. Liu, *Antiperfect Morse Stratification*, Selecta Mathematica. **17** (2011), no.2 , 505-532.

2. N.-K. Ho, C.-C. M. Liu, and D. Ramras, *Orientability in Yang-Mills Theory Over Nonorientable Surfaces*, Comm. Anal. Geom. **17** (2009), no.5, 903-953.

3. N.-K. Ho and C.-C. M. Liu, *Yang-Mills connections on orientable and nonorientable surfaces*, Memoirs of the American Mathematical Society. **202** (2009), no.948, 1-98.

4. N.-K. Ho and C.-C. M. Liu, *Yang-Mills connections on nonorientable surfaces*, Comm. Anal. Geom. **16** (2008), no.3, 617–679.

5. N.-K. Ho, *On the moduli space of flat connections over a compact surface*, Proceeding of the 4th International Congress of Chinese Mathematicians, Vol II (2007), 339-349.

6. N.-K. Ho and L. C. Jeffrey,*The volume of the moduli space of flat connections of a non-orientable 2-manifold*, Commun. Math. Phys. **256** (2005), 539–564.

7. N.-K. Ho and C.-C. M. Liu, *Connected components of the space of surface group representations II*, Intern. Math. Res. Notices, **16** (2005), 959–979.

8. N.-K. Ho and C.-C. M. Liu, *On the connectedness of the spaces of surface group representations*, Noncommutative Geometry and Physics, World Sci. Publ. Hackensack, NJ (2005), 199–214.

9. N.-K. Ho and L. C. Jeffrey, *Representations of fundamental groups of nonorientable 2-manifolds*, CRM Proceedings and Lecture Notes. Algebraic Structures and Moduli Spaces. **38** (2004), 139–147.

10. N.-K. Ho, *The real locus of an involution map on the moduli space of flat connections on a Riemann surface*, Intern. Math. Res. Notices, **61** (2004), 3263–3285.

11. N.-K. Ho and C.-C. M. Liu, *On the connectedness of moduli spaces of flat connections over compact surfaces*, Canad. J. Math. **56(6)** (2004), 1228–1236.

12. N.-K. Ho and C.-C. M. Liu, *Connected components of the space of surface group representations* Intern. Math. Res. Notices, **44** (2003), 2359–2372.

13. N.-K. Ho and N.-C. Wong, Space-filling curves and Hausdorff dimensions, *Southeast Asian Bulletin of Mathematics*, **21** (1997), 105–111.

Professional Activities

1. Co-organizing *NCTS (Taiwan)-CPT(France) Joint Workshop on Symplectic Geometry and Quantum Symmetries in Mathematical Physics*, February 2011, N.C.T.S. (HsinChu). The organizers were myself and Robert Coquereaux.

2. Co-organizing *Taiwan Geometry Symposium*, two to three times per year. The organizers were myself, River Chiang and Yng-Ing Lee.

3. Colloquium chair, Fall 2009 - Spring 2010, National Tsing-Hua University.

4. Co-organizing *East Asian Symplectic Conference 2009*, May 2009, Academia Sinica. The organizers were myself, River Chiang, Jih-Hsin Cheng, Chun-Chung Hsieh, Manabu Akaho, and Cheol-Hyun Cho.

5. Colloquium chair, Fall 2007 - Spring 2008, National Cheng-Kung University.

6. Organizer, Geometry session, December 2007, Taiwan Mathematical Society Annual Meeting.

Invited Talks

1. CEB Programme "Geometry and analysis of surface group representations", Institut Henri Poincaré, France, January 2012

2. The 2nd East Asian Symplectic Conference, KIAS, South Korea, June 2011

3. Programme "Moduli spaces", Isaac Newton Institute, England, March 2011

4. Colloquium, National Chiao-Tung University, Taiwan, May 2010

5. Seminaire "Groupes de Lie et espaces des modules", University of Geneva, Switzerland, May 2010

6. Geometry seminar, the University of Hong Kong, Hong Kong, March 2010

7. The 2nd TIMS-OCAMI Joint International Workshop on Differential Geometry and Geometric Analysis, Taiwan, March 2010

8. Colloquium, Academia Sinica, Taiwan, February 2010

9. Seminar on Mathematical Physics, N.C.T.S., Taiwan, October 2009

10. Geometry seminar, National Taiwan University, Taiwan, October 2008

11. Symplectic and Complex Geometry workshop, the University of Hong Kong, Hong Kong, May 2008

12. Workshop on Symplectic and Complex Geometry, N.C.T.S., Taiwan, March 2008

13. International Congress of Chinese Mathematicians 2007, 45-minutes invited talk, China, December 2007

14. Colloquium, National Tsing-Hua University, Taiwan, November 2007

15. Ontario Topology seminar, Fields Institute, Canada, July 2007

16. CMS-MITACS joint conference 2007, Canada, May 2007

17. Colloquium, National Taiwan University, Taiwan, January 2007

18. School on Poisson Geometry and Related Topics (part of Poisson 2006), Japan, May 2006

19. Geometry and Topology seminar, Centre interuniversitaire de recherches en geometrie et topologie, Canada, April 2006

20. Geometry and Topology seminar, McMaster University, Canada, January 2006

21. Geometry/Physics seminar, Northwestern University, USA, November 2005

22. Differential Geometry seminar, Massachusetts Institute of Technology, USA, April 2005

23. Working seminars on the moduli space of flat connections, University of Toronto, Canada, March 2005

24. Symplectic Geometry seminar, University of Toronto, Canada, January 2005

25. Noncommutative Geometry and Physics Conference, Keio University, Japan, February 2004

26. Colloquium, Providence University, Taiwan, May 2004

27. Symplectic Geometry Workshop, Academia Sinica, Taiwan, March, 2004

28. Colloquium, National Chiao-Tung University, Taiwan, February 2004

29. Colloquium, National Cheng-Kung University, Taiwan, December 2003

30. Colloquium, National Sun Yat-sen University, Taiwan, November 2003

31. Colloquium, National Taiwan normal University, Taiwan, November 2003

32. Colloquium, National Taiwan University, Taiwan, October 2003

33. Colloquium, Academia Sinica, Taiwan, October 2003

34. Symplectic Geometry seminar, University of Toronto, March 2003

35. Seminars in Functional Analysis, National Sun Yat-sen University, Taiwan, December 2001.

36. Workshop on Combinatorics, May 25, 1996, National Central University, Taiwan, May 1996.