

# Craig Westerland

## Curriculum Vitæ

Department of Mathematics & Statistics  
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### Personal

- **Citizenship:** United States.
- **Born:** 4 August, 1977 in Tarrytown, NY.

### Employment

- **Lecturer**, University of Melbourne, Australia. August 2008 – present.
- **VIGRE Van Vleck Visiting Assistant Professor**, University of Wisconsin, Madison, WI. August 2005 – August 2008.
- **Postdoctoral Fellow**, University of Copenhagen, Denmark. July 2007-December 2007.
- **Member**, Mathematical Sciences Research Institute, Berkeley, CA. Program: “New Topological Structure in Physics.” January 2006 – June 2006.
- **Member**, Institute for Advanced Study, Princeton, NJ. September 2004 – June 2005.

### Education

- **University of Michigan**, Ann Arbor, MI. Ph.D. in Mathematics, May 2004. Thesis title: *Stable splittings of configuration spaces of surfaces and related mapping spaces*. Advisor: Igor Kriz.
- **Williams College**, Williamstown, MA. B.A. (*magna cum laude*) in Mathematics (with Honors) and Astrophysics, June 1999.

### Publications and Preprints

- *Dyer-Lashof operations in the string topology of spheres and projective spaces*, *Mathematische Zeitschrift* 250 (2005), no. 3, 711–727.
- *Stable splittings of surface mapping spaces*, *Topology and its Applications* 153 (2006), 2834–2865.
- *String homology of spheres and projective spaces*, *Algebraic & Geometric Topology* 7 (2007) 309–325.
- *Equivariant operads, string topology, and Tate cohomology*, *Mathematische Annalen*, 340 (2008), no. 1, 97–142.
- with Kate Gruher, *String topology prospectra and Hochschild cohomology*, *Journal of Topology*, 1 (2008), no. 4, 837–856.
- with Igor Kriz and Joshua Levin, *The symplectic Verlinde algebras and string K-theory*. preprint: arXiv:0901.2109 (2009).

## Awards, Memberships, and Other Activities

- **NSF Standard Grant**, "Moduli Spaces and Algebraic Structures in Homotopy Theory," DMS-0705428, University of Wisconsin, August 15, 2007 to July 31, 2010.
- **Rackham Dissertation Fellow**, University of Michigan, Winter 2003.
- **NSF VIGRE Graduate Fellow**, University of Michigan, September 2000 – August 2003.
- **AMS Member**.
- **Conference Co-organizer:**
  - Conference on mapping class groups and operads, University of Copenhagen, 3-7 Sep., 2007.
  - Special session on stringy topology, 1st PRIMA Congress, UNSW, 6-10 July, 2009
  - Special session on geometry and topology, 53rd meeting of the Australian Mathematics Society, University of South Australia, 28 Sep.-1 Oct., 2009.
- **Seminar Organizer:** Postdoc Seminar and Postdoc Topology Seminar, MSRI, Spring 2006. Student Topology/Geometry Seminar, University of Michigan, 2002-2003.

## Teaching

- **Instructor**. University of Melbourne.
  - Differential Geometry (620-427), Semester 2, 2008.
  - Algebraic Topology (620-634) Semester I, 2009.
- **Instructor**. University of Copenhagen. Introduction to String Topology, Fall 2007.
- **Instructor**. University of Wisconsin-Madison. Instructor for:
  - Calculus I (Math 221), Fall 2005, 2006.
  - Introductory Topology I and II (Math 751 and 752), Fall 2005, Spring 2007, Spring 2008.
  - Reading course on Characteristic Classes, Spring 2007.
  - Graduate Summer Enhancement Program in Topology, Summer 2005, 2006.
- **Graduate Student Instructor**. University of Michigan. Instructor for:
  - Precalculus (Math 105), Fall 1999, Winter 2000.
  - Calculus I (Math 115), Fall 2001
- **Course Assistant**. University of Michigan. Mathematics for the Information Age (Math 107), Winter 2003, 2004. Assisted with computer and web work.
- **Automated Examination Development**. University of Michigan, Summer 2001. Developed questions for the online gateway exam for Precalculus.

## Professional Talks

- *Stable and Algebraic Homotopy*, Schloss Ringberg, Germany. 2 Nov. 2005.
- *Stringy Topology in Morelia*, Morelia, Mexico. 16 Jan. 2006.
- Lewis and Clark College Summer REU, Portland, OR. 20 June 2006.
- *First Copenhagen Topology Conference*, Copenhagen, Denmark. 5 Sept. 2006.
- *Midwest Topology Conference*, Bloomington, IA. 22 Oct. 2006.
- *Algebraic Topology: Old and New; M. M. Postnikov Memorial Conference*, Bedlewo, Poland. 19 June, 2007.
- *Hochschild and cyclic (co-)homology and applications to geometry and physics*, Max-Planck Institute, Bonn, 17 July, 2007.
- *Young persons workshop on string topology and the topology of moduli spaces*, Stanford University, 24-27 July, 2008.
- 26<sup>th</sup> *Victorian Algebra Conference*, Melbourne, Australia, October 2-3, 2008.
- Numerous topology/geometry seminars and AMS meetings.