

Nathalie Wahl  
Dept. of Mathematics  
University of Copenhagen  
Universitetsparken 5  
DK-2100 Copenhagen, Denmark

Phone: (+45) 35 32 06 83  
e-mail: wahl@math.ku.dk  
<http://www.math.ku.dk/~wahl>

## CURRICULUM VITAE

Date of birth: October 3rd 1976.

Nationality: Belgian.

Languages: French, English, Danish (fluent).

**Research Interests:** Algebraic topology, homotopy theory and geometric topology (operads, loop spaces, mapping class group, automorphisms groups, moduli spaces, homological stability, Hochschild homology, string topology, topological field theories).

### Education:

1994–1998 Licence in Mathematics from Université Libre de Bruxelles. (Adviser: J.-P. Doignon.)

1998–2001 PhD in Mathematics from Oxford University. (Adviser: U. Tillmann.)

### Employment:

Sept 2001–Dec 2002 Visiting Assistant Professor at Northwestern University.

Jan 2003–Dec 2004 Assistant Professor at Aarhus University (Marie Curie Fellowship).

Jan 2005–Jun 2006 L. E. Dickson Instructor at the University of Chicago.

Apr 2006–Jun 2006 Visitor at the Mittag-Leffler Institut.

Jul 2006–Apr 2010 Associate Professor at the University of Copenhagen.

Apr 2010– Professor at the University of Copenhagen.

Sept 2012–Nov 2012 Visitor at IHES (Bures-sur-Yvette).

Jan 2014–May 2014 Research Professor at MSRI (Berkeley).

Apr 2015–Jun 2015 Guest researcher at MPI/Hausdorff Institute (Bonn).

**Parental leave:** Dec 2008–July 2009, Dec 2010–July 2011 and Dec 2014–April 2015.

### Scholarships and Awards

1998 Diplôme d'honneur et Médaille de l'Université Libre de Bruxelles.

1998–2001 Full graduate scholarship from Wiener-Anspach Foundation.

2003–2004 Marie Curie European Fellowship (2 years).

2005 Francqui Fellow of the Belgian American Educational Foundation.

2005–2008 NSF Research Grant DMS-0504932.

2006–2009 Steno fellowship of the Danish Natural Science Research Council.

2008 Young Danish Elite Researcher Prize.

2009–2013 Female Research Leader Award of the Danish Council of Independent Research.

2009–2014 ERC Starting Grant.

## Publications and preprints

1. Antimatroids of finite character, *J. Geom.* **70** (2001), 168–175.
2. Monoidal rectification of diagrams, preprint (2002).
3. (with P. Salvatore) Framed discs operads and Batalin-Vilkovisky algebras, *Quart. J. Math.* **54** (2003), 213–231.
4. Infinite loop space structure(s) on the stable mapping class group, *Topology* **43** (2004), 343–368.
5. (with C. Jensen) Automorphisms of free groups with boundaries, *Algebr. Geom. Topol.* **4** (2004), 543–569.
6. (with A. Hatcher) Stabilization for the automorphisms of free groups with boundaries, *Geom. Topol.* **9** (2005), 1295–1336.
7. From mapping class groups to automorphism groups of free groups, *J. London Math. Soc.*(2) **72** (2005) no.2, 510–524.
8. (with A. Hatcher and K. Vogtmann) Erratum to: “Homology stability for outer automorphism groups of free groups” [*Algebr. Geom. Topol.* 4 (2004), 1253–1272] by Hatcher and Vogtmann, *Algebr. Geom. Topol.* **6** (2006), 573–579.
9. Homological stability for mapping class groups of non-orientable surfaces, *Invent. Math.* **171** (2008), 389–424.
10. (with Allen Hatcher) Stabilization for mapping class groups of 3-manifolds, *Duke Math. J.* **155** (2010), 205–269.
11. Homological stability of mapping class groups of surfaces, preprint (2010), in *Handbook of Moduli*, Vol. III, 547–583. Advanced Lectures in Mathematics 26 (2012).
12. (with Craig Westerland) Hochschild homology of structured algebras, *Adv. Math.* **288** (2016), 240–307.
13. Universal operations in Hochschild homology, *J. Reine Angew. Math.* **720** (2016), 81–127.
14. (with Oscar Randal-Williams) Homological stability for automorphism groups, preprint (2014).
15. (with Giovanni Gandini) Homological stability for automorphism groups of RAAGs, *Algebr. Geom. Topol.* **16** (2016), no. 4, 2421–2441.
16. (with Markus Szymik) The homology of the Higman-Thompson groups, preprint (2016).

## Conference talks (selected)

Topology of Manifolds (Michael Weiss’ 60th birthday) (Lisbon, Portugal, June 16),  
Topological and homological methods in group theory (Bielefeld, Germany, Apr 16),  
Algebraic topology: manifolds unlocking higher structures (Oxford, UK, Sept 15),  
Functor calculus workshop (Münster, Germany, June 15),  
Homotopy theory, manifolds and field theories (MPI Bonn, Germany, June 15),  
Higher Invariants (Regensburg, Germany, September 14),  
Manifolds, K-theory, and related topics (Dubrovnik, Croatia, June 14),  
Geometry, Groups and Topology (Karlsruhe, Germany, October 13),

Topological Aspects of Quantum Field Theories (IMS, Singapore, 13),  
British Topology Meeting (Cambridge, UK, 12),  
Symposium in Algebraic Topology (Stanford, USA, 12),  
VBAC Geometry and quantization of moduli spaces (Barcelona, Spain, 12),  
International Congress of Women Mathematicians (Hyderabad, Indian, 10),  
Geometry, Quantum Fields, and Strings (Oberwolfach, Germany, 10),  
Nordic Conference in Topology (Trondheim, Norway, 08 and 06),  
Conference on Algebraic Topology (Arolla, Switzerland, 08 and 04),  
Moduli Spaces (Bonn, Germany, 08),  
Oberwolfach Topology Meeting (Oberwolfach, Germany, 06 and 04),  
Topology Festival (Cornell, USA, 06),  
String Topology in Morelia (Morelia, Mexico, 06),  
Low Dimensional Manifolds (Oberwolfach, Germany, 05),  
Conference on Pure and Applied Topology (Isle of Skye, UK, 05).

### Lecture series

Young topologists meeting (Copenhagen, Denmark, July 16),  
Women and Math (IAS, USA, May 16),  
Homological stability (Nantes, April 16),  
Connections for Women (MSRI, USA, 14),  
Young women in Topology (Bonn, Germany, 11),  
PCMI graduate summer school (Park City, USA, 11),  
GDR Topologie (Strasbourg, France, 09),  
String Topology Workshop (Stanford, USA, 08).

### Students:

**Master:** Tarje Bargheer (08), Martin Vincent (08), Rasmus Heedegaard (10), Steffen Christensen (11), Mads Christian Hansen (13), Cédric Ho Thanh, Alexander Jasper (16).  
**PhD:** Tarje Bargheer (08-11), Angela Klamt (10-13), Daniela Egas (11-14), Massimiliano Ungheretti (13-16), Espen Nielsen (15-18), Manuel Krannich (15-18).

### Other academic functions

Editor for Homology, homotopy and applications.  
Editor for the Bulletin of the Belgian Mathematical Society.  
Member of the Scientific Advisory Board, Max Planck Institute in Bonn (2017- ).  
Co-organizer of conferences, masterclasses and workshops, many in Copenhagen.  
Co-organizer of the Oberwolfach Topology Meeting (2010–2016).