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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).

Education:

- 1994–1998 Licence in Mathematics from Université Libre de Bruxelles.
(Dissertation: “Extension au cas infini de la théorie des familles bien graduées et des géométries convexes”. Adviser: Prof. J.-P. Doignon.)
- 1998–2001 PhD in Mathematics from Oxford University.
(Thesis title: “Ribbon braid and related operads”. Adviser: Prof. U. Tillmann.)

Employment:

- Sept 2001–Dec 2002 Visiting Assistant Professor at Northwestern University.
- Jan 2003–Dec 2004 Assistant Professor at Aarhus University
(Marie Curie European Fellowship).
- Jan 2005–Jun 2006 L. E. Dickson Instructor at the University of Chicago.
- Jul 2006–Apr 2010 Associate Professor at the University of Copenhagen.
- Apr 2010– Professor at the University of Copenhagen.

Parental leave: Dec 2008–July 2009 and Dec 2010–July 2011

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 (spring) Mittag-Leffler visiting fellowship.
- 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), to appear in *Handbook of Moduli*.
12. (with Craig Westerland) Hochschild homology of structured algebras, preprint (2011).
13. (with Craig Westerland) Hochschild category of a category, in preparation.

Conference talks

Homotopy and Geometry of Loop Spaces (Sheffield, UK, 12),
Topological Quantum Field Theories (Barcelona, Spain, 11),
Algebraic Topology Day (Louvain-la-Neuve, Belgium, 11),
Luc Lumaire 60th birthday (Brussels, Belgium, 10),
International Congress of Women Mathematicians (Hyderabad, Indian, 10),
Teichmüller Theory and its Interactions in Mathematics and Physics (Barcelona, Spain, 10),
Geometry, Quantum Fields, and Strings: Categorical Aspects (Oberwolfach, Germany, 10),
Nordic Conference in Topology (Trondheim, Norway, 08 and 06),
Conference on Algebraic Topology (Arolla, Switzerland, 08 and 04),
Quantum Gravity Workshop (Holbaek, Denmark, 08),
Moduli Spaces (Bonn, Germany, 08),
GDR “Topologie Algébrique et Applications” (Angers, France, 07),
Hochschild and Cyclic (co-)homology (Bonn, Germany, 07),
Braids (Singapore, 07),

Postnikov Memorial Conference (Bedlewo, Poland, 07),
 Operads and Hopf Algebras (Clay Institute, USA, 07),
 Twisted K-theory, Arbeitsgemeinschaft (Oberwolfach, Germany 06),
 Oberwolfach Topology Meeting (Oberwolfach, Germany, 06),
 Quantum Moduli Spaces and TQFT (Aarhus, Denmark, 06),
 Topology Festival (Cornell, USA, 06),
 Higher Torsion Invariants, Arbeitsgemeinschaft (Oberwolfach, Germany 06),
 String Topology in Morelia (Morelia, Mexico, 06),
 Modern Foundations for Stable Homotopy Theory, Arbeitsgemeinschaft (Oberwolfach, Germany, 05),
 Low Dimensional Manifolds (Oberwolfach, Germany, 05),
 Conference on Pure and Applied Topology (Isle of Skye, UK, 05),
 Midwest Topology Seminar (Univ. of Chicago, USA, 05),
 Topology and Geometry of Moduli Spaces of Curves (AIM, USA, 05),
 AMS Sectional Meeting (Northwestern Univ., USA, 04),
 Oberwolfach Topology Meeting (Oberwolfach, Germany, 04),
 String Topology Workshop (Stanford Univ., USA, 04),
 Topology of Manifolds and Homotopy Theory (Banff, Canada, 04),
 Homotopy of Moduli Spaces, Arbeitsgemeinschaft (Oberwolfach, Germany, 03),
 String Topology Workshop (Stony Brook, USA, 03),
 Midwest Topology Seminar (Kalamazoo, USA, 02),
 Barcelona Conference on Algebraic Topology (Barcelona, Spain, 02),
 International Conference on Homotopy Theory (Northwestern Univ., USA, 02),
 Transpennine Topology Triangle (Manchester, UK, 02),
 Mapping Class Groups et Homotopie Stable (Luminy, France, 02),
 CALF Conference (Brussels, Belgium, 01),
 British Topology Meeting (Edinburgh, UK, 01),
 Transpennine Topology Triangle (Leicester, UK, 01),
 Quantization Deformation in Mathematical Physics (Manchester, UK, 01),
 Operad Workshop (Osnabrück, Germany, 00),
 Operaden und ihre Anwendungen, Arbeitsgemeinschaft (Oberwolfach, Germany, 00).

Lecture series

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).

General audience and colloquium talks

University of Osnabrück Mathematics Colloquium (Germany, 10),
 Danish EWM-meeting (Holbaek, Denmark, 10),
 Danish Mathematical Society yearly meeting (Copenhagen, Denmark, 09),
 Madison Mathematics Colloquium (USA, 08),

Stony Brook Mathematics Colloquium (USA, 07),
University of Aalborg Mathematics Colloquium (Denmark, 06),
University of Göttingen Graduiertenkolleg Colloquium (Germany, 06),
University of Copenhagen Mathematics Colloquium (Denmark, 06),
Université Libre de Bruxelles Mathematics Colloquium (Belgium, 04),
Wayne State Mathematics Colloquium (USA, 02),
Mathematics and Art Conference (Oxford, UK, 00),
Merton College MCR-SCR (Oxford, UK, 00).

Seminar talks

Oregon (08), Oxford (07,03), MIT (07,03), Vancouver (07), CUNY (07), Glasgow (07), Mittag-Leffler Institute (06), Utah (05), Zurich (05), Aarhus (05,04,03), Stanford (08,05,02), Chicago (05,04,03 and 01), Northwestern (05,01), Aberdeen (04), Cornell (04), Oslo (04), Stockholm KTH (04), Paris XIII (03), Bonn (03), Louvain-la-Neuve (03), John Hopkins (02), Madison (02), Urbana-Champaign (02), Minnesota (02), Manchester (01).

Students:

Master: Tarje Bargheer (08), Martin Vincent (08), Rasmus Heedegaard (10), Steffen Christensen (11).

PhD: Tarje Bargheer (08-11), Angela Klamt (10-13), Daniela Egas (11-14).

Outreach

Highschool teacher day workshop (12).

Math en Jeans: research projects with school children at Prins Henrik skole, Copenhagen (08-), and Kongevejens Skole, Virum (11).

Talk at Georg Mohr vinderseminar (to mathematics olympiads winners) (10).

Talk to highschool students (Sept 11).

Other academic functions

Editor for the proceedings of the Postnikov Memorial Conference (Poland, 07).

Co-organizer of the following conferences:

- Oberwolfach Topology Meeting (Oberwolfach, Germany, 10 and 12).
- West coast algebraic topology summer school on the homotopy theory of moduli spaces (Oregon, USA, 10).
- Copenhagen Topology Conference (Copenhagen, Denmark, 10).
- Strings in Copenhagen (Copenhagen, Denmark, 10).
- Allen Hatcher's 65th Birthday Conference (Banff, Canada, 09).
- Loop, Strings and Moduli Spaces (Tianjin, China, 09).
- Mapping class groups and operads workshop (Copenhagen, Denmark, 07).
- The First Copenhagen Topology Conference (Copenhagen, Denmark, 06).
- Midwest Topology Seminar (Chicago, USA, 05).
- CALF Meeting (ULB, Belgium, 01)

Co-organizer of the Topology Seminar at the University of Chicago (05-06) and of Copenhagen (06-).

Co-organizer of numerous masterclasses at University of Copenhagen (06-).