Curriculum Vitae Personal information

Name | Wasserman, Thomas Anton

University College Annexe,

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Address Staverton Road

OX2 6XL, Oxford

England

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Email wasserman@maths.ox.ac.uk

Nationality Dutch

Date of birth 20th of August 1987

Gender Male



Education

Program

DPhil. in Mathematics

Institution University of Oxford

Period | 2012 - present

Advisor Prof. Christopher Douglas

Thesis Title "A Reduced Tensor Product of Braided Fusion Categories over a Symmetric

Fusion Category"

Programs | Master Mathematical Sciences | Master Theoretical Physics

Institution Universiteit Utrecht

Period 2008 - 2012

Combined Thesis "Orbifold Conformal Field Theory and One-Loop Self-Energy in the $S_N\mathbb{R}^D$ Orb-

ifold Sigma Model"

Grade 8.5/10

Advisors Dr. André Henriques

Prof. Gleb Arutyunov

GPA 4.0

Programs | Bachelor Mathematics

Bachelor Physics and Astronomy

Institution Universiteit Utrecht

Period 2005 - 2009

Thesis "Gravitational Waves from Bubble Collisions during First-Order Phase Transi-

tions"

Grade 9/10

Advisor Dr. Tomislav Prokopec

Program Preparatory Scientific Education (Gymnasium): Nature and Technology

and Nature and Health programmes and Latin

Institution | Gymnasium Haganum (The Hague)

Period 1999 - 2005

Academic Interests

Interests

Topological Quantum Field Theories, Mathematical Physics with emphasis on mathematical treatment of Quantum Field Theories, Differential Geometry, Algebraic Topology, Floer Theory, Topological States of Matter.

Teaching experience

Title Employer Junior Lecturer in Pure Mathematics

University College, University of Oxford

Period | 2015 - 2017

Description

Tutor for prelims tutorials for linear algebra and groups and group actions.

Title

Tutor for the Williams-Exeter Visiting Student Programme

Employer Exeter College, University of Oxford

Period 201

 ${\bf Description}$

One-on-one tutorials with an American exchange student on geometry of surfaces.

Title

Class tutor

Employer | Mathematical Institute, University of Oxford

Period 2014 - 2016

Description

Class tutor for the fourth year courses on homological algebra, computational algebraic topology, and Lie groups.

Title

Teaching assistant

Employer

Mathematical Institute, University of Oxford

Period | 2012 - 2014

Description

Teaching assistant for the third year courses on topology and groups and geometry of surfaces, and fourth year courses on algebraic topology, homological algebra, and Lie groups.

Title

Student assistant

Employer

Universiteit Utrecht

Period

2008 - 2012

Description

Teaching assistant for the second year courses on analysis and multidimensional real analysis, third year courses on functional analysis and smooth manifolds, and for the master course on Riemann surfaces.

Title

Student assistant

Employer

Universiteit Utrecht

Period

2009 - 2010

Description

Managing the evaluation of the third year courses in the physics bachelor's program.

Awards and Scholarships

2016

Departmental Teaching Award from the Mathematical Institute of the University of Oxford

2013

Scholarship from Prins Bernhard Cultuurfonds for a DPhil. in Mathematics at the University of Oxford

2012

Scholarship from the Engineering and Physical Sciences Research

Council for a DPhil. in Mathematics at the University of Oxford

2012

Scholarship from Dr. Hendrik Muller Vaderlandsch Fonds for a DPhil. in Mathematics at the University of Oxford

2012

Funding from Stichting Vreedfonds for a DPhil. in Mathematics at the University of Oxford

2012 2010 2009	Funding from Fundatie Vrijvrouwe van Renswoude for a DPhil. in Mathematics at the University of Oxford Second place in the NNV's Bachelor Thesis contest at FYSICA 2010 Scholarship from the Swiss government for study at the ETH Zürich for 5 months
Masterclasses, Conferences, Talks.	
2017 2017 2017 2017 2017	"Geometry Seminar", Plymouth University, Invited speaker. "Topology Seminar", University of Oxford, Invited speaker. "LMS-CMI Research School: Algebraic Topology of Manifolds", Oxford. "Young Topology Meeting", Stockholm, Contributed a talk. "Geometry and Quantum Theory Colloquium", Den Dolder (Joint seminar for Dutch universities), Invited speaker.
2017 2016 2016	"Groups, Manifolds and K-Theory", Münster. "Clay Mathematics Workshops and Conferences", Oxford. "Jóvenes Investigadores X" Workshop, Complutense University Madrid.
2016 2016	Invited speaker. "Young Topology Meeting", Copenhagen. Contributed a talk. "Michael Weiss' Birthday Conference", Lisbon.
2016	"European Talbot", Winterberg. Topic: Topological Quantum Field Theories. Mentors: Chris Schommer-Pries and Peter Teichner. Contributed a lecture.
2016	Visited Stanford University. Hosts: Ralph Cohen and Søren Galatius. Contributed a talk in the Topology Progress Seminar.
2016 2015	"OAC Manifolds Conference", Oxford. "Higher Structures in Geometry and Physics" workshop, Max Planck Institute for Mathematics, Bonn.
2015	"Clay Mathematics Workshop on Algebraic Topolgy", Oxford.
2015	"Clay Mathematics Conference", Oxford.
2015	"Graduate Workshop on Topological Quantum Field Theory", Simons Centre, Stony Brook, NY.
2015	"Conference on Topology and Geometry", Haussdorf Institute for Mathematics, Bonn.
2015	"Young Topology Meeting", Lausanne. Contributed a talk.
2015	"Homotopy Theory, Manifolds, and Field Theories", Bonn.
2014	"Topological quantum field theories, quantum groups and 3-manifold invariants Masterclass", Copenhagen.
2014	"Young Topology Meeting", Copenhagen. Contributed a talk.
2014	"Algebraic Topology" program, Mathematical Sciences Research Institute, Berkeley, CA.
2014	"Reimagining the foundations of algebraic topology" workshop, MSRI, Berkeley, CA.
2013	"Clay Mathematics Institute conference and workshops", Oxford.
2013	"Young Researchers in Mathematics", Edinburgh.
2013	"Categorification and Link Homology short course and workshop, Louvain-La- Neuve.
2013	"Young Topology Meeting", Imperial College, London.
2013	"Higher Structure 2013" workshop, Cambridge.
2012	"Aspects of Topology", Oxford.
2012	"Quantum Gravity in Paris", Paris.
2012	"Higher Geometric Structures along the Lower Rhine", Bonn.
2011	"Higher Structures in Topology and Geometry IV", Göttingen.
2010	"Geometry of gauge theories and the geometric quantization Masterclass" at the University of Amsterdam.

Articles

In prep.

2017 The Symmetric Tensor Product on the Drinfeld Centre of a Symmetric Fusion Category. ArXiV pre-print: 1710.06461.

2017 The Drinfeld Centre as 2-Fold Monoidal Category. ArXiV pre-print: 1711.03394

2017 Drinfeld Centre-Crossed Braided Tensor Categories. Thesis Chapter, in preparation as pre-print.

2017 From Braided Fusion Categories to Crossed Braided Fusion Categories. Thesis Chapter, in preparation as pre-print.

The Reduced Tensor Product and Applications. Based on Thesis Chapter.

Current Projects

Topic Classification of Three-Dimensional Once-Extended G-Equivariant Topological Quantum Field Theories.

Topic Modular Objects in the 2-Category of Enriched Categories.

Topic Orbifolding for Three-Dimensional Once-Extended Topological Quantum Field Theories.

Topic | Conditions for the Existence of Minimal Modular Extensions.

Current Collaborations

Topic The Landau-Ginzburg Conformal Field Theory Correspondence from a Bicategory Viewpoint

Collaborator Ana Ros Camacho, currently Marie Sklodowska-Curie Individual Fellow at

Utrecht University.

Topic | From Partially Defined to Lax Topological Quantum Field Theories.

Collaborator Ángel González Prieto, currently PhD student at Complutense University Madrid.

Topic The Reduced Tensor Product, Modular Data, and the Search For Modular Tensor Categories.

Collaborator Joost Slingerland, currently Lecturer in Physics at the National University of Ireland, Maynooth.

Finding Fully Extended Two-Dimensional G-Equivariant Topological Quantum Field Theories.

Collaborator Kursat Sozer, currently PhD student at Indiana University.

Topic Monoidal Kan Extensions

Collaborator Mark Penney, currently postdoctoral researcher at the Max Planck Institute for

Mathematics, Bonn.

Topic | Homology Stability and Topological Quantum Field Theories

Collaborator Renee Hoekzema, currently DPhil student at the University of Oxford.

Organizational Experience

Topic

Period 2007 - 2012 (one week every summer)

Employer | Anneke Kerkhof Beeldend (Expressive) Management

(www.anneke-kerkhof.com)

Description | Co-organizing painting holidays.

Organizing, catering and managing inventory and shopping lists for professional

painting holidays, cooking three-course menus for large groups.

Period 2005-2011

Activity Various Committees for the study-association A-Eskwadraat

Description Participated in three committees, the "Ouderdag" (organizing an opportunity for parents to experience studying for a day), "AxiCie" (organizing various fun and relaxing activities for other students) and "Adviesraad" (advisory council

for the board), within the study-association A-Eskwadraat.

Extracurricular Activities

Period 2006-2011

Activity | Member of various co-determination councils at Utrecht University.

Period 2006-2010

Activity | Mentor during Bachelor and Master Introduction at Utrecht University

Description Helping new students feel at home at the university.

Skills

Wolfram Mathematica | Proficient.

C++ Basic.

LATEX | Highly Proficient.

Languages

Dutch Native tongue
English Highly proficient

German Basic reading comprehension
French Basic reading comprehension

Italian Basic cursing