

DANIEL TUBBENHAUER

PERSONAL DATA

Contact Hausdorff center for mathematics, Universität Bonn,
Endenicher Allee 60, Room 1.003, 53115 Bonn, Germany
Position Postdoctoral researcher
Email dtubben@math.uni-bonn.de
Website <http://www.math.uni-bonn.de/people/dtubben/>

RESEARCH INTERESTS

My research interests are higher representation theory, n -categories and categorification and applications in representation theory of Lie algebras, modular representation theory, knot theory and quantum groups.

EMPLOYMENT

Jan.2018–xx Lecturer, UNIVERSITÄT ZÜRICH
Sep.2015–Dec.2017 PostDoc, HAUSDORFF CENTER FOR MATHEMATICS
Feb.2015–Aug.2015 PostDoc, UNIVERSITÉ CATHOLIQUE DE LOUVAIN
Researcher financed by a DFG research funding
Jan.2015 PostDoc, QGM AARHUS UNIVERSITY
Nov.2014–Dec.2014 Invited Researcher, TIFR MUMBAI
Nov.2013–Oct.2014 PostDoc, QGM AARHUS UNIVERSITY
Aug.2013–Oct.2013 PostDoc, GEORG–AUGUST–UNIVERSITÄT GÖTTINGEN

EDUCATION

Nov.2010–Jul.2013 Georg–August–Universiät Göttingen
Graduiertenkolleg GRK 1493
Thesis: *Categorification and applications in topology and representation theory*
Advisors: Prof.Dr. Thomas SCHICK & Prof.Dr. Marco A. MACKAAY
May.2006–Oct.2010 Georg–August–Universiät Göttingen
Graduiertenkolleg GRK 1493
Advisors: Prof.Dr. Thomas SCHICK & Prof.Dr. Andreas THOM

*Ph.D. in
mathematics*

*Diplom (univ.) in
mathematics*

PUBLICATIONS

- Preprint* **Oct.2017** Relative cellular algebras
<https://arxiv.org/abs/1710.02851>
 Authors: Michael EHRIG, Daniel TUBBENHAUER
- Preprint* **Mar.2017** Functoriality of colored link homologies
<https://arxiv.org/abs/1703.06691>
 Authors: Michael EHRIG, Daniel TUBBENHAUER, PAUL WEDRICH
- Preprint* **Jan.2017** Webs and q -Howe dualities in types **BCD**
<http://arxiv.org/abs/1701.02932>
 Authors: Antonio SARTORI, Daniel TUBBENHAUER
- Preprint* **Dec.2016** Simple transitive 2-representations via (co)algebra 1-morphisms
<http://arxiv.org/abs/1612.06325>
 Authors: Marco MACKAAY, Volodymyr MAZORCHUK, Vanessa MIEMIETZ, Daniel TUBBENHAUER
- Preprint* **Nov.2016** Singular TQFTs, foams and type D arc algebras
<http://arxiv.org/abs/1611.07444>
 Authors: Michael EHRIG, Daniel TUBBENHAUER, Arik WILBERT
- Preprint* **Sep.2016** Two-color Soergel calculus and simple transitive 2-representations
<http://arxiv.org/abs/1609.00962>
 Authors: Marco MACKAAY, Daniel TUBBENHAUER
- Preprint* **Jan.2016** Generic \mathfrak{gl}_2 -foams, web and arc algebras
<http://arxiv.org/abs/1601.08010>
 Authors: Michael EHRIG, Catharina STROPPEL, Daniel TUBBENHAUER
- Published* **Oct.2015** The Blanchet–Khovanov algebras
 Categorification and Higher Representation Theory, 183–226, Contemp. Math., 683, Amer. Math. Soc., Providence, RI, 2017.
<http://arxiv.org/abs/1510.04884>
 Authors: Michael EHRIG, Catharina STROPPEL, Daniel TUBBENHAUER
- Published* **Jul.2015** Semisimplicity of Hecke and (walled) Brauer algebras
 J. Aust. Math. Soc. 103 (2017), no. 1, 1–44. <http://arxiv.org/abs/1507.07676>
 Authors: Henning H. ANDERSEN, Catharina STROPPEL, Daniel TUBBENHAUER
- Published* **Apr.2015** Super q -Howe duality and web categories
 Algebr. Geom. Topol. 17-6 (2017), 3703–3749.
<http://arxiv.org/abs/1504.05069>
 Authors: Daniel TUBBENHAUER, Pedro VAZ, Paul WEDRICH
- Published* **Mar.2015** Cellular structures using U_q -tilting modules
 Pacific J. Math. 292-1 (2018), 21–59.
<http://arxiv.org/abs/1503.00224>
 Authors: Henning H. ANDERSEN, Catharina STROPPEL, Daniel TUBBENHAUER
- Published* **Jan.2015** Symmetric webs, Jones–Wenzl recursions and q -Howe duality
 Int. Math. Res. Not. (IMRN), 2016–17 (2016), 5249–5290.
<http://arxiv.org/abs/1501.00915>
 Authors: David E.V. ROSE, Daniel TUBBENHAUER
- Published* **Sep.2014** Diagram categories for U_q -tilting modules at roots of unity
 Transform. Groups 22 (2017), no. 1, 29–89. <http://arxiv.org/abs/1409.2799>

Authors: Henning H. ANDERSEN, Daniel TUBBENHAUER

Preprint **Apr.2014** \mathfrak{sl}_n -webs, categorification and Khovanov–Rozansky homologies
<http://arxiv.org/abs/1404.5752>
 Author: Daniel TUBBENHAUER

Published **Oct.2013** \mathfrak{sl}_3 -web bases, intermediate crystal bases and categorification
 J. Algebraic Combin. 40-4 (2014), 1001–1076.
<http://arxiv.org/abs/1310.2779>
 Author: Daniel TUBBENHAUER

Published **Jun.2012** The \mathfrak{sl}_3 web algebra
 Math. Z. 277-1-2 (2014), 401–479. <http://arxiv.org/abs/1206.2118>
 Authors: Marco MACKAAY, Weiwei PAN, Daniel TUBBENHAUER

Published **Nov.2011** Virtual Khovanov homology using cobordisms
 J. Knot Theory Ramifications 23-9 (2014), 91 pages.
<http://arxiv.org/abs/1111.0609>
 Author: Daniel TUBBENHAUER

Futher **2011–xx** Eprints etc.
 See <http://www.math.uni-bonn.de/people/dtubben/preprint.html>
 Author: Daniel TUBBENHAUER

REFEREES

Coauthor & former advisor Prof.Dr. Marco A. MACKAAY mmackaay@ualg.pt
 Universidade do Algarve, Faro, Portugal

Colleague Prof.Dr. Andrew MATHAS andrew.mathas@sydney.edu.au
 University of Sydney, NSW 2006, Australia

Colleague Prof.Dr. Mikhail KHOVANOV khovanov@math.columbia.edu
 Columbia University, New York, NY, United states

Former advisor Prof.Dr. Thomas SCHICK schick@uni-math.gwdg.de
 Georg-August-Universität Göttingen, Göttingen, Germany

Coauthor Prof.Dr. Catharina STROPPEL stroppel@math.uni-bonn.de
 Universität Bonn, Bonn, Germany

Coauthor Prof.Dr. Pedro VAZ pedro.vaz@uclouvain.be
 Université Catholique de Louvain, Louvain, Belgium

SCIENTIFIC OUTREACH

Invited speaker SEE <http://www.math.uni-bonn.de/people/dtubben/talks.html>

Conferences SEE <http://www.math.uni-bonn.de/people/dtubben/meet.html>

Research visits SEE <http://www.math.uni-bonn.de/people/dtubben/meet.html>

Teaching SEE <http://www.math.uni-bonn.de/people/dtubben/teaching.html>

SCIENTIFIC INTERESTS

Main CATEGORIFICATION
 HIGHER REPRESENTATION THEORY
 HIGHER DIMENSIONAL CATEGORY THEORY

Second APPLICATIONS IN REPRESENTATION THEORY
 APPLICATIONS IN LOW-DIMENSIONAL TOPOLOGY
 APPLICATIONS IN GEOMETRY

FURTHER INFORMATION

Computer skills

SAGE	· Advanced
MATHEMATICA	· Advanced
C AND C++	· Advanced
JAVA	· Basic
OTHER COMPUTER ALGEBRA SYSTEMS	· Basic

Professional membership

AMERICAN MATHEMATICAL SOCIETY
 EUROPEAN MATHEMATICAL SOCIETY
 DEUTSCHE MATHEMATIKER VEREINIGUNG

Languages

GERMAN · Mother-tongue
 ENGLISH · Fluent
 FRENCH · Very basic (simple words only)
 LATIN · Very basic (simple words only)
 DANISH · Very basic (simple words only)

October 14, 2017