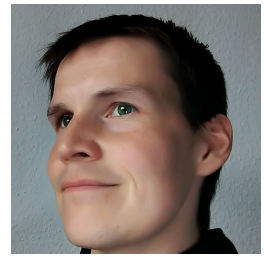


# Daniel Tubbenhauer

# Curriculum vitae



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🌐 <http://dtubbenhauer.com>  
📺 <http://www.youtube.com/c/visualmath>  
🐙 <https://github.com/dtubbenhauer>

## Contact

Address     ▶▶ **The University of Sydney** School of Mathematics and Statistics,  
Fo7 - Carlaw Building, Office Carlaw 827, NSW 2006, Australia

Current position     ▶▶ **Senior research fellow** The University of Sydney

## Employment History

Jul.2021–yy     ▶▶ **Senior research fellow** The University of Sydney  
Sydney, Australia

Jan.2018–Dec.2020     ▶▶ **Lecturer** Universität Zürich  
Zürich, Switzerland

Sep.2015–Dec.2017     ▶▶ **Postdoctoral researcher** Hausdorff Center for Mathematics (HCM)  
Bonn, Germany

Nov.2013–Jan.2015     ▶▶ **Postdoctoral researcher** Centre for Quantum Geometry of  
Moduli Spaces (QGM), Aarhus, Denmark

## Other positions – funded by grants, see funds raised

Jan.2021–Jun.2021     ▶▶ **Fellowship** Hausdorff Center for Mathematics (HCM)  
Bonn, Germany  
Sponsored by the HCM

Feb.2019–Mar.2019     ▶▶ **Invited Researcher** Mathematical Sciences Institute (MSI)  
Canberra, Australia  
Sponsored by the Australian National University (ANU)

Feb.2015–Aug.2015     ▶▶ **Invited Researcher** Université Catholique de Louvain  
Louvain-la-Neuve, Belgium  
Sponsored by the Deutsche Forschungsgemeinschaft (DFG)

Nov.2014–Dec.2014     ▶▶ **Invited Researcher** Tata Institute of fundamental research (TIFR)  
Mumbai, India  
Sponsored by the Danish National Research Foundation (DNRF)

## Other positions – funded by grants, see funds raised (continued)

Aug.2013–Oct.2013    ▶▶ **Junior fellowship** Georg-August-Universität Göttingen  
Göttingen, Germany  
Sponsored by Graduiertenkolleg GRK 1493

## Education

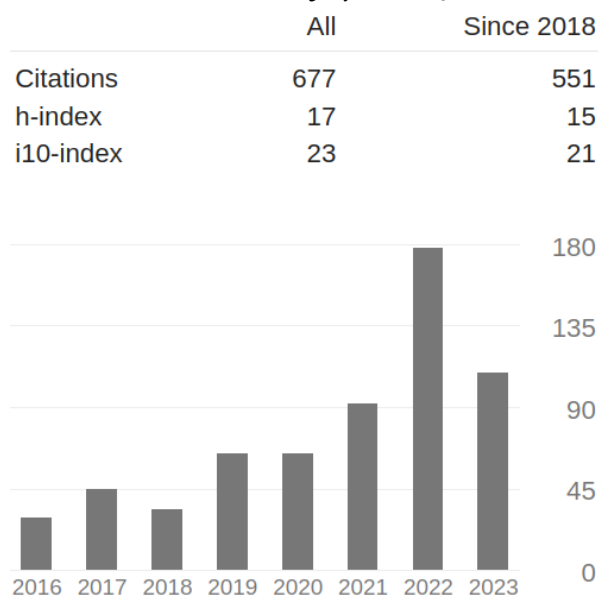
Apr.2010–Aug.2013    ▶▶ **Ph.D. in mathematics** Georg-August-Universität Göttingen  
Graduiertenkolleg GRK 1493  
Thesis title: *Categorification and applications in topology and representation theory*  
Finished: 28.Aug.2013

May.2007–Mar.2010    ▶▶ **M.Sc. Mathematics** Georg-August-Universität Göttingen  
Graduiertenkolleg GRK 1493  
Thesis title: *Virtual Khovanov homology*  
Finished: 12.Mar.2010

## Publication metrics

Research publications    ▶▶ **The full list is a separate file** 38 papers in total, 31 published papers, 7 submitted preprints, 1778 published pages

Research reach    ▶▶ **Citations** 677 with h-index 17 on Google Scholar, 247 on MathSciNet, 550 on Research Gate; Stats from July 28, 2023

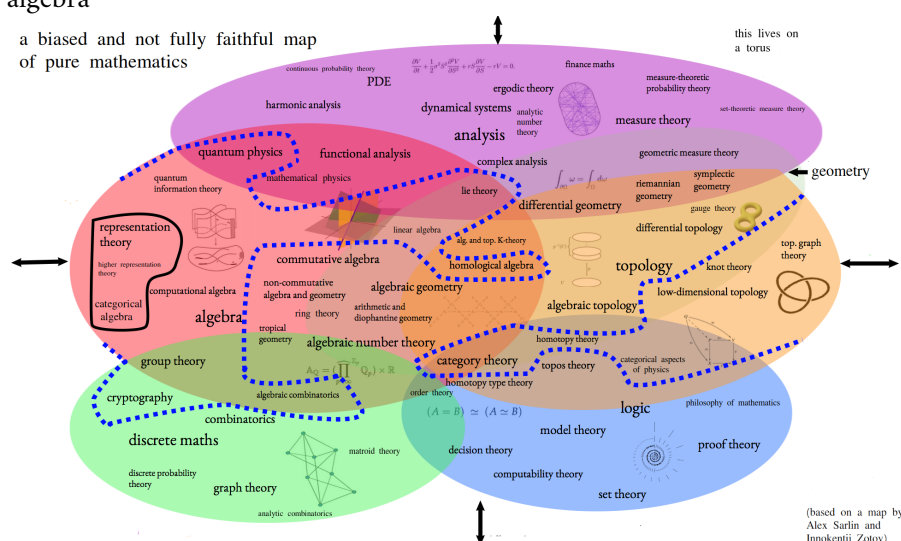


Research fields    ▶▶ **ArXiv identifier** 33 papers listed on arXiv in math.RT, 32 in math.QA, 19 in math.GT, 7 in math.CT, 8 in math.RA, 2 in math.GR, 1 in cs.CR

## Publication metrics (continued)

Research interest ►► **Main fields** representation theory, higher representation theory, (categorical) algebra

a biased and not fully faithful map  
of pure mathematics



**Keywords** 2-representations, categorical algebra, additive and fusion categories, quantum algebra, low-dimensional topology, link homologies

Coauthors ►► **23 coauthors** from Australia, Belgium, China, Denmark, France, Germany, India, Japan, Portugal, Sweden, Switzerland, United Kingdom, United States

## Funds raised

- Summary ►► **\$1,214,390** I have raised a total of \$1,214,390, \$914,390 as the sole applicant, since 2013  
The numbers are approximate values converted to AUD
- 2023 ►► **\$815,890** Future fellowship from the Australian Research Council (ARC)  
I was the sole applicant
- 2021 ►► **\$60,000** from the Australian Research Council (ARC)  
This was a joint application of 2 people
- 2020 ►► **\$120,000** from the Junior Hausdorff Trimester Program of the Hausdorff Institute for Mathematics (HIM)  
This was a joint application of 10 people
- 2019 ►► **\$12,000** from the ANU  
This was a joint application of 2 people
- 2021 ►► **\$30,000** from SwissMap  
I was the sole applicant
- 2017 ►► **\$120,000** from the Junior Hausdorff Trimester Program of the HIM  
This was a joint application of 6 people

## Funds raised (continued)

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- 2016    ▶▶    **\$25,000** from the HCM  
I was the sole applicant
- 2015    ▶▶    **\$22,500** from the DFG  
I was the sole applicant
- 2014    ▶▶    **\$5,000** from the DNRF  
I was the sole applicant
- 2013    ▶▶    **\$4,000** from the Universität Göttingen  
I was the sole applicant

## Organization of events

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- Feb 2023    ▶▶    **Categorification in representation theory** two week conference to be held at the University of Sydney  
Role: a main organizer
- Nov & Dec 2020    ▶▶    **Monoidal and 2-categories in representation theory and categorification** one week conference held at the Universität Bonn  
Role: a main organizer
- Oct 2020    ▶▶    **Lecture series on modified traces in algebra and topology** one week conference held at the Universität Bonn  
Role: a main organizer
- Sep to Dec 2020    ▶▶    **New Trends in Representation Theory** Junior Hausdorff Trimester Program HIM in Bonn  
Role: a main organizer
- Sep 2018    ▶▶    **Interactions of low-dimensional topology and (higher) representation theory** one week conference held at the Universität Zürich  
Role: sole organizer
- Nov & Dec 2017    ▶▶    **Workshop: Categorification, representation theory and symplectic geometry** one week conference held at the Universität Bonn  
Role: a main organizer
- Nov 2017    ▶▶    **Winter school: Categorification, representation theory and symplectic geometry** one week winter school held at the Universität Bonn  
Role: a main organizer
- Sep to Dec 2017    ▶▶    **Symplectic Geometry and Representation Theory** Junior Hausdorff Trimester Program HIM in Bonn  
Role: a main organizer

## Organization of events (continued)

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May 2016    ▶▶ **Workshop: Categorification** one week conference held at the Universität Bonn  
Role: sole organizer

## Invited keynote and speaker addresses

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Summary    ▶▶ **The full list is a separate file** 88 invited talks  
I have received 2-3 invitations each year, to selective conferences as an invited speaker  
*Below I list only the ones from 2022*

Dec 2022,2    ▶▶ **Conference talk** Representation Theory, Combinatorics and Geometry, Institute for Mathematical Sciences (IMS) in the National University of Singapore (NUS), Singapore

Dec 2022    ▶▶ **Conference talk** 66th Annual Meeting of the Australian Mathematical Society, University of New South Wales, Australia

Nov & Dec 2022    ▶▶ **Conference talk** Tensor Categories in Sydney, The University of Sydney, Australia

October 2022    ▶▶ **Seminar talk** Technische Universität Dresden, Germany

Aug & Sep 2022    ▶▶ **Conference talk** Character Theory and Categorification, Mathematisches Forschungsinstitut Oberwolfach (MFO), Germany

Aug 2022    ▶▶ **Lecture series** Quantum groups, Categorification, Knot invariants, and Soergel bi-modules (Quacks), Eugene (Oregon), United States

July 2022    ▶▶ **Seminar talk** Technische Universität München, Germany

June 2022    ▶▶ **Seminar talk** UNSW Pure Math Seminar, the University of New South Wales, Australia

Apr 2022    ▶▶ **Seminar talk** Beijing Institute of Technology, China

Mar & May 2022    ▶▶ **Seminar talk** Informal Friday Seminar, the University of Sydney, Australia

Mar 2022    ▶▶ **Seminar talk** Algebra Seminar, the University of Sydney, Australia

Feb 2022    ▶▶ **Seminar talk** Okinawa Institute of Science and Technology (OIST), Japan

## Students

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Currently    ▶▶ **Primary supervisor** 2 master students  
They will finish 2024 or 2025

## Students (continued)

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- ▶▶ **Secondary supervisor** 1 PhD student  
They will finish 2025
- Past ▶▶ **Primary supervisor** 1 Ph.D. student, 4 master students  
All finished (2021 four times, 2022 once)
- ▶▶ **Secondary supervisor** 3 Ph.D., 3 master and 2 bachelor students  
Finished (2017 (three times), 2018, 2019 (twice), 2022, 2023)

## Teaching

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- Summary ▶▶ **The full list is a separate file** 27 lectures given in total, 10 courses, 10 seminars, 7 other, 2 upcoming  
*Below I list only the ones from 2022*
- Spring.2022 ▶▶ **Geometry and topology** Course, University of Sydney  
aimed at bachelor students
- Fall.2022,2 ▶▶ **Representation theory** Course, University of Sydney  
aimed at bachelor and master students
- Fall.2022,1 ▶▶ **Category theory** Course, University of Sydney  
aimed at bachelor and master students

## Miscellaneous

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- Pronouns ▶▶ They/them
- YouTube ▶▶ Mathematical education channel (the link is in the header)  
440+ videos, 15500+ subscribers, 491475+ views
- GitHub ▶▶ All my TeX files, all code etc. can be found on GitHub (the link is in the header)
- Computer skills ▶▶ MATHEMATICA, advanced++  
Magma, advanced++  
SAGEMath/Python, advanced++  
GAP, advanced+  
JAVA, advanced+  
HTML, advanced  
C and C++, intermediate  
Other computer algebra systems, basic

## Miscellaneous (continued)

I was referee    ▶▶ In total 68 times  
Adv. Math. (three times), Algebr. Geom. Topol. (four times), Algebr. Represent. Theory (three times), Ann. Sci. École Norm. Sup., Ann. of Math., Ann. of Rep. Theory, Ark. Mat., Canad. J. Math., Compos. Math. (three times), Comm. Algebra, Contemp. Math. (three times), Czechoslovak Math. J., Duke Math. J., Electron. Res. Arch., Geom. Topol., Glasg. Math. J., Int. Math. Res. Not. IMRN, Invent. Math., J. Algebra (three times), J. Algebraic Combin., J. Aust. Math. Soc., J. Comb. Algebra, J. Eur. Math. Soc. (JEMS), J. Knot Theory Ramifications (twice), J. Korean Math. Soc., J. Pure Appl. Algebra, J. Lond. Math. Soc. (four times), Lett. Math. Phys. (twice), Manuscripta Math., Math. Ann., Math Z. (three times), Mem. Amer. Math. Soc., Pacific J. Math. (twice), Proc. Amer. Math. Soc., Quantum Topol. (seven times), Rev. Mat. Iberoam, Selecta Math. (N.S.), Springer nature books, Trans. Amer. Math. Soc., Theory Appl. Categ., Transform. Groups

Professional memberships    ▶▶ American Mathematical Society  
European Mathematical Society  
Deutsche Mathematiker Vereinigung

Languages    ▶▶ German, native language  
English, fluent  
Danish & Dutch & Latin & Swedish, basic  
French, very basic



Daniel Tubbenhauer (digital signature); July 28, 2023