

Thomas Tony | Curriculum vitae

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Positions

- 04/2025 – present Doctoral Research Associate, University of Potsdam.
09/2022 – 03/2025 Doctoral Research Associate, University of Münster.

Education

- 2022 – present PhD student in Mathematics (Dr. rer. nat.), University of Münster.
▪ Advisor: [Rudolf Zeidler](#)
2019 – 2022 Master of Science in Mathematics, University of Freiburg.
2013 – 2019 First State Exam in Mathematics and Physics (teaching degree), University of Freiburg.

Scholarships, grants and awards

- 2025 Oberwolfach Leibniz Graduate Students travel grant.
2022 Doctoral position funded by the [Cluster of Excellence Mathematics Münster](#).
2020 Deutschlandstipendium, University of Freiburg.
2013 DMV-Abiturpreis, Deutsche Mathematiker-Vereinigung.

Research stays

- 11/2025 Visiting [Rafe Mazzeo](#) (four weeks), Stanford University.

Invitations to conferences and workshops

- 06/2025 Oberwolfach workshop: Differentialgeometrie im Großen [🔗](#), talk given.
02/2024 Oberwolfach workshop: Analysis, Geometry and Topology of Positive Scalar Curvature Metrics [🔗](#).

Invited research seminar talks

- 12/2025 Geometry Seminar, Stanford University.
12/2025 Differential Geometry Seminar, UC Santa Barbara.
11/2025 Differential Geometry Seminar, UC Berkeley.
11/2025 Noncommutative Geometry Seminar, Texas A&M University.
11/2025 Geometry Seminar, Texas A&M University.
10/2025 Geometric Analysis Seminar, Columbia University.
07/2025 Oberseminar Topology and Geometry, University of Göttingen.
06/2025 Oberseminar Differentialgeometrie, University of Augsburg.
05/2025 Forschungsseminar Differentialgeometrie, University of Potsdam.
04/2025 Oberseminar Topologie, University of Münster.
04/2024 Arbeitsgruppenseminar Ammann, University of Regensburg.
01/2024 Oberseminar Differentialgeometrie, University of Freiburg.
11/2023 Geometric Analysis Seminar, The City University of New York.
01/2023 Arbeitsgruppenseminar Tuschmann, Karlsruhe Institute of Technology.

Organized conferences and workshops

08/2024 Young Topologist Meeting (YTM) [🔗](#), Cluster of Excellence Mathematics Münster.

Selection of conference and workshop participations

10/2025 Geometry: exchanges and perspectives 2025 [🔗](#), Institut Henri Poincaré, Paris.
05/2025 Geometric Moduli Spaces - Rigidity, Genericity, Stability [🔗](#), poster presented, ICMS, Edinburgh.
11/2024 Curvature and Geometric Analysis in Rome [🔗](#), poster presented, Sapienza Università di Roma.
12/2023 Workshop on Operator Algebras and Applications: Non-Commutative Geometry [🔗](#), Fields Institute, Toronto.
10/2023 Autumn School on Large Scale Geometry [🔗](#), Gong Talk given, University of Göttingen.

Teaching experience

University of Münster

Winter 2024/25 *Differential Geometry PhD Seminar*, organizer.

Summer 2023 *Differential Equations*, Tutor, Lecture given by [Tim de Laat](#).

University of Freiburg (as a tutor)

2015 – 2022 *Linear Algebra I and II (2x)*, *Analysis I and II*, *Multiple Integration* (teaching degree), *Complex Analysis*, *Differential Geometry*.

High School Teaching & Instruction

2016 – 2022 Learn coaching, [Das Lernteam](#).

2016 – 2020 Preparation for the General Certificate of Education in mathematics, [Abiturma](#).

Scientific memberships

2022 – present [Cluster of Excellence "Mathematics Münster: Dynamics – Geometry – Structure"](#).

2022 – present [CRC 1442 "Geometry: Deformations and Rigidity"](#).

2022 – present [Mathematics Münster Graduate School](#).

Academic services

Reviewer for Science China Mathematics and zbMATH.

Language skills

German (native), English (fluent), French (basic).

Technical skills

Latex, Python, HTML, Linux.

List of publications

Peer-reviewed articles

- [1] T. Tony. "Ricci-flat manifolds, parallel spinors and the Rosenberg index." In: *SIGMA Symmetry Integrability Geom. Methods Appl.* 21 (2025), Paper No. 072. DOI: [10.3842/SIGMA.2025.072](#).
- [2] T. Tony. "Scalar curvature rigidity and the higher mapping degree." In: *Journal of Functional Analysis* 288.3 (2025). DOI: [10.1016/j.jfa.2024.110744](#).

Preprints

- [3] O. Riedler and T. Tony. *Scalar-rigid submersions are Riemannian products*. 2026. arXiv: [2601.14117 \[math.DG\]](#).

Surveys and Reports.....

- [4] T. Tony. "Scalar Curvature Rigidity and the Higher Mapping Degree." In: *Oberwolfach Report No. 30/2025*. Ed. by Richard Bamler et al. <https://publications.mfo.de/handle/mfo/4293> (to appear). 2025.

Theses.....

- [5] T. Tony. *The End-Periodic Index Theorem for Dirac Operators and its Connection to the Classical Atiyah-Patodi-Singer Index Theorem*. <https://ttony.eu/documents/thesis-master.pdf>. Master's thesis, advisor: Nadine Große, University of Freiburg. 2022.
- [6] T. Tony. *Die Riemannsche Vermutung und die Primzahlverteilung*. <https://ttony.eu/documents/thesis-state-exam.pdf>. State exam's thesis (accepted as Bachelor's thesis as well), advisor: Katrin Wendland, University of Freiburg. 2019.