# Thomas Tony | Curriculum vitae

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## Education

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| 2022 – present | PhD in Mathematics (Dr. rer. nat.), University of Münster. |
| | ▪ advisor: R. 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

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| 2022 | Doctoral position funded by the Cluster of Excellence Mathematics Münster. |
| 2020 | Deutschlandstipendium, University of Freiburg. |
| 2013 | DMV-Abiturpreis, Deutsche Mathematiker-Vereinigung. |

## Invited research seminar talks

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| 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. |

## Invitations to conferences and workshops

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| 02/2024 | Oberwolfach workshop: Analysis, Geometry and Topology of Positive Scalar Curvature Metrics ↗. |

## Organized conferences and workshops

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| 08/2024 | Young Topologist Meeting (YTM) ↗, Cluster of Excellence Mathematics Münster. |

## Participation in conferences and workshops

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| 11/2024 | Curvature and Geometric Analysis in Rome ↗, Sapienza Università di Roma. |
| 03/2024 | Mathematics Münster Mid-term Conference ↗, Cluster of Excellence Mathematics Münster. |
| 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. |
| 08/2023 | Workshop on Curvature and Global Shape ↗, Poster presented, Cluster of Excellence Mathematics Münster. |
| 04/2023 | *Higher Structures in Geometry and Mathematical Physics* ↗, Centre International de Rencontres Mathématiques, Marseille. |

## Research stays

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| 04/2024 | Guest of the SFB Higher Invariants (one week), University of Regensburg. |
| 11/2023 | Visiting Renato G Bettiol (one week), The City University of New York. |

## Teaching experience

**University of Münster** ....................................................................................................

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| Winter 2024/25 | *Differential Geometry PhD Seminar*. |
| Summer 2023 | *Differential Equations*, Tutor, given by T. de Laat. |

**University of Freiburg (as a tutor)** .........................................................................

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

**Extramural teaching** ....................................................................................................

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| 2016 – 2022 | Learn coaching, Das Lernteam. |
| 2016 – 2020 | Preparation for the General Certificate of Education in mathematics, Abiturma. |

## Scientific memberships

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| 2024 – present | Part of the ERC Starting Grant – COMSCAL "Comparison and rigidity for scalar curvature". |
| 2022 – present | Member of the Cluster of Excellence "Mathematics Münster: Dynamics – Geometry – Structure". |
| 2022 – present | Member of the SFB 1442 "Geometry: Deformations and Rigidity". |
| 2022 – present | Member of the Mathematics Münster Graduate School. |

## Language skills

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

## Technical skills

Latex, Python, HTML, Linux

## List of publications

**Peer-reviewed articles**....................................................................................................

[1] T. Tony. "Scalar curvature rigidity and the higher mapping degree." In: *Jounal of Functional Analysis* (2024). DOI: 10.1016/j.jfa.2024.110744.

**Preprints**....................................................................................................

[2] T. Tony. *A note on Ricci-flat manifolds, parallel spinors and the Rosenberg index*. Preprint. 2024. arXiv: 2411.03882 [math.DG].

**Theses**....................................................................................................

[3] 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: K. Wendland, University of Freiburg. 2019.

[4] 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: N. Große, University of Freiburg. 2022.