

Curriculum Vitae

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Personal data

Name: David Lindemann
Date of birth: 23.01.1989
Nationality: German
Languages: German (native), English (fluent), Danish (B2)
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Employment

2024 – Postdoctoral researcher, Department of Mathematics, University of Hamburg, Germany
2024 German Research Foundation (DFG) return postdoc grant (6 months)
2021 – 2023 German Research Foundation (DFG) individual postdoc fellowship in the “Walter Benjamin Programme” (24 months), Department of Mathematics, Aarhus University, Denmark
2018 – 2021 Postdoctoral researcher, Department of Mathematics, University of Hamburg, Germany

Education

2014 – 2018 Ph.D. in mathematics, University of Hamburg
Thesis: “Structure of the class of projective special real manifolds and their generalisations”
2011 – 2014 M.Sc. in mathematics, University of Hamburg
Thesis: “Completeness of projective special real manifolds generated by reducible polynomials”
2008 – 2011 B.Sc. in mathematics, University of Hamburg
Minor field: Biology
Thesis: “Geodesic completeness of a hypersurface generated by a hyperbolic homogeneous polynomial”

Publications

2024 Special homogeneous surfaces (*with Andrew Swann*), Math. Proc. Cambridge Philos. Soc. **177** (2), 333–362, [doi:10.1017/S0305004124000252](https://doi.org/10.1017/S0305004124000252), [arXiv:2303.18228](https://arxiv.org/abs/2303.18228)
2024 Computing Irregular Hypar-based Quad-mesh Patterns for Segmented Timber Shells (*with Markus Hudert, László Mangliár, and Andrew Swann*), Comput.-Aided Des. **177**, art. id. 103772, 12 pp., [doi:10.1016/j.cad.2024.103772](https://doi.org/10.1016/j.cad.2024.103772)
2024 Special homogeneous curves, Math. Scand. **109**, no. 2, [doi:10.7146/math.scand.a-143045](https://doi.org/10.7146/math.scand.a-143045), [arXiv:2208.06890](https://arxiv.org/abs/2208.06890)

- 2023 Classification of left-invariant Einstein metrics on $SL(2, \mathbb{R}) \times SL(2, \mathbb{R})$ that are bi-invariant under a one-parameter subgroup (*with Vicente Cortés, Jeremias Ehlert, and Alexander S. Haupt*), *Ann. Glob. Anal. Geom.* **63**, doi:10.1007/s10455-023-09890-4, arXiv:2201.07343
- 2023 Properties of the moduli set of complete connected projective special real manifolds, *Math. Z.* **303**(2), doi:10.1007/s00209-022-03184-4, arXiv:1907.06791
- 2021 A class of cubic hypersurfaces and quaternionic Kähler manifolds of co-homogeneity one (*with Vicente Cortés, Malte Dyckmanns, and Michel Jüngling*), *Asian J. Math.* Vol. **25**, no. 1, 1–30, doi:10.4310/AJM.2021.v25.n1.a1, arXiv:1701.07882
- 2018 Left-invariant Einstein metrics on $S^3 \times S^3$ (*with Florin Belgun, Vicente Cortés, and Alexander S. Haupt*), *J. Geom. Phys.* **128**, doi:10.1016/j.geomphys.2018.02.015, arXiv:1703.10512
- 2014 Classification of complete projective special real surfaces (*with Vicente Cortés, and Malte Dyckmanns*), *Proc. London Math. Soc.* **109**, No. 2, 423–445, doi:10.1112/plms/pdu013, arXiv:1302.4570

Preprints

- 2022 Special geometry of quartic curves, arXiv:2206.12524
- 2020 Limit geometry of complete projective special real manifolds, arXiv:2009.12956

Teaching

- 2025 Exercise class “Grundkonzepte der Geometrie” (“Basic concepts of Geometry”)
- 2025 Exercise class “Grundlagen der Arithmetik” (“Foundations of Arithmetics”)
- 2022 Exercise class “Numerisk lineær algebra” (“Numerical linear algebra”)
- 2021 Exercise class “Mathematik 2 für Studierende der Informatik” (“Mathematics for computer scientists 2”)
- 2020 Exercise class “Mathematik 1 für Studierende der Informatik” (“Mathematics for computer scientists 1”)
- 2020 Lecture course “Differential Geometry” (B.Sc. level, online), accessible at https://www.math.uni-hamburg.de/home/lindemann/diffgeo_SS2020_lindemann.html
- 2019 Exercise class “Mathematik 4 für Studierende der Physik” (“Mathematics for physicists 4”)
Exercise class “Grundbildung Geometrie (für Grundschullehrer und Sonderpädagogen)” (“Basic geometry for elementary and special needs school teachers”)
- 2018 Seminar “Kurven und Flächen” (B.Sc. level) (“Curves and Surfaces”)
Exercise class “Mathematik 3 für Studierende der Physik” (“Mathematics for physicists 3”)
- 2016 Exercise class “Differentialgeometrie” (“Differential Geometry”)

- 2015 Exercise class “Analysis 2”
Grading of the exercises of the course “Mathematical Methods of Classical
Physics”
- 2014 Exercise class “Lineare Algebra und analytische Geometrie 2”
 (“Linear algebra and analytic geometry 2”)
Exercise class “Mathematik 3 für Studierende der Physik”
 (“Mathematics for physicists 3”)