

Georg-Joachim FRENCK

Curriculum Vitae



PERSONAL DATA

PLACE AND DATE OF BIRTH: Kassel, Germany — October, 3rd 1990
NATIONALITY: German
MARITAL STATUS: married, 2 children (age 3 and 1)
SEX: male

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POSITIONS

OCT. 2019 -	Postdoc Karlsruhe Institute of Technology
JAN. 2016 - SEP. 2019	Research associate University of Münster

EDUCATION

JUL. 2019	PhD in Mathematics , WWU Münster, Grade: Magna cum laude.
SEP. 2015	Master of Science, Mathematik , WWU Münster, Grade: 1.1 (with distinction).
JUL. 2013	Bachelor of Science, Mathematik , WWU Münster, Grade: 1.7, Minor in Physics.
JUL. 2009	Abitur , Otto-Hahn-Gymnasium, Saarbrücken, Grade: 1.3.

ARTICLES AND PREPRINTS

- [EF20] J. Ebert and G. Frenck. “The Gromov–Lawson–Chernysh surgery theorem”. In: *Bol. Soc. Mat. Mex. (3)* to appear (2020).
- [FR20] G. Frenck and J. Reinhold. *Spaces of metrics of positive Ricci curvature and bundles with non-multiplicative \hat{A} -genus*. 2020. arXiv: [2010.04588](https://arxiv.org/abs/2010.04588) [[math.DG](https://arxiv.org/abs/2010.04588)].
- [FGR20] G. Frenck, F. Galaz-Garcia, and P. Reiser. *Cohomogeneity One Manifolds and Homogeneous Spaces of Positive Scalar Curvature*. 2020. arXiv: [2009.13142](https://arxiv.org/abs/2009.13142) [[math.DG](https://arxiv.org/abs/2009.13142)].
- [Fre20] G. Frenck. *H-Space structures on spaces of metrics of positive scalar curvature*. 2020. arXiv: [2004.01033](https://arxiv.org/abs/2004.01033) [[math.GT](https://arxiv.org/abs/2004.01033)].

- [Fre19] G. Frencik. *The action of the mapping class group on metrics of positive scalar curvature*. 2019. arXiv: [1912.08613](https://arxiv.org/abs/1912.08613) [[math.AT](#)].
- [FK20] G. Frencik and J.-B. Kordaß. “Surgery stable curvature conditions and infinite loop spaces”. in preparation. 2020.

SCIENTIFIC TALKS

OCT. 29TH, 2020	Geometry and Topology Seminar , Durham University. “The space of positive Ricci curvature metrics”
OCT. 28TH, 2020	Topology/Geometry Zoom Seminar , University of Oregon. “The space of positive Ricci curvature metrics”
MAY 19TH, 2020	OberZOOMinar Topologie , Georg-August-Universität Göttingen. “ H -Space multiplications on metrics of positive scalar curvature”
JAN. 23RD, 2020	Spaces and moduli spaces of Riemannian metrics with curvature bounds – A-Fri-Ka , KIT Karlsruhe. “ H -Space multiplications on metrics of positive scalar curvature”
NOV. 27TH, 2019	Department of Mathematics & Statistics Colloquium , NUI Maynooth “The action of $\text{Diff}(M)$ on $\mathcal{R}^+(M)$ ”
APR. 29TH, 2019	Oberseminar Differentialgeometrie , Universität Augsburg. “The action of $\text{Diff}(M)$ on $\mathcal{R}^+(M)$ ”
APR. 25TH, 2019	Oberseminar Differentialgeometrie , Karlsruher Institut für Technologie. “The action of $\text{Diff}(M)$ on $\mathcal{R}^+(M)$ ”
APR. 16TH, 2019	Oberseminar Topologie , Georg-August-Universität Göttingen. “The action of $\text{Diff}(M)$ on $\mathcal{R}^+(M)$ ”
MAR. 11TH, 2019	Oberseminar Topologie , Université de Fribourg. “The action of $\text{Diff}(M)$ on $\mathcal{R}^+(M)$ ”
JUL. 11TH, 2018	Young Topologists Meeting , Kopenhagen. “Topology and Scalar curvature”
JUL. 24TH, 2016	Surgery and Geometry , Workshop, Banff. “Surgery and positive scalar curvature”

CONFERENCES AND SCHOOLS ATTENDED

AUG. 2020	Virtual workshop on Ricci and scalar curvature ,
JAN. 2020	Spaces and moduli spaces of Riemannian metrics with curvature bounds – A-Fri-Ka , KIT Karlsruhe, coorganizer.
NOV. 2018	Riemann Topology Meeting , Fribourg.
JUL. 2018	Young Topologists Meeting , Kopenhagen.
JUL. 2016	Surgery and Geometry , Workshop, Banff.
JUL. 2016	Summer School on Surgery and Classification of Manifolds , Calgary.
JUL. 2016	Young Topologists Meeting , Kopenhagen.

TEACHING AND ORGANISATION

SUMMER TERM 2020	Lecture course “Differential geometry” , teaching assistant.
WINTER TERM 2019/20	Lecture course “Elementary geometry” , teaching assistant.
SUMMER TERM 2019	PhD-Seminar of the Topology group , organizer.
WINTER TERM 2018/19	Lecture course “Differential equations” , teaching assistant.
WINTER TERM 2017/18	Lecture course “Topology II” , teaching assistant. Reading seminar on index theory , organizer.
WINTER TERM 2016/17	Lecture course “Topology I” , teaching assistant
2012 - 2015	Tutorial assistant Weekly exercise sessions and sheet corrections for various courses in theoretical mathematics, both undergraduate and graduate.

SEMINAR TALKS

WINTER TERM 2018/19	Seminar on algebraic K-theory Talk-title: “Whitehead-torsion”. PhD-seminar Talk-title: “The action of the diffeomorphism group on the space of psc-metrics I & II”.
SUMMER TERM 2018	Seminar on vector bundles and K-theory Talk-title: “The Hopf-invariant 1-problem”. PhD-seminar Talk-title: “Surgery and positive scalar curvature I & II”.
WINTER TERM 2017/18	Seminar on Topology of 3-manifolds Talk-title: “Uniqueness of Torus-decompositions I & II”.
SUMMER TERM 2017	Seminar on L^2-invariants Talk-title: “Triviality of L^2 -Betti numbers for amenable groups”.
WINTER TERM 2016/17	Seminar on The theorem of Madsen-Weiss Talk-title: “Morse theory”.
SUMMER TERM 2016	Oberseminar on the Farrel-Jones-conjecture Talk-title: “Algebraic K -theory”.
WINTER TERM 2015/16	Seminar on Characteristic classes Talk-title: “Construction of characteristic classes”. Reading seminar on Spin geometry Talk-title: “The Gromov-Lawson surgery theorem II”.
SUMMER TERM 2015	Seminar on Classical homotopy theory Talk-title: “Rational homotopy theory”.
WINTER TERM 2014/15	Seminar on Index theory and positive scalar curvature Talk-title: “The Gromov-Lawson surgery theorem.”
SUMMER TERM 2014	Seminar on The h-cobordism theorem and exotic spheres Talk-title: “The Whitney-trick”.
WINTER TERM 2013/14	Seminar on Topological methods in group theory Talk-title: “Grushko’s theorem”.

LANGUAGES

GERMAN: **Mother-tongue**
ENGLISH: **Fluent**
Education partially in English
FRENCH: **Good**
6 Years in School
JAPANESE: **Basic**