

Curriculum Vitae

PERSONAL INFORMATION

Family name, First name: von Bergmann, Kirsten
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Date of birth: 28.05.1976
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• EDUCATION

- 1995 – 2000 Studies of Chemistry at the University of Bonn, Germany, Diploma-thesis at the Institute of Physical and Theoretical Chemistry, group of Prof. Dr. K. Wandelt: *STM study of Manganese Clusters on an ultrathin aluminum oxide film on Ni₃Al(111)*.
2000 – 2004 PhD-thesis at the Department of Physics, University of Hamburg, Germany, group of Prof. Dr. R. Wiesendanger: *Iron nanostructures studied by spin-polarized STM*.

• ACADEMIC POSITIONS

- since 2004 Member of research staff in the group of Prof. Dr. R. Wiesendanger at the Department of Physics, University of Hamburg, Germany.
2008 Visiting researcher at the IBM Almaden Research Center, San Jose, USA, group of Dr. A.J. Heinrich, with a scholarship of the German Research Foundation (DFG) (4 months). *Topics: Kondo effect and spin-flip excitations of single magnetic atoms*.
since 2007 Permanent research staff, Department of Physics, University of Hamburg, Germany. *Topics: spin-polarized STM, complex spin textures, skyrmions, higher-order magnetic interactions, magnet-superconductor hybrids*.
2020 Habilitation and Privat-Dozentur at University of Hamburg, Germany

• FELLOWSHIPS AND AWARDS

- 2001 – 2004 Scholarship of the Graduate School *Design and Characterization of Functional Materials* of the German Research Foundation (DFG), Univ. of Hamburg, Germany.
2004 Award *Excellent Dissertation*, Department of Physics, Univ. of Hamburg, Germany.
2004 Prize for the dissertation from the *Hamburgische Stiftung für Wissenschaften, Entwicklung und Kultur Helmut und Hannelore Greve* (5.000 €).
2008 Research scholarship of the German Research Foundation (DFG) to visit the IBM Almaden Research Center, San Jose, USA (11.000 €).
2013 *Gaede-Prize* of the German Vacuum Society (DVG) (10.000 €).

• CAREER BREAKS

2010 and 2012 parental leave for approximately 8 months each, 2010-2023 part time 75%.

• ACHIEVEMENTS SINCE 2000

- > 80 peer-reviewed publications, total citations >12.000, h-index 39 (Google Scholar 02/2026).
- about 50 accepted invited/semi-plenary/plenary talks at conferences and workshops.
- >3.900.000 € raised third party funding.

- **FUNDING AND PROJECTS**

- 2006 – 2017 Member and Principal Investigator (PI) of the Collaborative Research Center SFB 668 of the German Research Foundation (DFG): *Magnetism from the single atom to the nanostructure* (one of two or three PIs in A1 and A8, 2.174.000 €).
- 2009 – 2012 Member of the Hamburg state excellence initiative: *Nanospintronics*.
- 2013 Organizer of a Heraeus-Workshop (one of three organizers, 25.500 €).
- 2015 – 2018 Member of the EU FET-OPEN initiative: *MagicSky*.
- 2018 – 2026 Member, PI, and member of Steering Committee (since 2020) of Priority Program SPP2137 *Skyrmionics* of the German Research Foundation (DFG): Gepris 402843438:
1st FP: Skyrmion–Skyrmion and Skyrmion–Edge Interactions studied with STM
2nd FP: Antiferromagnetic Skyrmions in ultra-thin oxide films
(single PI, 1st FP: 226.200 €, 2nd FP: 249.050 €).
- Since 2019 Project of the German Research Foundation (DFG): Gepris 418425860:
1st FP: Magnetic ground states at surfaces driven by higher-order exch. interactions
2nd FP: Magnetic ground states and higher-order interactions beyond monolayers
(with Prof. S. Heinze, Univ. Kiel) (my funds, 1st FP: 225.700 €, 2nd FP: 252.850 €).
- 2021 – 2025 EU SPEAR-ITN: Spin-orbit Material, Emergent Phenomena and Related Technologies Training (collaborative project, two PhD positions, my funds 505.576 €).
- 2024 – 2025 Groningen-Hamburg Funding: *Magnetic Textures on Superconductors* (with Associate-Prof. Roberto Lo Conte from Univ. Groningen) (my funds 4.000 €).
- Since 2025 Project of the German Research Foundation (DFG): Gepris 552644472:
Non-coplanar magnet superconductor hybrid systems (single-PI 266.204 €).
- Since 2026 Associate PI of the Cluster of Excellence *Advanced Imaging of Matter* (A2.1, A3.4).

- **TEACHING ACTIVITIES**

- since 2001 Practical courses for Bc. Sci Physics and Bc. Sci. Nanoscience studies.
- 2009 – 2015 Exercises in Solid State Physics (four semesters).
- since 2019 Lectures and exercises (Master level) on *Nanostructure Physics – Magnetism and Surface Science* (together with Jens Wiebe) in summer terms.

- **SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS**

- since 2004 Co-Supervision and scientific support of 9 Postdocs, 14 PhD Students, 13 Master Students, 10 Bachelor Students at the University of Hamburg, Germany.
- Since my Habilitation I have supervised / am supervising 5 PhD students as 1st evaluator. All of them have finished / are expected to finish within 3.5 – 4 years. All of these students were/are embedded in national or European consortia or collaborations.

- **COMMISSIONS OF TRUST (selected)**

- Reviewer of about 5 manuscripts per year submitted to scientific journals, including Science, Nature, Nature Mater./Nanotechn./Phys./Commun., Physical Review Lett./B, Nano Lett., etc.
- Reviewer of Research Proposals, including German Science Foundation (DFG), Swiss National Science Foundation (SNSF), Czech Science Foundation, Department of Energy (DOE) USA, etc.
- Commission member and equal opportunity officer of several W1, W2, and W3 positions at the University of Hamburg, Germany.
- 2013 Organizer of the 544. WE-Heraeus-Seminar (approx 80 Participants), Bad Honnef, Germany.
- 2015 – 2024 Equal opportunity officer, Department of Physics, University of Hamburg.
- 2018 Symposium Organizer of the 9th JEMS (Joint European Magnetic Symposia, in total approx 600 participants), Mainz, Germany.
- Since 2019 International Advisory Committee for the MML (Intl Symposium on Metallic Multilayers).
- Since 2020 Member of the Steering Committee of the Priority Program SPP2137 Skyrmionics.
- Since 2021 Member of the Gaede-Prize Committee of the DPG.
- Since 2024 Steering committee of the re-established STM conference series (about 400 participants).
- Since 2024 Member of the council of the Department of Physics, Universität Hamburg.

- **PUBLICATIONS (selection of 10)**

in total 83 peer-reviewed publications, * corresponding author,
{12446} number of citations, h-index = 39 (both according to GoogleScholar 02/2026)

- [1] V. Saxena, M. Gutzeit, A. Rodríguez-Sota, S. Haldar, F. Zahner, R. Wiesendanger, A. Kubetzka, S. Heinze, and K. von Bergmann*, *Strain-driven domain wall network with chiral junctions in an antiferromagnet*, [Nature Commun. 16, 10808 \(2025\)](#). {6}
- [2] R. Brüning*, L. Rózsa*, R. Lo Conte, A. Kubetzka, R. Wiesendanger, and K. von Bergmann*, *Topological meron-antimeron domain walls and skyrmions in a low-symmetry system*, [Phys. Rev. X 15, 021041 \(2025\)](#). {7}
- [3] M. Gutzeit, A. Kubetzka, S. Haldar, H. Pralow, M.A. Goerzen, R. Wiesendanger, S. Heinze, and K. von Bergmann*, *Nano-scale collinear multi-Q states driven by higher-order interactions*, [Nature Commun. 13, 5764 \(2022\)](#). {19}
- [4] Sebastian Meyer, Marco Perini, Stephan von Malottki, André Kubetzka, Roland Wiesendanger, Kirsten von Bergmann*, Stefan Heinze *Isolated zero field sub-10 nm skyrmions in ultrathin Co films*, [Nature Commun. 10, 3823 \(2019\)](#). {131}
- [5] P.-J. Hsu, A. Kubetzka, A. Finco, N. Romming, K. von Bergmann*, and R. Wiesendanger, *Electric field driven switching of individual magnetic skyrmions*, [Nature Nanotech. 12, 123 \(2017\)](#). {425}
- [6] N. Romming*, A. Kubetzka, C. Hanneken, K. von Bergmann, and R. Wiesendanger, *Field-dependent Size and Shape of Single Magnetic Skyrmions*, [Phys. Rev. Lett. 114, 177203 \(2015\)](#). {625}
- [7] N. Romming, C. Hanneken, M. Menzel, J.E. Bickel, B. Wolter, K. von Bergmann*, A. Kubetzka*, and R. Wiesendanger, *Writing and Deleting Single Magnetic Skyrmions*, [Science 341, 636 \(2013\)](#). {1934}
- [8] S. Heinze*, K. von Bergmann*, M. Menzel, J. Brede, A. Kubetzka, R. Wiesendanger, G. Bihlmayer, and S. Blügel, *Spontaneous atomic-scale magnetic skyrmion lattice in two dimensions*, [Nature Phys. 7, 718 \(2011\)](#). {2342}
- [9] S. Loth, K. von Bergmann, M. Ternes, A.F. Otte, C.P. Lutz, and A.J. Heinrich*, *Controlling the state of quantum spins with electric currents*, [Nature Phys. 6, 340 \(2010\)](#). {410}
- [10] K. von Bergmann*, S. Heinze, M. Bode, E. Y. Vedmedenko, G. Bihlmayer, S. Blügel, and R. Wiesendanger, *Observation of a Complex Nanoscale Magnetic Structure in a Hexagonal Fe Monolayer*, [Phys. Rev. Lett. 96, 167203 \(2006\)](#). {171}

Selection of other, non-peer-reviewed publications

- K. von Bergmann, *Knoten in der Magnetisierung*, Physik Journal **19**, 30, Oktober (2020).
- K. von Bergmann and A. Kubetzka, *Skyrmions: a twisted future*, Physics World **30**, 25 (2017).
- K. von Bergmann, Chapter *Interface-induced skyrmions investigated by (spin-polarized) scanning tunneling microscopy* in Topological Matter - Topological Insulators, Skyrmions and Majoranas, Book edited by S. Blügel *et al.*, Forschungszentrum Jülich (2017).
- K. von Bergmann, *Magnetic bubbles with a twist*, Science **349**, 234 (2015). (Perspectives).