

# Curriculum Vitae

Family name, First name:	Lange, Gunnar Felix		
Date of birth:	15.05.1996	Sex:	M
Nationality:	German		
Researcher unique identifier(s) (ORCID, ResearcherID, etc.):	ORCID: 0000-0003-1353-0628		
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## EDUCATION

	Name of faculty/department, name of university/institution, country
2023	Ph.D. Department of Physics, University of Cambridge, UK
2019	MSc. Mathematical & Theoretical Physics, Department of Physics, University of Oxford, UK
2018	BSc. Physics, Department of Physics, University of Oslo, Norway
2018	BSc. Computational Informatics, Department of Mathematics, University of Oslo, Norway

## POSITIONS

### Current Position

	Job title/name of employer/country
2024-	Postdoctoral Fellow on the DStrain program (MSCA co-funded), Department of Physics, University of Oslo, Norway
2024-	Researcher, Division of climate change and air pollution, Norwegian Meteorological Institute, Oslo, Norway [Currently in a 20% position]

### Previous positions held

	Job title/name of employer/country
2023	Postdoctoral Fellow, Max-Planck Institute for the Physics of Complex Systems, Dresden, Germany

## FELLOWSHIPS, AWARDS AND PRIZES

	Name of institution/country
2025	Young CAS grant from the Centre for Advanced Studies at the Norwegian Academy of Science and Letters for the project ENQUIRY.
2025	Elected member of the Young Academy of Norway
2025	Winner of the inaugural CECI (Collaborating Early-Career Investigators) award from Psi-K, together with Dr. Bo Peng, for “exemplary scientific achievements that result from collaboration between early-career investigators.”
2024	3 year postdoctoral fellowship through the Marie Skłodowska-Curie Action (co-fund through DSTrain at the University of Oslo)
2023	2 year independent postdoctoral Fellowship at the Max-Planck Institute for the Physics of Complex Systems, Dresden (only partially taken)
2018	Aker Scholarship: Full-ride scholarship for both MSc. and Ph.D

## SUPERVISION OF GRADUATE STUDENTS AND RESEARCH FELLOWS

	No. of	Master's students/ Ph.D./Postdocs	Name of faculty/department/centre, name of university/institution/country
2024-	3	Master (Ongoing)	Department of Physics, University of Oslo (main supervisor)
2021-2022	1	Master	Department of Physics, University of Cambridge (co-supervisor)

## TEACHING ACTIVITIES

	Teaching position – topic, name of university/institution/country
2025	Lecturer, University of Oslo Norway. - FYS – MENA4111 - Quantum Mechanical Modelling of Nanomaterials [main lecturer and course responsible, fall 2025]  - FYS1050 – Physics for the public/Fysikk for folk flest. [guest lecture on quantum computing]
2025	Guest lecturer, Finse Cybersecurity Winter School 2025. Lecture: «A million qubits».
2025	Guest lecturer and external examiner, Kristiania University College, Oslo, Norway: PGR213 - Programming and Quantum Computing
2020-2023	Teaching assistant, University of Cambridge, UK. Various courses, including Part III Theories of Quantum Matter, Part II Theoretical Physics II and Part II Computational Physics

# Publication list

## Publications

Lange's research lives at the intersection between theoretical physics, quantum technology and material science. It is mostly concerned with band topological effects in both toy models and real materials, with a particular focus on applications within quantum sensing. Lange also participates in multiple experimental collaborations, building models to explain experimental data.

- [1] Jankowski, W. J., Slager, R.-J., & **Lange, G. F.** (2025) Quantum geometric bounds in spinful systems with trivial band topology, *Phys. Rev. Res.*, 7, L042011.
- [2] Peng, B., **Lange, G.F.**, Bennett, D., Wang, K., Slager, R. J., & Monserrat, B. (2024). Photoinduced Electronic and Spin Topological Phase Transitions in Monolayer Bismuth. *Phys. Rev. Lett.*, 132(11), 116601.
- [3] **Lange, G.F.**, Pottecher, J. D., Robey, C., Monserrat, B., & Peng, B. (2024). Negative Refraction of Weyl Phonons at Twin Quartz Interfaces. *ACS Materials Letters*, 6(3), 847–855. [\[Journal cover\]](#)
- [4] Hamara, D., **Lange G.F.**, Kholid, F. N., Markou, A., Felser, C., Slager, R. J., & Ciccarelli, C. (2023). Ultrafast helicity-dependent photocurrents in Weyl Magnet Mn<sub>3</sub>Sn. *Communications Physics*, 6(1), 1–7.
- [5] **Lange, G. F.**, Bouhon, A., & Slager, R.-J. (2023). Spin texture as a bulk indicator of fragile topology. *Phys. Rev. Research*, 5, 033013.
- [6] **Lange, G. F.**, Bouhon, A., Monserrat, B., & Slager, R.-J. (2022). Topological continuum charges of acoustic phonons in two dimensions and the Nambu-Goldstone theorem. *Phys. Rev. B*, 105, 064301.
- [7] Bouhon, A., **Lange, G. F.**, & Slager, R.-J. (2021). Topological correspondence between magnetic space group representations and subdimensions. *Phys. Rev. B*, 103, 245127. [\[Editors' Suggestion\]](#).
- [8] **Lange, G. F.**, Bouhon, A., & Slager, R.-J. (2021). Subdimensional topologies, indicators, and higher order boundary effects. *Phys. Rev. B*, 103, 195145.
- [9] Lee, K., **Lange, G. F.**, Wang, L. L., Kuthanazhi, B., Trevisan, T. V., Jo, N. H., Schrunk, B., Orth, P.P., Slager, R.-J., Canfield, P. C., & Kaminski, A. (2021). Discovery of a weak topological insulating state and van Hove singularity in triclinic RhBi<sub>2</sub>. *Nature Communications*, 12(1), 1–8.
- [10] Røising, H. S., Scaffidi, T., Flicker, F., **Lange, G. F.**, & Simon, S. H. (2019). Superconducting order of Sr<sub>2</sub>RuO<sub>4</sub> from a three-dimensional microscopic model. *Phys. Rev. Research*, 1(3), 33108.

## Preprints

- Eaton, A. G., Popiel, N. J. M., Xu, K.-J., Hickey, A. J., Liu, H., Hatnean, M. C., Balakrishnan, G., **Lange, G. F.**, Slager, R.-J., Shen, Z.-X., & Sebastian, S. E (2024). Electrical transport signatures of metallic surface state formation in the strongly-correlated insulator FeSb2. ArXiv: 2403.04550.