

CURRICULUM VITAE – FRANZ LUEF

Academic positions

08/2019 – present Full Professor, Norwegian University of Science and Technology.
05/2014 – 08/2019 Associate Professor, Norwegian University of Science and Technology.
08/2013 – 04/2014 Visiting Professor, Norwegian University of Science and Technology.
01/2012 – 07/2013 APART Fellow of the Austrian Academy of Sciences, University of California, Berkeley.
01/2009 – 12/2011 Marie Curie Outgoing Research Fellow, University of California, Berkeley.
01/2006 – 12/2008 Postdoctoral fellow University of Vienna.

Education

PhD in Mathematics, University of Vienna (2005).

Editorial work

Section Editor for “Harmonic Analysis and Operator Theory” in the journal “Complex Analysis and Operator Theory” since August 2021.
Associate Editor for “Journal Fourier Analysis and Applications” since February 2022.
Associate Editor for “Annals of Functional Analysis”, since November 2022.

Visiting positions – Selected

Visiting Professor, Univ. Torino, May 2025
Visiting Professor, Univ. Vienna, March 2025 – August 2025
Visiting Professor, Stanford Univ., Sept. 2024 – February 2025
Visiting Professor, Univ. Vienna, July 2018 – June 2019.
Math. Forschungsinstitut Oberwolfach, Germany, 7 invitations, 2007 – 2025.
CIRM Marseille, 3 weeks, Jan. 2015.
UC Berkeley, several 1-2 week visits, 2013 – 2017.
Centre for Advanced Study at the Norwegian Academy of Science and Letters, 2 weeks, Feb. 2013.
Erwin Schrödinger Institute, Austria, 4 weeks Nov. 2012, Jan. 2014.
Courant Institute for Mathematics, invited by Prof. S. Guntürk, Nov. 2010.
Max Planck Institute for Mathematics, Bonn, Germany, invited by Prof. Yu. I. Manin, Jan. 2004 – Feb. 2004, Aug. 2006 – Sept. 2006, Aug. 2008 – Sept. 2008.
Isaac Newton Institute for Mathematics, Cambridge, UK, Sept. 2007.

Research funding

- Co-Awardee of Austrian Science Fund (FWF) project “Polar Duality and Quantum Mechanics” of M. de Gosson, 2024-2027.
 - Co-Awardee of Austrian Science Fund (FWF) project “Localization (of) Operators and Operator Reconstruction” of M. Speckbacher, 2024-2028.
 - Co-applicant of an innovation project between the Norwegian University of Science and Technology and Cognite AS for the Ph.D. position of Henry McNulty working at Cognite AS, 2022-2024.
 - Fellowships from the Austrian Academy of Sciences DOC, Max Kade and APART, 2008 and 2012-2013.
 - Marie Curie Outgoing Fellowship from the European Union, 2009-2011.
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Publications:
2020 – 2025

26. R. Fulsche, F. Luef, R. F. Werner. Wiener’s Tauberian Theorem in classical and quantum harmonic analysis. *J. Funct. Anal.*, under revision.

25. L. D. Abreu, F. Luef, Z. Mohammed. Gabor frames for quasi-periodic functions and polyanalytic spaces on the flat cylinder. *J. Fourier Anal. Appl.*, accepted.

24. F. Luef, H. McNulty. Quantum Time-Frequency Analysis and Pseudodifferential Operators. *Indiana J. Math.*, accepted.

23. F. Luef, H. J. Samuelsen. Fourier restriction for Schatten class operators and functions on phase space. *Int. Math. Res. Not. IMRN*, no. 2, Paper No. rnae291, 22 pp. 2025.

22. M. Gjertsen, F. Luef. On the structure of multivariate Gabor systems and a result on Gaussian Gabor frames. *J. Fourier Anal. Appl.*, 31 , no. 1, Paper No. 6, 43 pp, 2025.

21. N. Dias, F. Luef, J. Prata. On Wigdersons’ approach to the uncertainty principle, *J. Math. Pures Appl.* (9) 198, Paper No. 103689, 34 pp, 2025.

20. H. G. Feichtinger, S. Halvdansson, F. Luef. Measure-operator convolutions and applications to mixed-state Gabor multipliers. *Sampling Th. Signal Processing Data Anal.*, 22(2), 16, 2024.

19. F. Bastianoni, F. Luef. τ -quantization and τ -Cohen classes distributions of Feichtinger operators. *J. Pseudo-Differ. Oper. Appl.*, 15, no. 4, Paper No. 86, 29 pp., 2024.

18. M. Dörfler, F. Luef, H. McNulty, E. Skrettingland. Time-Frequency Analysis and Coorbit Spaces of Operators. *J. Math. Anal. Appl.*, 534(2):128058, 2024.

17. L. Abreu, P. Balazs, N. Holighaus, F. Luef, M. Speckbacher. Time-frequency analysis on flat tori and Gabor frames in finite dimensions. *Appl. Comp. Harm. Anal.*, 69:101622, 2024.

16. M. Dörfler, F. Luef, E. Skrettingland. Local Structure and Effective Dimensionality of Time-SeriesData Sets. *Appl. Comp. Harm. Anal.*, 73:101692, 2024.

15. F. Luef, X. Wang. Gaussian Gabor frames, Seshadri constants and generalized Buser–Sarnak invariants. *Geom. Funct. Anal. Math.*, 33:778-823, 2023.

14. U. Enstad, M. S. Jakobsen, F. Luef, T. Omland. Deformations of Gabor frames on the adeles and other locally compact abelian groups. *Adv. Math.*, 410(Part B):108771, 2022.

13. N. Dias, F. Luef, J. Prata. Uncertainty principles via variational calculus on modulation spaces, *J. Funct. Anal.*, 283(8):109605, 2022.

12. E. Berge, F. Luef. A Large Scale Approach to Decomposition Spaces. *Studia Math.*, 265:257-301, 2022.

11. E. Berge, S. M. Berge, F. Luef, E. Skrettingland. Affine quantum harmonic analysis. *J. Funct. Anal.*, 282(4):109327, 2022.

10. E. Berge, S. M. Berge, F. Luef. The affine Wigner distribution. *Appl. Comp. Harm. Anal.*, (56):150-175, 2022.

9. L. Dabrowski, G. Landi, M. S. Jakobsen, F. Luef. Solitons of general topological charge over noncommutative tori. *Rev. Math. Phys.*, 33(4):2150009, 30 pages, 2021.
8. J. Keller, F. Luef. Polyanalytic Toeplitz operators: Mapping properties and approximation of Weyl calculus. *J. Fourier Anal. Appl.*, 27:47, 2021.
7. F. Luef, E. Skrettingland. A Tauberian theorem for operators and functions. *J. Funct. Anal.*, 280(6):108883, 2021.
6. A. Austad, F. Luef. Modulation Spaces as a Smooth Structure in Noncommutative Geometry. *Banach J. Math.*, 15, paper 35, 2021.
5. R. Balan, D. E. Dutkay, D. Han, D. Larson, F. Luef. A duality principle for groups II: Multi-frames meet super-frames. *J. Fourier Anal. Appl.*, 26, paper 83, pp.19, 2020.
4. A. Austad, M.S. Jakobsen, F. Luef. Gabor duality theory for Morita equivalent C^* -algebras, *Int. J. Math.*, 31(10), paper 2050073, pp.34, 2020.
3. M. S. Jakobsen, F. Luef. Duality of Gabor frames and Heisenberg modules, *J. Noncom. Geom.*, 14(4):1445â1500, 2020.
2. F. Luef, E. Skrettingland. On accumulated Cohen's class distributions and mixed-state localization operators. *Const. Approx.*, 52:31-64, 2020.
1. S. Kang, F. Luef, J. A. Packer. Yang-Mills connections on quantum Heisenberg manifolds, *J. Math. Anal. Appl.*, 483(1):123604, 2020.