

ROBIN REUVERS

KEY WORDS

Mathematical physics, quantum mechanics, fermionic and bosonic many-body systems, entanglement, applications of representation theory to physics, statistical mechanics

APPOINTMENTS

- 2025-** **Roma Tre University**
Associate professor
- 2022-2025** Tenure-track assistant professor
- 2021-2022** Assegnista di ricerca
- 2020** **University of Copenhagen**
Postdoctoral visitor
- 2017-2020** **Darwin College, Cambridge**
Research fellow
- 2017-2019** **University of Cambridge**
Royal Society Newton International Fellow

EDUCATION

- 2013-2016** **University of Copenhagen**
PhD in Mathematical Physics
- 2016** **Princeton University**
Visiting Student Research Collaborator
- 2012-2013** **University of Cambridge**
MASt in Mathematics (Part III)
- 2009-2012** **Radboud University Nijmegen**
BSc in Mathematics, BSc in Physics

PUBLICATIONS

13. J. Agerskov, J.P. Solovej and R. Reuvers. Ground state energy of dilute Fermi gases in 1D, arXiv:2509.00536, 2025.
12. S. Fabbri, A. Giuliani and R. Reuvers. Universality of the topological phase transition in the interacting Haldane model, *Physical Review B* 112: 165113, 2025.
11. J. Agerskov, J.P. Solovej and R. Reuvers. Ground state energy of dilute Bose gases in 1D. *Communications in Mathematical Physics* 406: 27, 2025.
10. R. Reuvers. Generalized Pauli constraints in large systems: the Pauli principle dominates. *Journal of Mathematical Physics* 62(3): 032204, 2021.
9. C.J.F. van de Ven, G.C. Groenenboom, R. Reuvers and N.P. Landsman. Quantum spin systems versus Schrödinger operators: A case study in spontaneous symmetry breaking. *SciPost Physics* 8(2): 022, 2020.
8. S. Fournais, M. Napiórkowski, R. Reuvers and J.P. Solovej. Ground state energy of a dilute two-dimensional Bose gas from the Bogoliubov free energy functional. *Journal of Mathematical Physics* 60: 071903, 2019.
7. R. Reuvers. Lower bound on entanglement in subspaces defined by Young diagrams. *Journal of Mathematical Physics* 60(1): 012201, 2019.
6. R. Reuvers. An algorithm to explore entanglement in small systems. *Proceedings of the Royal Society A* 474(2214): 20180023, 2018.
5. M. Napiórkowski, R. Reuvers and J.P. Solovej. Calculation of the critical temperature of a dilute Bose gas in the Bogoliubov approximation. *Europhysics Letters* 121(1): 10007, 2018.
4. M. Napiórkowski, R. Reuvers and J.P. Solovej. The Bogoliubov free energy functional II. The dilute limit. *Communications in Mathematical Physics* 36(1): 347–403, 2018.
3. M. Napiórkowski, R. Reuvers and J.P. Solovej. The Bogoliubov free energy functional I. Existence of minimizers and phase diagram. *Archive for Rational Mechanics and Analysis* 229(3): 1037–1090, 2018.
2. E.A. Carlen, E.H. Lieb and R. Reuvers. Entropy and entanglement bounds for reduced density matrices of fermionic states. *Communications in Mathematical Physics* 344(3): 655–671, 2016.
1. N.P. Landsman and R. Reuvers. A Flea on Schrödinger’s Cat. *Foundations of Physics* 43(3): 373–407, 2013.

BOOKS AND THESES

2. Enigmas (Darwin College Lectures). E.J. Ward and R. Reuvers, Eds. Cambridge University Press, 2022.
1. R. Reuvers. Analysis of the Bogoliubov free energy functional: a variational description of a weakly-interacting Bose gas. PhD thesis. Department of Mathematical Sciences, Faculty of Science, University of Copenhagen, 2016.