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## Vortex Duality in Higher Dimensions

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## List of Publications

*Condensing Nielsen–Olesen strings and the vortex–boson duality in 3+1 and higher dimensions*

A.J. Beekman, D. Sadri and J. Zaanen

New Journal of Physics **13** 033004 (2011) — arXiv:1006.2267

*Electrodynamics of Abrikosov vortices: the Field Theoretical Formulation*

A.J. Beekman and J. Zaanen

accepted for Frontiers of Physics — arXiv:1106.3946

*The emergence of gauge invariance: the stay-at-home gauge versus local–global duality*

J. Zaanen and A.J. Beekman

submitted to Annals of Physics — arXiv:1108.2791

*Type-II Mott insulators*

A.J. Beekman and J. Zaanen

in preparation



## Curriculum vitæ

On the 21<sup>st</sup> of November, 1979, I was born in Gouda, the Netherlands, where I completed secondary education at the Coornhert Gymnasium in 1997. The following year I spent working and travelling in France and Israel.

I entered the  $\beta/\gamma$ -propædeuse at the University of Amsterdam, through which program I proceeded to study physics. I graduated as Master of Science in theoretical physics on the thesis *Quantum double symmetries of the even dihedral groups and their breaking* under the supervision of prof. dr. ir. F.A. Bais in 2005. During this time I competed in race rowing, and also organized the Dutch Indoor Rowing Championships for five years.

In 2006 I started PhD research under the supervision of prof. dr. J. Zaanen at the Instituut-Lorentz for theoretical physics, which is part of the Leiden Institute of Physics at Leiden University. During this time I was a teaching assistant for the courses *Advanced Theory of Condensed Matter* by prof. dr. J. Zaanen, *Field Theory* by prof. dr. P.J. van Baal and *Theory of Condensed Matter* by dr. D.I. Santiago. From 2007 to 2011 I was a member of the PhD council of the Dutch Research School of Theoretical Physics.

Since 2007 I am a board member of the Amsterdam Rowing Association. In 2009 I was awarded the Membership of Merit from the Amsterdam Student Rowing Club “Nereus”.



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I have been enjoying my time at the Instituut-Lorentz voor theoretische natuurkunde so much that I have extended my residence for quite a while. I thank all my colleagues in past and present, and the support staff Marianne, Fran and Trudy for an enormously stimulating work environment.

The Dutch Research School of Theoretical Physics is a prime example of an organization that is exactly suited for the geographical scale and topical scope it represents, and is instrumental in keeping a wider view within an ever more specializing and divided scientific world. I am glad to have been able to contribute to its progress.

Finally, I thank my parents, sister and brother for being there.