

NILS-OLE WALLISER (Apr 19 1982)

Theoretical physicist (PhD)

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EDUCATION

- today **Visiting** the École Polytechnique, Paris.
- Continuing projects I have started during my PhD studies.
- 2007 – 2011 **PhD in Physics** (Dr. rer. nat.) with distinction, Vienna University of Technology.
Advisors: Prof. Maximilian Kreuzer (1960 – 2010) and Prof. Anton Rebhan.
Title of thesis: *Geometry of model building in type IIB superstring and F-theory compactifications.*
- 2001 – 2007 **M.Sc. in Physics** (Dipl.-Phys.), University of Göttingen.
Average grade (counting courses with numerical grades): 4.7/5.
Supervisor: Prof. Stefan Hollands.
Title of thesis: *Alpha-vacua in de Sitter spacetime.*
- 2004 – 2005 **Erasmus exchange program**, University of Padua, Italy.
- 1996 – 2001 **High school** (Liceo Classico E. Montale, Rome), graduation with distinction.

FORMER AND CURRENT RESEARCH INTERESTS

- 2007 – present Toric geometry and applications to type IIB orientifold/F-theory compactifications.
- 2005 – 2007 Algebraic quantum field theory on curved spacetimes.

CONFERENCE AND INVITED TALKS

- 2011 Invited talk at ITP, Ruprechts-Karls-Universität, Heidelberg, Germany.
- Restrictions on sequences of type IIB vacua*, invited talk, INFN and Physics Department, Università di Roma ‘Tor Vergata’, Roma, Italy.
- Invited talk, CPHT, École Polytechnique, Paris, France.
- Computational tools for constructing smooth CY hypersurfaces and applications to string model building*, String Phenomenology 2011, University of Wisconsin–Madison Campus, USA.
- Monday’s seminar, Max-Planck-Institute for Physics Munich, Germany.
- 4th Workshop on Geometric Methods in Theoretical Physics, SISSA Trieste, Italy.
- A new offspring of PALP*, Memorial Conference for Maximilian Kreuzer, ESI Vienna, Austria.
- 2009 *F-theory and new developments in string theory*, Bogolyubov Conference on Modern Problems of Theoretical and Mathematical Physics, BITP Kiev, Ukraine.

WORKING EXPERIENCE

- 2007 **Personal math tutoring** for primary school pupils.
- 2004 – 2006 **Teaching assistant**, University of Göttingen, (during my Master’s studies).

- T.a. mathematical methods of theoretical physics, electrodynamics and laboratory classes.
- Formulated exam questions.

ADMINISTRATIVE AND MANAGEMENT EXPERIENCE

2010 – 2011 **Co-organizing the ‘Vienna Theory Lunch Seminar’.** Weekly seminar meetings with international speakers.

COMPUTER SKILLS

programming Experience in larger projects involving programming in C. Developing and maintaining PALP, a package for analyzing lattice polytopes.

math tools Mathematica, PALP, Sage, SINGULAR.

LANGUAGES

Italian Native.

German Almost accentless. *Lived in German speaking countries for ten years.*

English Fluent. *My professional language. Used daily in the last four years.*

French Very basic.

REFERENCES

First referee: Anton Rebhan, Professor
Institute for Theoretical Physics, VUT, Vienna, Austria
e-mail: rebhana@hep.itp.tuwien.ac.at

Second referee: Andrés Collinucci, Fellow at CERN, Theory Division
(on leave from permanent address at the Université Libre de Bruxelles)
e-mail: collinucci.phys@gmail.com

Third referee: Harald Skarke, University Lecturer
Institute for Theoretical Physics, VUT, Vienna, Austria
e-mail: skarke@hep.itp.tuwien.ac.at

Fourth referee: Maximilian Kreuzer (1960 – 2010), Associate Professor
Institute for Theoretical Physics, VUT, Vienna, Austria
e-mail: moessmer@tph.tuwien.ac.at (contact: Mrs. Moessmer, administrative staff)