

Dr. Andreas Braun

born September 18th, 1979
in Koblenz, Germany

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Education and Professional Career

- since 1/04/2010 Postdoc at the Technical University of Vienna
- 5/2/2010 Dr. in Physics at the University of Heidelberg
Title:
'F-Theory and the Landscape of Intersecting D7-branes'
- 10/2006-2/2010 Graduate studies at the University of Heidelberg
with a scholarship from the Heidelberg Graduate School
of Fundamental Physics
Supervisor: Arthur Hebecker
- 12/06/2006 Diploma in Physics at the University of Heidelberg
Title of Thesis:
'Moduli Stabilization in 6d Supergravity with Flux'
Supervisor: Arthur Hebecker
- 2003 Physics studies at the University of Helsinki
(Erasmus scholarship)
- 2000-2006 Physics studies at the University of Heidelberg

Publications

A. P. Braun, N. Johansson, M. Larfors, N. -O. Walliser, "Restrictions on infinite sequences of type IIB vacua," JHEP **1110** (2011) 091. [arXiv:1108.1394 [hep-th]].

A. P. Braun, A. Collinucci, R. Valandro,
"G-flux in F-theory and algebraic cycles," [arXiv:1107.5337 [hep-th]].
to appear in Nucl.Phys.B

A. P. Braun, N. -O. Walliser,
“A New offspring of PALP,” [arXiv:1106.4529 [math.AG]].
to be published in a Memorial Volume dedicated to M.Kreuzer

A. P. Braun, S. Gerigk, A. Hebecker, H. Triendl,
“D7-Brane Moduli vs. F-Theory Cycles in Elliptically Fibred Threefolds,” Nucl. Phys.
B836 (2010) 1-36. [arXiv:0912.1596 [hep-th]].

A. P. Braun, R. Ebert, A. Hebecker, R. Valandro,
“Weierstrass meets Enriques,” JHEP **1002** (2010) 077. [arXiv:0907.2691 [hep-th]].

A. P. Braun, A. Hebecker, C. Ludeling, R. Valandro,
“Fixing D7 Brane Positions by F-Theory Fluxes,” Nucl. Phys. **B815** (2009) 256-287.
[arXiv:0811.2416 [hep-th]].

A. P. Braun, A. Hebecker and H. Triendl,
‘D7-Brane Motion from M-Theory Cycles and Obstructions in the Weak Coupling Limit,’
Nucl. Phys. B **800** (2008) 298 [arXiv:0801.2163 [hep-th]].

A. P. Braun, A. Hebecker and M. Trapletti,
‘Flux stabilization in 6 dimensions: D-terms and loop corrections,’
JHEP **0702** (2007) 015 [arXiv:hep-th/0611102].

Conference talks

2011:

4th Workshop on Geometric Methods in Theoretical Physics, SISSA, Trieste
talk delivered: '*Fluxes and algebraic cycles in IIB and F-Theory*'

2008:

Mathematical Challenges in String Phenomenology, Vienna.
talk delivered: '*D7-brane moduli and their flux stabilization via F-theory*'

2007:

39th School on High-energy Physics, Maria Laach
talk delivered: '*F-theory and the open string landscape*'

19th Bad Honnef meeting 'Physics beyond the standard model'
talk delivered: '*Flux-induced D-terms in a KKLT-like model*'

Invited Talks

Oktober 28th 2011, IPhT Paris	'G-flux in F-Theory and algebraic cycles'
Oktober 25th 2011, Bonn	'G-flux in F-Theory and algebraic cycles'
July 25th 2011, Heidelberg	'An explicit construction of G4 Fluxes in F-Theory'
July 21st 2011, Munich	'An explicit construction of G4 Fluxes in F-Theory'
May 19th 2009, Bonn:	'Elliptic K3s, T^4/Z_2 and Enriques involutions'

Teaching experience

2011 Lectures on 'Singularity Theory with Applications to String Theory'
2010 Lectures on 'Supersymmetry and Supergravity'
2008 Organization of a seminar for advanced students of physics and mathematics on 'Index theorems and Anomalies in QFT'.
2009 Various tutorials in theoretical physics, including classical mechanics,
-2004 quantum mechanics and general relativity.