Melanie Becker

Current position

- Professor of physics, department of physics, Texas A&M University since 2005,

Degrees held

- Vordiplom in physics: October 1987, Universität Bochum (Germany),
- Diplom in physics: April 1991, Universität Bonn (Germany) ,
- Doctoral degree: August 1994, CERN/Universität Bonn (Germany),
- Postdoctoral research associate, University of California Santa Barbara, 1994-1997
- Senior research fellow, Caltech, 1997-2000
- Assistant Professor University of Maryland 2000-2004
- Associate Professor University of Maryland 2004
- Professor Texas A&M University 2005

Honors and awards

- Alfred Sloan Fellowship, 2001
- RISE fellowship, University of Maryland, 2004.
- Edward Frances and Shirley B. Daniels fellow from the Radcliffe Institute, Harvard University, 2005

NOTABLE PUBLICATIONS

1) Five-Branes, membranes and non-perturbative string theory, K.Becker, M.Becker and A.Strominger, Nucl.Phys. B456 (1995) 130-152, hep-th/9507158.
2) M-theory on eight manifolds, K.Becker and M.Becker, Nucl.Phys.B477 (1996) 155-167, hep-th/9605053.
3) A Two-loop test of M(atrix) theory, K.Becker and M.Becker, Nucl.Phys.B505 (1997) 48-60, hep-th/970591.
4) Higher order graviton scattering in M(atrix) theory, K.Becker, M.Becker, J.Polchinski and A.Tseytlin, Phys.Rev.D56 (1997), hep-th/9706072.
5) Supersymmetry breaking and alpha prime corrections to flux induced potentials, K.Becker, M.Becker, M.Haack and J.Louis, JHEP 0206 (202) 060, hep-th/0204254.

Books

String theory and M-theory: A Modern Introduction, K.Becker, M.Becker and J.H.Schwarz, Cambridge University Press, 2007

Most Recent articles

1) Conformal Interfaces between free boson orbifold theories, arXiv:1706.03802, submitted to JHEP.

2*) All Chern-Simons Invariants of 4D, N = 1 Gauged Superform Hierarchies.*
By Katrin Becker, Melanie Becker, William D. Linch, III, Stephen Randall, Daniel Robbins.
[arXiv:1702.00799 [hep-th]].

3) M-theory and the G(2) Hitchin Hinctional in Superspace, K.Becker, M.Becker, .Guha, W.Linch and D.Robbins, arXiv: 1611.03098 [hep-th], JHEP (1612) (2016)) 085

4) Defects and boundary RG flows in C/Z_d, M.Becker, Y.Cabrera and D.Robbins, arXiv:1611:01133 hep-th], JHEP 1702 (2017) 007.

5) *Chern-Simons Actions and their Gaugings in 4D, N =1 Superspace.*
By Katrin Becker, Melanie Becker, William D. Linch, Daniel Robbins.
[arXiv:1603.07362 [hep-th]], JHEP **1606** (2016) 097.

6*) Abelian Tensor Hierarchy in 4D, N = 1 Superspace.*
By Katrin Becker, Melanie Becker, William D. Linch, Daniel Robbins.
[arXiv:1601.03066 [hep-th]], JHEP **1603** (2016) 052.

7) *Three-Point Disc Amplitudes in the RNS Formalism.*
By Katrin Becker, Melanie Becker, Daniel Robbins, Ning Su.
[arXiv:1601.02660 [hep-th]], Nucl. Phys. **B907** (2016) 360-399.

8) *The α'-Expansion of Calabi-Yau Compactifications.*
By Katrin Becker, Melanie Becker, Daniel Robbins.
[arXiv:1510.05713 [hep-th]].

9) *Some Tree-Level String Amplitudes in the NSR Formalism.*
By Katrin Becker, Melanie Becker, Ilarion V. Melnikov, Daniel Robbins, Andrew B. Royston.
[arXiv:1507.02172 [hep-th]], JHEP **1512** (2015) 010.

10) *M-theory and G_2 Manifolds.*
By Katrin Becker, Melanie Becker, Daniel Robbins.
[arXiv:1507.01619 [hep-th]], Phys.Scripta **90** (2015) no.11, 118004.

11) *String Corrected Spacetimes and SU(N)-Structure Manifolds.*
By Katrin Becker, Melanie Becker, Daniel Robbins.
[arXiv:1503.04237 [hep-th]], Nucl.Phys. **B898** (2015) 715-735.

12) *Kaluza-Klein Theories without Truncation.*
By Katrin Becker, Melanie Becker, Daniel Robbins
[arXiv:1412.8198 [hep-th]], JHEP **1502** .