

David Richard Curtin

- CONTACT INFORMATION 428 Physical Sciences Building cell: +1 607 229 2899
Cornell University Ithaca, NY 14853 e-mail: drc39@cornell.edu
USA <http://www.lepp.cornell.edu/~drc39/>
- RESEARCH INTERESTS I am interested in finding and analyzing new theories to describe physics beyond the Standard Model. My past and current areas of active research include *supersymmetric gauge theories* (dynamical SUSY breaking and metastability, dualities and nonperturbative results, model building with a focus on gauge mediation and application of Seiberg-Witten methods to N=1 theories), *models with warped extra dimensions* (novel electroweak symmetry breaking mechanisms) and *collider phenomenology* at the LHC and beyond.
- EDUCATION **Cornell University**, Ithaca, New York
Doctor of Philosophy 2006 – present
Expected graduation date: August 2011
Advisor: Csaba Csáki
University of Melbourne, Melbourne, Australia
Bachelor of Science: First Class Honors 2005
Thesis Topic: “Fermion confinement in brane world models with SO(10) unification”
Advisor: Raymond Volkas
Graduated 1st in Class
University of Sydney, Sydney, Australia
Bachelor of Science (Advanced Stream) with High Distinction 2001 – 2004
Majors: Physics and Pure Mathematics
Placed on Deans List of Excellence in Academic Performance
Admitted to Talented Students Program to conduct extracurricular research
- HONORS AND AWARDS John and David Boochever Prize Fellowship in Fundamental Theoretical Physics for 2010-11
Laby Medal for Outstanding Honours Thesis, 2005
Prestigious Honours Scholarship, 2005
Melbourne Honors Scholarship, 2005
Science Foundation for Physics Scholarship No II, 2003
Science Foundation for Physics Scholarship No I, 2002
- SELECTED PUBLICATIONS D. Curtin, Y. Tsai, “Singlet-Stabilized Minimal Gauge Mediation”, *arXiv:1011.2766* (accepted for publication in Physical Review D.)
M. Blanke, D. Curtin, M. Perelstein, “MT2 Mass Measurements with severe Combinatorics Background”, *In Preparation*, Jan 2011.
M. Blanke, D. Curtin, M. Perelstein, “SUSY-Yukawa Sum Rule at the LHC” *arXiv:1004.5350*, *Phys. Rev. D***82**, 035020 (2010).
C. Csáki, D. Curtin, “A Flavor Protection for Warped Higgsless Models”, *arXiv:0904.2137*, *Phys. Rev. D***80**, 015027 (2009).
- INVITED SEMINARS John Hopkins University (Scheduled 12 April 2011)
University of Chicago (Scheduled 9 March 2011)
Harvard University (Scheduled 1 March 2011)
University of California, Berkeley (Scheduled 23 February 2011)

“Singlet-Stabilized Minimal Gauge Mediation”, Syracuse University (6 December 2010)

“Singlet-Stabilized Minimal Gauge Mediation”, University of California, Davis (8 November 2010)

“SUSY-Yukawa Sum Rule at the LHC ”, University of Florida (12 October 2010)

“SUSY-Yukawa Sum Rule at the LHC ”, University of Michigan (15 September 2010)

OTHER SELECTED
TALKS

“Singlet-Stabilized Minimal Gauge Mediation”, Theory Seminar, LEPP, Cornell University (22 October 2010)

“SUSY-Yukawa Sum Rule at the LHC ”, Parallel Talk, SUSY 10 Symposium, Bonn, Germany (23 August 2010)

“SUSY-Yukawa Sum Rule at the LHC”, Parallel Talk, Pheno 2010 Symposium, University of Wisconsin-Madison, (10 May 2010)

“Full Mass Determination from MT2 with Combinatorial Background”, CU-CMS hep-ex Meeting, LEPP, Cornell University (6 May 2010)

“Complete Mass Determination at Hadron Colliders”, BSM Journal Club, Cornell University (15 March 2010)

“Charged Lepton Flavor Violation” and “D-Dbar Mixing”, A-Exam Presentation, Cornell University, (7 October 2009)

“Flavor Protection for Warped Higgsless Models”, TASI Summer School Presentation, Boulder, Colorado (June 2009)

“Flavor Protection for Warped Higgsless Models”, Theory Seminar, LEPP, Cornell University (10 April 2009)

“Fermion confinement in brane world models with SO(10) unification”, Honours Presentation, University of Melbourne (15 November 2005)

WORKSHOPS &
CONFERENCES

SUSY 10, Physikalisches Institut, Bonn, Germany (23 - 28 August 2010)

Pheno 2010 Symposium, University of Wisconsin-Madison, (10-12 May 2010)

SCHOOLS

Prospects in Theoretical Physics, “Aspects of Supersymmetry”, Institute of Advanced Study, Princeton, NJ (19-30 July 2010)

Theoretical Advanced Studies Institute, “Physics of the Large and the Small”, University of Colorado at Boulder (1-26 June 2009)

TEACHING
EXPERIENCE

Cornell University, Ithaca, NY

Course Grader, Physics 7652: Quantum Field Theory II Spring 2010

Co-Instructor, Physics 217: Physics II: Electricity and Magnetism Spring 2008

Teaching Assistant, Physics 116: Mechanics and Special Relativity Spring 2011

Teaching Assistant, Physics 208: Fundamentals of Physics Spring 2010

Teaching Assistant, Physics 327: Advanced Electricity and Magnetism Fall 2009

Teaching Assistant, Physics 112: Physics I: Mechanics Spring 2009

Teaching Assistant, Physics 201: Physics of the Heavens and the Earth Fall 2008

Teaching Assistant, Physics 317: Applications of Quantum Mechanics Fall 2007

Teaching Assistant, Physics 213: Physics II: Heat/Electromagnetism Spring 2007

Teaching Assistant, Physics 112: Physics I: Mechanics Fall 2006

University of Melbourne, Melbourne, Australia

Lab Demonstrator, Physics 640-131: Physics 1 Spring 2005

REFeree
EXPERIENCE

Physical Review D

Journal of High Energy Physics