

David Edgar Morrissey

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Employment

- Research Scientist, TRIUMF, Sept. 2009 – present.
- Postdoctoral Research Fellow, Harvard University, 2008-2009.
- Postdoctoral Research Fellow, University of Michigan, 2005-2008.

Education

- University of Chicago
Ph.D. Physics, 2005
Advisor: Carlos Wagner
Thesis: Particle Physics and Cosmology and in Supersymmetric Models.
- McGill University
B.Sc. Joint Honours in Mathematics and Physics, 2000.

Honours and Awards

- University of Chicago Sugarman Award for Graduate Student Research, 2005.
Argonne National Laboratory Laboratory Graduate Student Fellowship, 2003-2005.
University of Chicago Robert G. Sachs Summer Fellowship, 2001.
NSERC Postgraduate Scholarship, 2000 (declined).
McGill University Anne Molson Gold Medal, 2000.
McGill University University Scholar, 1996-2000.

Activities

- Member, University of Chicago Physics Department Admissions Committee, 2002.
- Member, Argonne National Laboratory HEP Theory Institute Organizing Committee, 2005.
- Co-organizer, University of Michigan Theoretical Particle Physics Reading Group, 2006, 2007.
- Co-organizer, TRIUMF LHC Workshop, 2009

Teaching Experience

- University of Chicago, Teaching Assistant
Physics 141-143, Honors General Physics (undergraduate), 2000-2001.
Physics 185, Intermediate Mechanics (undergraduate), 2002.
Physics 131-133, General Physics (undergraduate), 2002.
Physics 234, Quantum Mechanics I (undergraduate), 2002.
Physics 235, Quantum Mechanics II (undergraduate), 2002.
Physics 185, Intermediate Mechanics (undergraduate), 2003.
Physics 225, Intermediate Electricity and Magnetism (undergraduate), 2004.
Physics 185, Intermediate Mechanics (undergraduate), 2005.
- For more information about my past teaching experience, please contact:
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University of Chicago
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Schools, Workshops, and Conferences Attended

- Argonne Theory Institute on SUSY and Extra Dimensions, September 2002.
- Argonne Neutrino Workshop, May 2003.
- 2004 Phenomenology Symposium (PHENO), UW Madison, April 2004.
- Argonne Theory Institute on Higgs, SUSY and Extra Dimensions, May 2004.
- TASI 2004, University of Colorado, Boulder, June 2004.
- Victoria Linear Collider Workshop, August 2004.
- 2005 Phenomenology Symposium (PHENO), UW Madison, May 2005.
- Argonne Theory Institute on Higgs, SUSY and Extra Dimensions, May 2004.
- Kaon 2005 International Workshop, Northwestern University, June 2005.
- LHC Inverse Workshop, University of Michigan, April 2006.
- Argonne Collider Workshop, May 2006.
- 2006 Phenomenology Symposium (PHENO), UW Madison, May 2006.
- SUSY 06, Newport Beach CA, June 2006.
- 2007 Phenomenology Symposium (PHENO), UW Madison, May 2007.
- Brookhaven New Horizons Forum, May 2007.
- Eötvös-Cornell Workshop 2007, Eötvös University, June 2007.
- Baryogenesis Confronts Experiment Workshop, Kavli Institute for Cosmological Physics, University of Chicago, November 2007.
 - LHC New Physics Signatures Workshop, University of Michigan, January 2008
 - Physics at the LHC Workshop, Kavli Institute for Theoretical Physics, University of California Santa Barbara, February 2008
 - 2008 Phenomenology Symposium (PHENO), UW Madison, May 2008
 - PASCOS 2008 Conference, Perimeter Institute, June 2008

- Los Alamos LHC Summer Workshop, Santa Fe, July 2008
- INT Workshop on Precision Collider Physics, University of Washington, September 2008
- Brookhaven New Horizons Forum, November 2008
- ATLAS Canada Meeting, Carleton University, December 2008
- MCTP Dark Matter Workshop, University of Michigan, January, 2009
- LHC for Future Colliders Workshop, CERN, February, 2009
- LHC Physics Workshop, Heidelberg University, February 2009
- LHC Physics Conference, TRIUMF, April 2009
- SUSY 2009, Northeastern University, June 2009
- Physics at TeV Colliders, Les Houches, June 2009
- Unusual Dark Matter Workshop, University of Oregon, July 2009
- Beyond the Standard Model at Threshold, Aspen Center for Physics, July 2009

Research Talks

- Argonne National Laboratory HEP Theory Seminar, September 2003, “Phenomenology of Mirror Quarks.”
- PHENO 2004 Parallel Seminar, April 2004, “Electroweak baryogenesis and dark matter in the nMSSM.”
- ANL Theory Institute Seminar, May 2004, “Electroweak baryogenesis and dark matter in the nMSSM.”
- TASI 2004 Student Seminar, June 2004, “Electroweak baryogenesis and dark matter in the nMSSM.”
- Victoria Linear Collider Workshop Parallel Seminar, August 2004, “Electroweak baryogenesis and dark matter in the nMSSM.”
- Brookhaven National Laboratory Theory Seminar, April 2005, “Dark matter and electroweak baryogenesis in SUSY models.”
- PHENO 2005 Parallel Seminar, May 2005, “Proton decay and scattering from instantons.”
- ANL Theory Institute Seminar, May 2005, “Dark matter and electroweak baryogenesis in the MSSM.”
- Northwestern University Theory Seminar, June 2005, “Dark matter and electroweak baryogenesis in SUSY models.”
- Kaon 2005 International Workshop, June 2005, “CP violation and electroweak baryogenesis.”
- University of Michigan HET Seminar, September 2005, “Dark matter and electroweak baryogenesis in SUSY models.”
- Michigan State University Theory Seminar, February 2006 “Signatures of baryon number violation in gauge extensions of the standard model.”

- University of Wisconsin Theory Seminar, March 2006,
“New gauged U(1)’s in supersymmetry.”
- MCTP LHC Inverse Workshop, April 2006,
“Obstacles to running up (in the MSSM) and some solutions.”
- Argonne Collider Workshop, May 2006,
“Signatures of baryon and lepton number violation in gauge extensions of the standard model.”
- PHENO 2006 Parallel Seminar, May 2006
“The tension between gauge unification and a gauged U(1) solution to the mu problem of supersymmetry” .
- SUSY 2006 Parallel Seminar, June 2006,
“Signatures of baryon number violation in gauge extensions of the standard model.”
- University of Notre Dame HEP Seminar, September 2006,
“An approach to the flavor problem of supersymmetry and its experimental consequences.”
- University of Maryland HEP Seminar, February 2007,
“An approach to the flavor problem of supersymmetry and its experimental consequences.”
- PHENO 2007 Parallel Seminar, May 2007,
“Higgs-exempt no-scale supersymmetry.”
- Brookhaven New Horizons Workshop, May 2007, “Higgs-exempt no-scale supersymmetry.”
- Eötvös-Cornell Workshop 2007, June 2007,
“Higgs-exempt no-scale supersymmetry and its phenomenology.”
- KICP Baryogenesis Workshop, November 2007,
“Baryon Production and Dark Matter in the nMSSM.”
- Los Alamos T-8 Division Seminar, January 2008,
“Cosmic Strings from Supersymmetric Flat Directions.”
- University of Arizona HEP Seminar, January 2008, “Cosmic Strings from Supersymmetric Flat Directions.”
- TRIUMF Science Division Seminar, January 2008,
“Searching for Supersymmetry at Colliders and in the Cosmos”
- KITP LHC Workshop, February 2008,
“LHC Searches for MSSM Electroweak Baryogenesis.”
- York University Physics Seminar, February 2008,
“Searching for Supersymmetry at Colliders and in the Cosmos”
- CERN Theory Seminar, March 2008,
“Cosmic Strings from Supersymmetric Flat Directions.”

- Ohio State University Cosmology Seminar, March 2008,
“Cosmic Strings from Supersymmetric Flat Directions.”
- Michigan State University HEP Seminar, April 2008,
“LHC Searches for MSSM Electroweak Baryogenesis.”
- University of Florida HEP Seminar, April 2008,
“Constraints on $U(1)$ Gauge Symmetries from Grand Unification.”
- PHENO 2008 Parallel Seminar, May 2008
“LHC Searches for MSSM Electroweak Baryogenesis.”
- PASCOS 2008 Conference Parallel Seminar, Perimeter Institute, June 2008,
“LHC Searches for MSSM Electroweak Baryogenesis.”
- Los Alamos T-8 LHC Workshop, July 2008,
“LHC Searches for MSSM Electroweak Baryogenesis.”
- University of Washington INT Workshop Seminar, September 2008,
“Connecting LHC Measurements to High Scale Physics.”
- Johns Hopkins University Particle Theory Seminar, October 2008,
“Changing Dark Matter.”
- Brookhaven New Horizons Forum, November 2008,
“New Higgs Boson Signatures from Gauge or Gaugino Mediation.”
- ATLAS Canada Workshop, Carleton University, December 2008,
“New Higgs Boson Signatures from Gauge or Gaugino Mediation.”
- University of Michigan Dark Matter and LHC Workshop, January 2009,
“Candidates for Inelastic Dark Matter”
- Cornell Particle Theory Seminar, March 2009, “Candidates for Inelastic Dark Matter”
- Los Alamos Particle Theory Seminar, March 2009, “Candidates for Inelastic Dark Matter”
- Argonne Particle Theory Seminar, March 2009, “Candidates for Inelastic Dark Matter”
- Fermilab Particle Theory Seminar, March 2009, “Candidates for Inelastic Dark Matter”
- UC Berkeley Particle Theory Seminar, April 2009, “Candidates for Inelastic Dark Matter”
- UC Davis Particle Theory Seminar, April 2009, “Candidates for Inelastic Dark Matter”
- TRIUMF LHC Workshop, April 2009, “Higgs Boson Signatures of MSSM Baryogenesis”
- MIT Particle Physics Seminar, May 2009, “Candidates for Inelastic Dark Matter”
- SUSY 2009 Conference, June 2009, “Higgs Boson Signatures of MSSM Baryogenesis”
- Les Houches TeV Colliders Workshop, June 2009, “Abelian Hidden Sectors at a GeV”

- University of Oregon Dark Matter Workshop, July 2009, “Abelian Hidden Sectors at a GeV”
- Aspen Physics Center Workshop, August 2009, “Abelian Hidden Sectors at a GeV”

Research Publications

- D. E. Morrissey and C. E. M. Wagner,
“Beautiful mirrors, unification of couplings and collider phenomenology,”
Phys. Rev. D **69**, 053001 (2004) [arXiv:hep-ph/0308001].
- A. Menon, D. E. Morrissey and C. E. M. Wagner,
“Electroweak baryogenesis and dark matter in the mSUSY,”
Phys. Rev. D **70**, 035005 (2004) [arXiv:hep-ph/0404184].
- C. Balazs, M. Carena, A. Menon, D. E. Morrissey and C. E. M. Wagner, “The supersymmetric origin of matter,” Phys. Rev. D **71**, 075002 (2005) [arXiv:hep-ph/0412264].
- D. E. Morrissey, T. M. P. Tait and C. E. M. Wagner, “Proton lifetime and baryon number violating signatures at the LHC in gauge extended models,” Phys. Rev. D **72**, 095003 (2005) [arXiv:hep-ph/0508123].
- D. E. Morrissey and J. D. Wells, “The tension between gauge coupling unification, the Higgs boson mass, and a gauge-breaking origin of the supersymmetric μ -term,” Phys. Rev. D **74**, 015008 (2006) [arXiv:hep-ph/0512019].
- D. E. Morrissey and J. D. Wells, “Holomorphic selection rules, the origin of the μ term, and thermal inflation,” JHEP **0701**, 102 (2007) [arXiv:hep-ph/0606234].
- J. L. Evans, D. E. Morrissey, and J. D. Wells, “Higgs boson exempt no-scale supersymmetry and its collider and cosmology implications,” Phys. Rev. D **75**, 055017 (2007) [arXiv:hep-ph/0611185].
- G. L. Kane, P. Kumar, D. E. Morrissey and M. Toharia, “Connecting (supersymmetry) LHC measurements with high scale theories,” Phys. Rev. D **75**, 115018 (2007) [arXiv:hep-ph/0612287].
- Y. Cui, S. P. Martin, D. E. Morrissey and J. D. Wells, “Cosmic Strings from Supersymmetric Flat Directions,” Phys. Rev. D **77**, 043528 (2008) [arXiv:0709.0950 [hep-ph]].
- E. J. Chun, J. L. Evans, D. E. Morrissey and J. D. Wells, “Higgs Boson Exempt No-Scale Supersymmetry with a Neutrino Seesaw: Implications for Lepton Flavor Violation and Leptogenesis,” Phys. Rev. D **79**, 015003 (2009) [arXiv:0804.3050 [hep-ph]].
- Y. Cui and D. E. Morrissey, “Non-Thermal Dark Matter from Cosmic Strings,” Phys. Rev. D **79**, 083532 (2009) [arXiv:0805.1060 [hep-ph]].
- D. E. Morrissey and A. Pierce, “Modified Higgs Boson Phenomenology from Gauge or Gaugino Mediation in the NMSSM,” Phys. Rev. D **78**, 075029 (2008) [arXiv:0807.2259 [hep-ph]].
- T. Cohen, D. E. Morrissey and A. Pierce, “Changes in Dark Matter Properties After Freeze-Out,” Phys. Rev. D **78**, 111701 (2008) [arXiv:0808.3994 [hep-ph]].

- J. L. Evans, D. E. Morrissey and J. D. Wells, “Vacuum Stability with Tachyonic Boundary Higgs Masses in No-Scale Supersymmetry or Gaugino Mediation,” [arXiv:0812.3874 [hep-ph]] (submitted to Phys. Rev. D).
- Y. Cui, D. E. Morrissey, D. Poland and L. Randall, “Candidates for Inelastic Dark Matter,” JHEP **0905**, 076 (2009) [arXiv:0901.0557 [hep-ph]].
- A. Menon and D. E. Morrissey, “Higgs Boson Signatures of MSSM Electroweak Baryogenesis,” Phys. Rev. D **79**, 115020 (2009) [arXiv:0903.3038 [hep-ph]].
- D.E. Morrissey, D. Poland, K.M. Zurek, “Abelian Hidden Sectors at a GeV,” JHEP **0907**, 050 (2009) [arXiv:0904.2567 [hep-ph]].