

The Michigan Center for Theoretical Physics presents the

# LHC New Physics Signatures Workshop



January 5th thru 11th, 2008  
340 West Hall

University of Michigan  
Ann Arbor Michigan

Workshop  
Home

Scientific  
Program

Organizing  
Committee

Advisory  
Committee

Registration/List of Participants

Hotel Information

Key Dates & Helpful Links

Travel Information

## Scientific Program

Video for the workshop is now available! [Click here](#)

Time	Saturday, January 5th	Talk Title
1:00-1:10	Gordon Kane (MCTP Director)	Opening Remarks
	<i>Session Chair: Aaron Pierce (Michigan)</i>	
1:10-1:50	Ketevi Assamagan (BNL, ATLAS)	Physics with the first 100 inverse picobarns in ATLAS and CMS
1:50-2:30	Christos Leonidopoulos (CERN, CMS)	Trigger in ATLAS and CMS
	Coffee Break	337 West Hall
	<i>Session Chair: James Wells (Michigan)</i>	
3:00-3:40	Joe Lykken (Fermilab)	Missing Energy with 100 inverse picobarns
3:40-4:20	Brent Nelson (Northeastern)	Exotic Quarks and Squarks at the LHC
4:20-4:40	Maxim Perelstein (Cornell)	Collider Signature of the Supersymmetric Golden Region
5:00-7:00	Reception	337 West Hall
Time	Sunday, January 6th	Talk Title
	<i>Session Chair: David Shih (IAS)</i>	
10:00-10:40	Bruce Knuteson (MIT)	Global Search for New Physics
10:40-11:00	Kiwoon Choi (KAIST)	Measuring sparticle masses using the transverse mass kink
	Lunch	
	<i>Session Chair: Jason Kumar (Irvine)</i>	
2:00-2:40	Steven Goldfarb (Michigan, ATLAS)	Lepton reconstruction and signatures in ATLAS and CMS
2:40-3:20	Pran Nath (Northeastern)	Sparticle Landscape and Signatures at the LHC

	Coffee Break <i>Session Chair: David Morrissey (Michigan)</i>	337 West Hall
3:40-4:20	Scott Thomas (Rutgers)	Direct and Indirect Searches for New Physics with Diboson Final States
<b>Time</b>	<b>Monday, January 7th</b>	<b>Talk Title</b>
	<i>Session Chair: Jessie Shelton (Rutgers)</i>	
10:00-10:40	Steve King (Southampton)	The Constrained E <sub>6</sub> MSSM
10:40-11:00	Michael Graesser (LANL)	Correlations in Supersymmetric Cascade Decays
	Lunch <i>Session Chair: Alexey Petrov (Wayne State)</i>	
1:50-2:10	Steve Martin (NIU)	Stoponium at the LHC
2:10-2:30	Corinne Goy (LAPP, Ancey, ATLAS)	Toward Precision Measurements of the Standard Model Sector with the ATLAS Detector
2:30-2:50	Joey Huston (MSU)	Re-discovering the SM at the LHC
	Coffee Break	337 West Hall
3:20-3:40	Phil Grajek (Michigan)	Signatures Wiki
4:10-5:00	Kyle Cranmer (NYU)	Searching for New Physics: Strategies, Tools, and Techniques (Regular Department HEP/ASTRO SEMINAR)
<b>Time</b>	<b>Tuesday, January 8th</b>	<b>Talk Title</b>
	<i>Session Chair: Herman Verlinde (Princeton)</i>	
10:00-10:40	Paul Langacker (IAS)	Z' mediated supersymmetry breaking
10:40-11:00	Albert deRoeck (CERN)	Indirect Constraints and the CMSSM
	Lunch <i>Session Chair: Arjun Menon (Michigan)</i>	
2:00-2:20	Alan Wilson (Michigan)	Direct and Indirect Searches for New Physics with Diboson Final States
2:20-2:40	Neil Christensen (Michigan State)	LHC Signatures of the Minimal Higgsless Model
	Coffee Break	337 West Hall
	<i>Session Chair: Bing Zhou (Michigan)</i>	
3:00-3:20	Piyush Kumar (Berkeley)	Connecting the LHC and Underlying Theories
3:20-4:00	Amitabh Lath (Rutgers, CMS)	Jet and ETmiss reconstruction and Signatures in ATLAS and CMS
5:00-7:00	Reception	337 West Hall
<b>Time</b>	<b>Wednesday, January 9th</b>	<b>Talk Title</b>
	<i>Session Chair: Can Kilic (Johns Hopkins)</i>	
10:00-10:40	Y. G. Kim (KAIST)	Glino Stransverse Mass
10:40-11:00	Marat Gataullin (Caltech, CMS)	Searches for New Physics with Photons at CMS
	Lunch <i>Session Chair: Maria Spiropulu (CERN)</i>	
2:00-2:20	Adam Everett (Purdue, CMS)	Experimental Aspects of the search for new high-mass resonances decaying to muon pairs in the CMS experiment
2:20-2:40	Bobby Acharya (ICTP/Udine, ATLAS)	Measurement of Top pair production with the ATLAS detector
	Coffee Break	337 West Hall
4:00-5:00	Departmental Colloquium (Lisa Randall—Harvard)	

Time	Thursday, January 10th	Talk Title
	<i>Session Chair: Rakhi Mabbubani (FNAL)</i>	
10:00-10:40	Lisa Randall (Harvard)	Two Higgs Models for Large Tan Beta and Heavy Second Higgs
10:40-11:00	Eva Halkiadakis (Rutgers)	Extracting Hadronic Resonances using Jet Ensembles
	Lunch	
	<i>Session Chair: Dejan Stojkovic (Buffalo)</i>	
2:00-2:20	Joe Conlon (Cambridge)	Supersymmetric Flavour Universality in String Theory
2:20-2:40	Bobby Samir Acharya (Trieste)	Phenomenology of G2 Manifolds
	Coffee Break	337 West Hall
	<i>Session Chair: Patrick Meade (IAS)</i>	
3:00-3:40	A. Delgado (Notre Dame)	Dynamical mu Term in Gauge Mediation
3:40-4:00	Brooks Thomas (Arizona)	Nonstandard Signature Possibilities in Two Higgs Doublet Models
5:00-7:00	Reception	
Time	Friday, January 11th	Talk Title
	<i>Session Chair: Oliver Buchmuller (CERN)</i>	
10:00-10:40	Jesse Thaler (Berkeley)	GenEv: A New Framework for Event Generation
10:40-11:00	Haijun Yang (Michigan)	Search for $H \rightarrow WW$ with ATLAS Detector Based on Boosted Decision Trees
	Lunch	
	<i>Session Chair: Thomas Flacke (Michigan)</i>	
2:00-2:20	J. Shu (Chicago)	Top Compositeness at the Tevatron and LHC
2:20-2:40	J. Shao (Michigan)	Early Spin Measurements at the LHC
2:40-3:20	Lian-tao Wang (Princeton)	Top Rich Signals of New Physics at the LHC
	Workshop Concludes	

**Participants include:**

Bobby Acharya (ICTP, Trieste)  
 Ketevi Assamagan (Brookhaven)  
 Ismet Altunkaynak (Northeastern)  
 Konstantin Bobkov (Michigan)  
 Jacob Bourjaily (Princeton)  
 Oliver Buchmuller (CERN)  
 Jay Chapman (Michigan)  
 Kiwoon Choi (KAIST)  
 Neil Christensen (MSU)  
 Timothy Cohen (Michigan)  
 Joseph Conlon (Cambridge)  
 Sera Cremonini (Michigan)  
 Yanou Cui (Michigan)  
 James Degenhardt (Pennsylvania)  
 Eduard De La Cruz Burelo (Michigan)  
 Antonio Delgado (Notre Dame)  
 Albert de Roeck (CERN)  
 Edward Diehl (Michigan)  
 Brian Dudley  
 Adam Everett (Purdue)  
 Daniel Feldman (Northeastern)

Paul Langacker (IAS)  
 Amitabh Lath (Rutgers)  
 Christos Leonidopoulos (CERN)  
 Tong Li (UW-Madison)  
 Zuwei Liu (Northeastern)  
 Joe Lykken (FNAL)  
 Rakhi Mabbubani (Fermilab)  
 Stephen Martin (Northern Illinois)  
 Arjun Menon (Michigan)  
 David Morrissey (Michigan)  
 John Mozzen (Michigan)  
 Pran Nath (Northeastern)  
 Brent Nelson (Northeastern)  
 Maxim Perelstein (Cornell)  
 Alexey Petrov (Wayne State)  
 Aaron Pierce (Michigan)  
 Jianming Qian (Michigan)  
 Lisa Randall (Harvard)  
 David Robertson (Otterbein College)  
 Julia Shelton (Rutgers)

Thomas Flacke (Michigan)  
Yu Gao (Wisconsin at Madison)  
Marat Gataulin (Caltech)  
Steven Goldfarb (Michigan)  
Corinne Goy (LAPP, IN2P3/CNRS)  
Michael Graesser (LANL)  
Eva Halkiadakis (Rutgers)  
Carsten Hensel (Goettingen)  
Suen Hou (Taiwan)  
Yue Hu (Louisville)  
Joey Huston (MSU)  
Gordon Kane (Michigan)  
Can Kilitic (Johns Hopkins)  
Yeong-Gyun Kim (KAIST)  
Steve King (Southampton)  
Bruce Knuteson (MIT)  
Eric Kuflik (Michigan)  
Jason Kumar (California, Irvine)  
Piyush Kumar (Berkeley)

David Shih (IAS)  
Jing Shy (U. of Chicago/Argonne)  
Maria Spiropulu (CERN)  
Dejan Stojkov (SUNY at Buffalo)  
Jesse Thaler (Berkeley)  
Brooks Thomas (Arizona)  
Scott Thomas (Rutgers)  
Kai Wang (Wisconsin)  
Liantao Wang (Princeton)  
Scott Watson (Michigan)  
James Wells (Michigan)  
Martin White (Cambridge)  
Alan Wilson (Michigan)  
Atay Yavin (Princeton)  
Jingbo Ye (Southern Methodist University)  
Bing Zhou (Michigan)

