

## Daily schedule for Miami topical physics conference 12-19 December 2024

Please point out any corrections by sending email to

*curtright@miami.edu*

This version incorporates all modifications as of

12/12/2024 9:41

This is a tentative schedule. Exact times may change.  
Please *reload* this file occasionally to see any changes.

Times shown here are **Miami Time = Eastern Standard Time = UTC - 5:00.**



9:30-10:00  
10:00-10:30  
10:30-11:00  
11:00-11:30  
11:30-12:00  
12:00-12:30  
12:30-1:00  
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3:30-4:00  
4:00-4:30  
4:30-5:00  
5:00-5:30  
5:30-6:00

Arrival  
  
  
  
  
  
  
  
  
  
  
Registration

Arrival & Orientation

*Lunch Break*

*(Lunch is **not** provided by the organizers.)*

Registration



9:30-10:00  
10:00-10:30  
10:30-11:00  
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4:30-5:00  
5:00-5:30  
5:30-6:00

Exordium  
Black Holes

[Curtright](#)  
[Shafi](#)  
Minic

A "shadowy" welcome  
Fun with monopoles  
Quantum Gravity as Gravitized Quantum Theory

*Lunch Break*

*(Lunch is **not** provided by the organizers.)*

Berens  
Cappelluti  
[Daly](#)  
Gayathri

Linearized gravitational perturbations of a Kerr black hole: explicit metric reconstruction  
The Formation and Evolution of Supermassive Black Holes in the Early Universe  
Black Holes in Galaxies Across the Universe  
Reconstructing the origin of black hole mergers using sparse astrophysical models



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3:30-4:00  
4:00-4:30  
4:30-5:00  
5:00-5:30  
5:30-6:00

LIGO  
LIGO

[Tanner](#)  
Ballmer  
Bonavena  
Chia  
Dror

Advanced LIGO: From discovery to A-sharp and Voyager  
Next-Gen. Gravitational-Wave Detectors: Science, Status, Prospects  
Astigmatism compensation in the Cosmic Explorer corner layout  
LISA-Band Optical Pathlength Stability Measurements of the Structural Thermal Model of LISA's Telescopes  
Sub-Nanohertz Gravitational Wave Detection

*Lunch Break*

*(Lunch is **not** provided by the organizers.)*

Chatterjee  
Bhaumik  
Mishra  
Kumar  
Klimenko

ML4GW: A Real-time framework for machine-learning algorithms in gravitational-wave data analysis  
Gravitational Wave Detector Sensitivity to Eccentric Black Hole Mergers  
Constraining the Pair Instability mass gap with Gravitational waves detected by a Model-Independent Search  
Test of general relativity using gravitational waves from a population of binary black holes  
Observations of Gravitational Waves from Core-Collapse Supernovae



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 3:30-4:00  
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 4:30-5:00  
 5:00-5:30  
 5:30-6:00

LHC  
 LHC

Peña Herrera  
 Chang, X.  
 Beck  
 Delannoy

Searches for long-lived particles and other challenging exotic signatures in CMS, HL-LHC and beyond  
 New measurement of  $K^+ \rightarrow \pi^+ \nu \bar{\nu}$  branching ratio  
 Rare Decays at LHCb: news and future possibilities  
 Review talk - some recent results of CMS

*Lunch Break*

*(Lunch is **not** provided by the organizers.)*

Chekanov  
 Alegria  
 Biglietti  
 McGowan

Recent results from the ATLAS experiment at the LHC  
 Recent searches for new phenomena with the ATLAS detector  
 Higgs boson property measurements at the ATLAS experiment  
 Highlights of SM measurements including Top with the ATLAS experiment at the LHC



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4:30-5:00  
5:00-5:30  
5:30-6:00

Neutrinos  
Models

Keyken  
Casales  
Davies  
Morrison  
Biino

New Physics Searches with the FASER Experiment --- [via Zoom from Spain](#)  
Latest Results from the NOvA experiment with 10 years of data  
Exploring Exotic Neutrino Oscillations with the NOvA Experiment  
Latest developments and results from T2K  
Searches for hidden sectors and lepton flavour violation in kaon decays

*Lunch Break*

*(Lunch is **not** provided by the organizers.)*

Jentschura  
[Ramond](#)  
Dixon  
Nago  
Ito

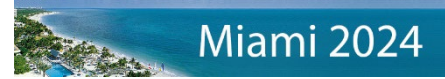
Quantum Field Theory at the Predictive Limits  
Neutrino Schemes  
Quarks and Leptons generate Exotic Invariants in the SSM  
Electroweak symmetry breaking in five-dimensional Sp(6) Gauge-Higgs Unification model  
Possible Symmetry of S-matrix associated with higher graded Lie superalgebra



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 6:30-7:00  
 7:00-7:30  
 7:30-8:00  
 8:00-8:30  
 8:30-9:00

Dark Matter  
 Cosmology

Lemann	Broadening direct searches for light dark matter
Du	Dark Radiation Isocurvature from Cosmological Phase Transitions
Yang	Superconducting axion string
Chang, J.H.	Axion Stars: Mass Functions and Constraints
<a href="#">Sikivie</a>	Axions and the Formation of Supermassive Black Holes at Cosmic Dawn
<i>Lunch Break</i>	
<i>(Lunch is <b>not</b> provided by the organizers.)</i>	
Xue	Unparticle Decay
West	Cosmology of the Higgs Effective Field Theory
Dror	The Fluctuating Spacetime of Dark Matter
Watson	Inflation from Purgatory
Shuttle bus to NSU	
<i>PT symmetry -- physics off the real axis</i>	
	<a href="#">Carl Bender</a>
Reception at NSU	
Shuttle bus back to Lago Mar	



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Theory I  
Theory II

[Frampton](#)  
Fornal  
Guendelman  
Mannheim

The 33311 Left-Right Bilepton Model  
Testing Models with Extra U(1) Gauge Symmetries with Gravitational Waves  
Dynamical String Tension Theories with target space scale invariance SSB and restoration  
Exact Solution to Standard Model Hydrodynamic Cosmological Perturbation Theory and its Implications

*Lunch Break*

*(Lunch is **not** provided by the organizers.)*

McCarty  
Mukhopadhyay  
Alsaad  
Buniy

Strongly Coupled SU(2) QCD  
A proposal for a symmetry preserving cutoff  
Machine Learning Algorithms and FAIR (Findable, Accessible, Interoperable, Reusable) Databases  
An algebraic classification of entangled states







Miami 2024

Link to Abstract

Speaker	Link to Abstract	Talk title	Affiliation
Alegria	<a href="#">42</a>	Recent searches for new phenomena with the ATLAS detector	Oklahoma State University
Alsaad	<a href="#">30</a>	Machine Learning Algorithms and FAIR (Findable, Accessible, Interoperable, Reusable) Databases to Design Inorganic Heterostructures	Jordan University of Science and Technology
Ballmer	<a href="#">27</a>	Next-Gen. Gravitational-Wave Detectors: Science, Status, Prospects	Syracuse University
Beck	<a href="#">13</a>	Rare Decays at LHCb: news and future possibilities	MIT
<a href="#">Bender</a>	<a href="#">21</a>	PT symmetry -- physics off the real axis	Washington University, Saint Louis
Berens	<a href="#">29</a>	Linearized gravitational perturbations of a Kerr black hole: explicit metric reconstruction	Vanderbilt University
Bhaumik	<a href="#">26</a>	Gravitational Wave Detector Sensitivity to Eccentric Black Hole Mergers	University of Florida
Biglietti	<a href="#">31</a>	Higgs boson property measurements at the ATLAS experiment	INFN Roma TRE
Biino	<a href="#">43</a>	Searches for hidden sectors and lepton flavour violation in kaon decays	INFN Torino and GSSI L'Aquila
Bonavena	<a href="#">41</a>	Astigmatism compensation in the Cosmic Explorer corner layout	University of Florida
Buniy	<a href="#">36</a>	An algebraic classification of entangled states	Chapman University
Cappelluti	<a href="#">39</a>	The Formation and Evolution of Supermassive Black Holes in the Early Universe	University of Miami
Casales	<a href="#">38</a>	Latest Results from the NOvA experiment with 10 years of data	Fermilab
Castano		No talk	Nova Southeastern University
Chang, J.H.	<a href="#">3</a>	Axion Stars: Mass Functions and Constraints	Fermilab and UIC
Chang, X.	<a href="#">24</a>	New measurement of $K^+ \rightarrow \pi^+ \nu \bar{\nu}$ branching ratio	École Polytechnique Fédérale de Lausanne
Chatterjee	<a href="#">16</a>	ML4GW: A Real-time framework for machine-learning algorithms in gravitational-wave data analysis	MIT
Chekanov	<a href="#">14</a>	Recent results from the ATLAS experiment at the LHC	Argonne National Laboratory
Chia	<a href="#">54</a>	LISA-Band Optical Pathlength Stability Measurements of the Structural Thermal Model of LISA's Telescopes	University of Florida
<a href="#">Curtright</a>	<a href="#">1</a>	A "shadowy" welcome	University of Miami
<a href="#">Daly</a>	<a href="#">5</a>	Black Holes in Galaxies Across the Universe	Penn State University
Davies	<a href="#">50</a>	Exploring Exotic Neutrino Oscillations with the NOvA Experiment	University of Mississippi
Delannoy	<a href="#">18</a>	Review talk - some recent results of CMS	UT Knoxville
Dixon	<a href="#">37</a>	Quarks and Leptons generate Exotic Invariants in the SSM	University of Calgary
Dror	<a href="#">23</a>	Sub-Nanohertz Gravitational Wave Detection	University of Florida
Dror	<a href="#">23</a>	The Fluctuating Spacetime of Dark Matter	University of Florida
Du	<a href="#">35</a>	Dark Radiation Isocurvature from Cosmological Phase Transitions	Rutgers University
Edmonds	<a href="#">4</a>	Fuzzy Dark Matter and Universal Acceleration	Penn State Hazleton
Evans		No talk	University of North Carolina
Fornal	<a href="#">48</a>	Testing Models with Extra U(1) Gauge Symmetries with Gravitational Waves	Barry University
<a href="#">Frampton</a>	<a href="#">10</a>	The 33311 Left-Right Bilepton Model	University of Salento
Gayathri	<a href="#">44</a>	Reconstructing the origin of black hole mergers using sparse astrophysical models	University of Wisconsin Milwaukee



<b>Speaker</b>	<b>Link to Abstract</b>	<b>Talk title</b>	<b>Affiliation</b>
Guendelman	<a href="#">15</a>	Dynamical String Tension Theories with target space scale invariance SSB and restoration	Ben Gurion University of the Negev
Hoq		No talk	University of Miami
Ito	<a href="#">8</a>	Possible Symmetry of S-matrix associated with higher graded Lie superalgebra	Osaka Metropolitan University
Jentschura	<a href="#">45</a>	Quantum Field Theory at the Predictive Limits	Missouri University of Science & Technology
Kephart		No talk	Vanderbilt U.
Keyken	<a href="#">49</a>	New Physics Searches with the FASER Experiment --- via Zoom	Royal Holloway, University of London
Klimenko	<a href="#">40</a>	Observations of Gravitational Waves from Core-Collapse Supernovae	University of Florida
Kumar	<a href="#">51</a>	Test of general relativity using gravitational waves from a population of binary black holes	University of Florida
Lemann	<a href="#">55</a>	Broadening direct searches for light dark matter	MIT
Mannheim	<a href="#">12</a>	Exact Solution to Standard Model Hydrodynamic Cosmological Perturbation Theory and its Implications	University of Connecticut
McCarty	<a href="#">34</a>	Strongly Coupled SU(2) QCD	Atlanta
McGowan	<a href="#">32</a>	Highlights of SM measurements including Top with the ATLAS experiment at the LHC	University of Victoria
Mezincescu		No talk	University of Miami
Minic	<a href="#">2</a>	Quantum Gravity as Gravitized Quantum Theory	Virginia Tech
Mishra	<a href="#">25</a>	Constraining the Pair Instability mass gap with Gravitational waves detected by a Model-Independent Search	University of Florida
Morrison	<a href="#">53</a>	Latest developments and results from T2K	University of Glasgow
Mukhopadhyay	<a href="#">17</a>	A proposal for a symmetry preserving cutoff	Institute of Mathematical Sciences, India
Nago	<a href="#">9</a>	Electroweak symmetry breaking in five-dimensional Sp(6) Gauge-Higgs Unification model	Osaka Metropolitan University
Pena Herrera	<a href="#">56</a>	Searches for long-lived particles and other challenging exotic signatures in CMS, HL-LHC and beyond	Fermilab
Rahman, N.		No talk	University of Dhaka
Rahman, S.		No talk	University of Miami
<a href="#">Ramond</a>	<a href="#">28</a>	Neutrino Schemes	University of Florida
<a href="#">Shafi</a>	<a href="#">46</a>	Fun with monopoles	University of Delaware
<a href="#">Sikivie</a>	<a href="#">11</a>	Axions and the Formation of Supermassive Black Holes at Cosmic Dawn	University of Florida
<a href="#">Tanner</a>	<a href="#">22</a>	Advanced LIGO: From discovery to A-sharp and Voyager	University of Florida
Turbiner	<a href="#">52</a>	Exact quantization condition in 1D quantum mechanics	Nuclear Science Institute, UNAM
Van Korftryk		No talk	Paris
Verma		No talk	University of Miami
Watson	<a href="#">6</a>	Inflation from Purgatory	Syracuse University
West	<a href="#">20</a>	Cosmology of the Higgs Effective Field Theory	University of Florida
Xue	<a href="#">19</a>	Unparticle Decay	University of Florida
Yang	<a href="#">7</a>	Superconducting axion string	University of Florida

# LAGO MAR MEETING AND CONFERENCE MAP

