

# Daily schedule for Miami topical physics conference 13-19 December 2023

Please point out any corrections by sending email to

*curtright@miami.edu*

This version incorporates all modifications as of

12/18/2023 8:54

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  
1:00-1:30  
1:30-2:00  
2:00-2:30  
2:30-3:00  
3:00-3:30  
3:30-4:00  
4:00-4:30  
4:30-5:00  
5:00-5:30  
5:30-6:00

Exordium

Arrival and Registration

Lunch Break

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

Welcome

Thom Curtright

Scale Invariant Scattering Revisited

Alexander Turbiner

Many-body physics: Can we solve the problem of 48 electrons with two static charges?

Tom McCarty

Strong Coupling Analysis of SU(2) QCD



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  
1:00-1:30  
1:30-2:00  
2:00-2:30  
2:30-3:00  
3:00-3:30  
3:30-4:00  
4:00-4:30  
4:30-5:00  
5:00-5:30  
5:30-6:00

LIGO  
LIGO

~~Zsuzsanna Marka~~  
Carlos Lousto  
Richard OShaughnessy  
Jacob Lange  
Imre Bartos

*Lunch Break*

Gayathri Vivekananthaswamy  
Shubhagata Bhaumik  
Bartosz Fornal  
Sergey Klimenko  
~~Szabolcs Marka~~

~~TBD~~

Latest Results of Numerical Relativity Simulations of Binary Black Holes  
Gravitational wave sources 1: The story so far  
Gravitational wave sources 2: Eccentricity - what we've done and where we need to go  
Hierarchical Triples as Early Sources of r-process Elements

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

Gravitational wave source populations: Disentangling an AGN component  
Search for Eccentric Black Hole Coalescences during the Third Observing Run of LIGO and Virgo  
Using Early Universe Gravitational Waves to Test Theories of Dark Matter, Baryogenesis, and Seesaw Models  
Multiresolution Gabor regression of transient gravitational-wave signals  
~~TBD~~



- 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
- 1:00-1:30
- 1:30-2:00
- 2:00-2:30
- 2:30-3:00
- 3:00-3:30
- 3:30-4:00
- 4:00-4:30
- 4:30-5:00
- 5:00-5:30
- 5:30-6:00

Quantum effects  
南部さんへ

Philip Mannheim (virtual talk)  
Joshua Erlich  
Mikhail Shifman  
Charles Cao  
Roman Buniy

*Lunch Break*

Michael Creutz  
Djordje Minic  
Dejan Stojkovic  
Christopher Hill  
Pierre Ramond

Not one but two consistent quantum gravity theories in four spacetime dimensions  
Aspects of Stochastic Composite Gravity  
Why the Landau Theorem fails in asymptotically free field theories  
Deconfinement and Error Thresholds in Holography  
Generalized Bell-Mermin operators

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

The standard model and the lattice  
Calculating Standard Model Parameters: cosmological constant, Higgs mass, and masses & mixing matrices of quarks & leptons  
Signals of the doomsday  
Nambu and Compositeness  
Nambu's Journey from QCD to Strings



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  
1:00-1:30  
1:30-2:00  
2:00-2:30  
2:30-3:00  
3:00-3:30  
3:30-4:00  
4:00-4:30  
4:30-5:00  
5:00-5:30  
5:30-6:00

LHC  
LHC

Ang Li (virtual talk)  
Evgeny Soldatov (virtual talk)  
Laura Fabbri  
Vadim Kostyukhin  
Tim Lukas Bruckler

*Lunch Break*

Nikolina Ilic  
Zachary Flowers  
Norbert Novitzky  
Daniela Koeck  
Osamu Yasuda

Measurements of Higgs boson properties with the ATLAS experiment  
Testing the electroweak theory in multiboson measurements in ATLAS  
Precision measurements of the Standard Model with the ATLAS Experiment  
Recent highlights on top quark physics with the ATLAS experiment at the LHC  
Selected Highlights from BSM Searches with the ATLAS Detector

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

Overview of ATLAS  
Recent results from CMS  
Recent highlights from ALICE  
Latest updates from FASER and FASERnu  
Sensitivity of future long baseline experiments and octant degeneracy



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  
1:00-1:30  
1:30-2:00  
2:00-2:30  
2:30-3:00  
3:00-3:30  
3:30-4:00  
4:00-4:30  
4:30-5:00  
5:00-5:30  
5:30-6:00

Black holes, etc.

Chirag Chawla (virtual talk)  
Joan Schmelz  
Ruth Daly  
Rajib Ganguly  
Gerrit Verschuur

Hunting down black-holes with Gaia  
High Velocity Cloud Complex M: A Supernova Origin Story  
New Black Hole Spin Values for Sagittarius A\* Obtained with the Outflow Method  
Reverse Engineering the Fine Dining Needs of Black Hole Divas  
A History of the History of Cosmology

*Lunch Break*

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

Cosmology, etc.

Paul Frampton  
Douglas Edmonds  
Don Colladay  
Eduardo Guendelman  
~~Qaisar Shafi~~

A Model of Dark Matter and Energy  
Rotation Curves of Galaxies at High Redshift  
Lorentz backgrounds in gravity  
Holomorphic General Coordinate Invariant Modified Measure Gravitational Theory  
~~Cosmic strings~~



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  
1:00-1:30  
1:30-2:00  
2:00-2:30  
2:30-3:00  
3:00-3:30  
3:30-4:00  
4:00-4:30  
4:30-5:00  
5:00-5:30  
5:30-6:00

Axions & DM  
More DM, etc.

Ken Tilburg  
Christina Gao  
Matthew Johnson  
James Chan  
Huangyu Xiao

*Lunch Break*

Peizhi Du  
Rachel Houtz  
Wei Xue  
Sergei Gleyzer  
Isabel Garcia Garcia (virtual talk)

Extended Path Intensity Correlation (EPIC)  
Axion Wind Detection with the Homogeneous Precession Domain of the Superfluid He-3  
Fundamental physics from secondary CMB anisotropies: dipoles and dark sectors  
Growth and Evaporation of Axion Soliton  
Probing Dark Matter Substructures with Fast Radio Bursts

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

New Semiconductor Devices for Dark Matter Detection  
Walls, bubbles and doom - the cosmology of HEFT  
Gauged global strings  
Machine Learning-based Analysis and Inference of Strong Gravitational Lensing Systems  
Goldstone Interactions with Bubble Walls



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  
1:00-1:30  
1:30-2:00  
2:00-2:30  
2:30-3:00  
3:00-3:30  
3:30-4:00  
4:00-4:30  
4:30-5:00  
5:00-5:30  
5:30-6:00

Finis

Konstantin Matchev  
Katia Matcheva  
Tom Kephart

Identifying the Group-Theoretic Structure of Machine-Learned Symmetries  
Novelty Detection Machine Learning Techniques for Exoplanet Exploration  
TBD

*Lunch Break*

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

Thank you for attending Miami 2023

Safe travels!



Count	Arrive	Depart	Speaker	Talk title
1	13	19	Barrio	No talk
2	13	16	Bartos	Hierarchical Triples as Early Sources of r-process Elements
3	13	16	Bhaskar	Search for Eccentric Black Hole Coalescences during the Third Observing Run of LIGO and Virgo
4	12	20	Brueckler	Searches for heavy resonances or BSM physics in low-mass, non-resonant, or long-lived signatures with the ATLAS detector
5	14	19	Buniy	Generalized Bell-Mermin operators
6	13	15	Cao	Deconfinement and Error Thresholds in Holography
7	13	19	Castano	No talk
8	16	18	Chan	Growth and Evaporation of Axion Soliton
9	12	20	Chawla (virtual talk)	Hunting down black-holes with Gaia
10	15	18	Colladay	Lorentz backgrounds in gravity
11	12	17	Creutz	The standard model and the lattice
12	12	20	Curtright	Scale Invariant Scattering Revisited
13	13	19	Daly	New Black Hole Spin Values for Sagittarius A* Obtained with the Outflow Method
14	17	19	Du	New Semiconductor Devices for Dark Matter Detection
15	12	21	Edmonds	Rotation Curves of Galaxies at High Redshift
16	12	16	Erllich	Aspects of Stochastic Composite Gravity
17	12	19	Evans	No talk
18	13	20	Fabbri	Precision measurements of the Standard Model with the ATLAS Experiment
19	12	20	Flowers	Recent results from CMS
20	14	15	Fornal	Using Early Universe Gravitational Waves to Test Theories of Dark Matter, Baryogenesis, and Seesaw Models
21	12	19	Frampton	A Model of Dark Matter and Energy
22	15	18	Ganguly	Reverse Engineering the Fine Dining Needs of Black Hole Divas
23	17	19	Gao	Axion Wind Detection with the Homogeneous Precession Domain of the Superfluid He-3
24	17	19	Garcia Garcia (virtual talk)	Goldstone Interactions with Bubble Walls
25	14	22	Gleyzer	Machine Learning-based Analysis and Inference of Strong Gravitational Lensing Systems
26	13	19	Guendelman	Holomorphic General Coordinate Invariant Modified Measure Gravitational Theory
27	13	18	Hill	Nambu and Compositeness
28	17	19	Houtz	Walls, bubbles and doom - the cosmology of HEFT
29	14	19	Ilic	Overview of ATLAS
30	15	19	Johnson	Fundamental physics from secondary CMB anisotropies: dipoles and dark sectors
31	13	20	Kephart	TBD

Count	Arrive	Depart	Speaker	Talk title
32	13	16	Klimenko	Multiresolution Gabor regression of transient gravitational-wave signals
33	12	20	Koeck	Latest updates from FASER and FASERnu
34	12	19	Kostyukhin	Recent highlights on top quark physics with the ATLAS experiment at the LHC
35	13	15	Lange	Gravitational wave sources 2: Eccentricity - what we've done and where we need to go
36	16	16	Li (virtual talk)	Measurements of Higgs boson properties with the ATLAS experiment
37	13	15	Lousto	Latest Results of Numerical Relativity Simulations of Binary Black Holes
38	15	15	Mannheim (virtual talk)	Not one but two consistent quantum gravity theories in four spacetime dimensions
39	<del>13</del>	<del>16</del>	<del>S-Marka</del>	<del>TBD</del>
40	<del>13</del>	<del>16</del>	<del>Z-Marka</del>	<del>TBD</del>
41	16	19	Matchev	Identifying the Group-Theoretic Structure of Machine-Learned Symmetries
42	16	19	Matcheva	Novelty Detection Machine Learning Techniques for Exoplanet Exploration
43	13	19	McCarty	Strong Coupling Analysis of SU(2) QCD
44	13	19	Mezincescu	No talk
45	12	20	Minic	Calculating Standard Model Parameters: cosmological constant, Higgs mass, and masses & mixing matrices of quarks & leptons
46	12	20	Novitzky	Recent highlights from ALICE
47	13	15	OShaughnessy	Gravitational wave sources 1: The story so far
48	13	18	Ramond	Nambu's Journey from QCD to Strings
49	17	17	Schmelz	High Velocity Cloud Complex M: A Supernova Origin Story
50	<del>13</del>	<del>19</del>	<del>Shafi</del>	<del>Cosmic strings</del>
51	13	20	Shifman	Why the Landau Theorem fails in asymptotically free field theories
52	16	16	Soldatov (virtual talk)	Testing the electroweak theory in multiboson measurements in ATLAS
53	12	20	Stojkovic	Signals of the doomsday
54	13	19	Turbiner	Many-body physics: Can we solve the problem of 48 electrons with two static charges?
55	13	13	Van Kortryk	No talk
56	16	19	Van Tilburg	Extended-Path Intensity Correlation (EPIC)
57	17	17	Verschuur	A History of the History of Cosmology
58	14	18	Vivekananthaswamy	Gravitational wave source populations: Disentangling an AGN component
59	14	19	Xiao	Probing Dark Matter Substructures with Fast Radio Bursts
60	16	19	Xue	Gauged global strings
61	13	19	Yasuda	Sensitivity of future long baseline experiments and octant degeneracy

No. registrants: ~~61~~ 57  
No. talks: ~~56~~ 52  
Payments: ~~51~~ 54



### **Participants not giving talks**

- 1 Castaneo
- 2 Evans
- 3 Mezincescu
- 4 Van Kortryk

### **Cancellations**

- 1 S Marka
- 2 Z Marka
- 3 Shafi
- 4 Van Tilberg



<b>Speaker</b>	<b>Talk title</b>	<b>Affiliation</b>
Barrio	No talk	Retired
Bartos	Hierarchical Triples as Early Sources of r-process Elements	University of Florida
Bhaumik	Search for Eccentric Black Hole Coalescences during the Third Observing Run of LIGO and Virgo	University of Florida
Brueckler	Searches for heavy resonances or BSM physics in low-mass, non-resonant, or long-lived signatures with the ATLAS detector	University of Oxford
Buniy	Generalized Bell-Mermin operators	Chapman University
Cao	Deconfinement and Error Thresholds in Holography	Virginia Tech
Castano	No talk	Nova Southeastern University
Chan	Growth and Evaporation of Axion Soliton	AMNH/CUNY
Chawla (virtual talk)	Hunting down black-holes with Gaia	Tata Institute of Fundamental Research
Colladay	Lorentz backgrounds in gravity	New College of Florida
Creutz	The standard model and the lattice	BNL
Curtright	Scale Invariant Scattering Revisited	University of Miami
Daly	New Black Hole Spin Values for Sagittarius A* Obtained with the Outflow Method	Penn State University Berks
Du	New Semiconductor Devices for Dark Matter Detection	Rutgers University
Edmonds	Rotation Curves of Galaxies at High Redshift	Penn State Hazleton
Erlich	Aspects of Stochastic Composite Gravity	William & Mary
Evans	No talk	University of North Carolina-Chapel Hill
Fabbri	Precision measurements of the Standard Model with the ATLAS Experiment	University of Bologna and INFN Sezione di Bologna
Flowers	Recent results from CMS	University of Kansas
Fornal	Using Early Universe Gravitational Waves to Test Theories of Dark Matter, Baryogenesis, and Seesaw Models	Barry University
Frampton	A Model of Dark Matter and Energy	Uni. of Salento
Ganguly	Reverse Engineering the Fine Dining Needs of Black Hole Divas	University of Michigan-Flint
Gao	Axion Wind Detection with the Homogeneous Precession Domain of the Superfluid He-3	University of Illinois Urbana Champaign
Garcia (virtual talk)	Goldstone Interactions with Bubble Walls	University of Washington
Gleyzer	Machine Learning-based Analysis and Inference of Strong Gravitational Lensing Systems	University of Alabama
Guendelman	Holomorphic General Coordinate Invariant Modified Measure Gravitational Theory	Ben Gurion University of the Negev
Hill	Nambu and Compositeness	Fermilab
Houtz	Walls, bubbles and doom - the cosmology of HEFT	University of Florida
Ilic	Overview of ATLAS	University of Toronto/IPP
Johnson	Fundamental physics from secondary CMB anisotropies: dipoles and dark sectors	York University and Perimeter Institute
Kephart	TBD	Vanderbilt U.



Speaker	Talk title	Affiliation
Klimenko	Multiresolution Gabor regression of transient gravitational-wave signals	University of Florida
Koec	Latest updates from FASER and FASERnu	University of Oregon
Kostyukhin	Recent highlights on top quark physics with the ATLAS experiment at the LHC	Siegen University, Germany
Lange	Gravitational wave sources 2: Eccentricity - what we've done and where we need to go	University of Texas at Austin
Li (virtual talk)	Measurements of Higgs boson properties with the ATLAS experiment	APC, CNRS/IN2P3 and Université Paris Cité
Lousto	Latest Results of Numerical Relativity Simulations of Binary Black Holes	Rochester Institute of Technology
Mannheim (virtual talk)	Not one but two consistent quantum gravity theories in four spacetime dimensions	University of Connecticut
<del>S Marka</del>	<del>TBD</del>	Columbia University
<del>Z Marka</del>	<del>TBD</del>	Columbia University
Matchev	Identifying the Group-Theoretic Structure of Machine-Learned Symmetries	University of Florida
Matcheva	Novelty Detection Machine Learning Techniques for Exoplanet Exploration	University of Florida
McCarty	Strong Coupling Analysis of SU(2) QCD	Atlanta
Mezincescu	No talk	University of Miami
Minic	Calculating Standard Model Parameters: cosmological constant, Higgs mass, and masses & mixing matrices of quarks & leptons	Virginia Tech
Novitzky	Recent highlights from ALICE	Oak Ridge National Laboratory
OShaughnessy	Gravitational wave sources 1: The story so far	Rochester Institute of Technology
Ramond	Nambu's Journey from QCD to Strings	University of Florida
Schmelz	High Velocity Cloud Complex M: A Supernova Origin Story	Universities Space Research Association
<del>Shafi</del>	<del>Cosmic strings</del>	University of Delaware
Shifman	Why the Landau Theorem fails in asymptotically free field theories	University of Minnesota
Soldatov (virtual talk)	Testing the electroweak theory in multiboson measurements in ATLAS	National Research Nuclear University MEPhI
Stojkovic	Signals of the doomsday	SUNY at Buffalo
Turbiner	Many-body physics: Can we solve the problem of 48 electrons with two static charges?	Instituto de Ciencias Nucleares, UNAM
Van Kortryk	No talk	Paris
Van Tilburg	Extended-Path Intensity Correlation (EPIC)	Flatiron Institute and NYU
Verschuur	A History of the History of Cosmology	Retired
Vivekananthaswamy	Gravitational wave source populations: Disentangling an AGN component	University of Wisconsin Milwaukee
Xiao	Probing Dark Matter Substructures with Fast Radio Bursts	Fermilab
Xue	Gauged global strings	University of Florida
Yasuda	Sensitivity of future long baseline experiments and octant degeneracy	Tokyo Metropolitan University