

Daily schedule for Miami topical physics conference 12-19 December 2025

Please point out any corrections by sending email to

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This version incorporates all modifications as of

12/12/2025 22:51

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.**



10:00-10:30	Arrival	Arrival & Registration	
10:30-11:00			
11:00-11:30			
11:30-12:00			
12:00-12:30			
12:30-1:00		<i>Lunch Break</i> <i>(Lunch is not provided by the organizers.)</i>	
1:00-1:30			
1:30-2:00			
2:00-2:30			
2:30-3:00			
3:00-3:30	Exordium	<u>Curtright</u>	Welcome and Introduction
3:30-4:00		Hoq	Scalar Field Theories with Non-Polynomial Lagrangians
4:00-4:30		Alshal	Spin 2 and GUP (virtual talk)
4:30-5:00			
5:00-5:30			



10:00-10:30	LHC	Chiodini	Overview of Recent Results from the ATLAS Experiment
10:30-11:00		Stelzer	Highlights on Higgs Physics with ATLAS
11:00-11:30		Romano	Highlights of SM Measurements Including Top with the ATLAS Experiment at the LHC
11:30-12:00		Otero y Garzón	Recent Searches for New Phenomena with the ATLAS Detector
12:00-12:30			
12:30-1:00			
1:00-1:30		Lunch Break	(Lunch is not provided by the organizers.)
1:30-2:00			
2:00-2:30			
2:30-3:00			
3:00-3:30	Neutrinos, etc	Ramond	Neutrinos Have Come a Long Way
3:30-4:00		McCoy	BSM and Neutrino Physics with the FASER Detector
4:00-4:30		Nayak	Search for eV-scale sterile neutrinos at MicroBooNE (virtual talk)
4:30-5:00		Buniy	Degrees of Entanglement of Dicke States of Qubits
5:00-5:30			



10:00-10:30	LIGO	Bartos	Stellar Graveyards and Shifting Paradigms in Gravitational-wave Astrophysics
10:30-11:00		Casallas Lagos	Estimating the General Evolution of the Core-collapse Supernova High Frequency Feature in Interferometric Noise
11:00-11:30		Dutta Roy	Search for Gravitational-Wave Burst Candidates in LIGO–Virgo-KAGRA O4a Using the cWB-XP Pipeline
11:30-12:00		Klimenko	Observations of intermediate mass black holes with LIGO
12:00-12:30			
12:30-1:00			
1:00-1:30		Lunch Break	(Lunch is not provided by the organizers.)
1:30-2:00			
2:00-2:30			
2:30-3:00			
3:00-3:30	LIGO	Kumar	Probing remnant properties of binary black hole mergers using a novel ringdown analysis
3:30-4:00		Szczepanczyk	The next ten years of core-collapse supernova gravitational-wave astronomy
4:00-4:30		Vivekananthaswamy	Reconstructing the origin of black hole mergers using sparse astrophysical models
4:30-5:00		Xue	From LIGO to LISA: Black Hole Mergers and EMRI Formation in AGN Disks
5:00-5:30			



10:00-10:30	Astrophysics	Gleyzer	Machine Learning for High Energy Physics and Astrophysics
10:30-11:00		Fornal	New Gravitational Wave Signatures of Theories with Extended Gauge Symmetries
11:00-11:30		Gogoladze	Flavour Symmetry and the Gravitational Wave Background
11:30-12:00		Daly	Supermassive Black Holes and the Low Frequency Gravitational Wave Background
12:00-12:30			
12:30-1:00			
1:00-1:30		Lunch Break	(Lunch is not provided by the organizers.)
1:30-2:00			
2:00-2:30			
2:30-3:00			
3:00-3:30	QM & QFT	Turbiner	Instanton Vacua in Quantum Mechanics
3:30-4:00		Shifman	Instantons, sphalerons and all that in scalar QFT with $N=1,2$: tunneling in topologically nontrivial ground states
4:00-4:30		Minic	The Weight of the Quantum
4:30-5:00			
5:00-5:30			



10:00-10:30	FineTuning	Manson	Fine-tuning and the Multiverse
10:30-11:00		Boyce	Fine-Tuning is Not Evidence for a Multiverse
11:00-11:30		Castano	Measures of Fine-tuning
11:30-12:00		Matchev, Poston, Ramond, et al.	Philosophy & Fine-tuning: A Panel Discussion
12:00-12:30			
12:30-1:00			
1:00-1:30		Lunch Break	(Lunch is not provided by the organizers.)
1:30-2:00			
2:00-2:30			
2:30-3:00			
3:00-3:30	AI and ML	Roman	Orchestral AI: Accelerating Scientific Discovery with Agentic Workflows
3:30-4:00		Menzo	Agents in HEP
4:00-4:30		Matchev	AI in HEP and Beyond
4:30-5:00		Zuniga-Galindo	Statistical Field Theory of Deep Neural Networks: An Ultrametric Approach to Deep Learning



10:00-10:30	LHC & KATRIN	???	Search for sterile neutrinos at KATRIN (virtual talk)
10:30-11:00		Thomas	Recent Highlights from the ALICE Experiment at LHC (virtual talk)
11:00-11:30		Colafranceschi	Large-Scale Production and Implementation of the CMS ME0 GEM Detector for HL-LHC
11:30-12:00		Pfaller	Recent Results of LHCb
12:00-12:30			
12:30-1:00			
1:00-1:30		Lunch Break	(Lunch is not provided by the organizers.)
1:30-2:00			
2:00-2:30			
2:30-3:00			
3:00-3:30	Q M, I, & L	Matcheva	Quantum Machine Learning for Analyzing Exoplanet Transmission Spectra
3:30-4:00		Stojkovic	Physics from Quantum Information
4:00-4:30		McCarty	Development of the one loop computation for nonperturbative SU(2) Yang Mills
4:30-5:00			
5:00-5:30			



10:00-10:30	Dark Matter	Edmonds	Multi-Field Fuzzy Dark Matter Models and the Radial Acceleration Relation
10:30-11:00		Sapkota	The Kähler-Fisher Framework for Fuzzy Dark Matter: Stability, Entropy, and Observational Constraints
11:00-11:30		Stiffler	Towards a Common Fundamental Source of Inflation, Dark Matter, and Dark Energy within Thomas-Whitehead Gravity
11:30-12:00		Guendelman	Dynamical Tension Strings with Target Scale Symmetry producing DE, DM, and why 4D?
12:00-12:30			
12:30-1:00			
1:00-1:30		Lunch Break	(Lunch is not provided by the organizers.)
1:30-2:00			
2:00-2:30			
2:30-3:00			
3:00-3:30	Duality	Curtright	Duality and Phase Space Quantization
3:30-4:00		Kephart	Magnetic Monopoles as Ultra High Energy Cosmic Rays
4:00-4:30		Frampton	TBD
4:30-5:00			
5:00-5:30			



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[Remembering Luca Mezincescu](#)

Various speakers

Lunch Break

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

Thank you for attending Miami 2025

Safe travels!

Speaker	Link to Abstract	Talk title	Affiliation
Alshal		Spin 2 and GUP	Santa Clara University
Bartos	20	Stellar Graveyards and Shifting Paradigms in Gravitational-wave Astrophysics	University of Florida
Boyce	23	Fine-Tuning is Not Evidence for a Multiverse	University of Missouri
Buniy	34	Degrees of Entanglement of Dicke States of Qubits	Chapman University
Casallas Lagos	2	Estimating the General Evolution of the Core-collapse Supernova High Frequency Feature in Interferometric Noise	University of Warsaw
Castano		Measures of Fine-tuning	Nova Southeastern University
Chiodini	15	Overview of Recent Results from the ATLAS Experiment	INFN Lecce
Colafranceschi	39	Large-Scale Production and Implementation of the CMS ME0 GEM Detector for HL-LHC	James Madison University
Curtright	41	Duality and Phase Space Quantization	University of Miami
Daly	35	Supermassive Black Holes and the Low Frequency Gravitational Wave Background	Penn State University
Dutta Roy	33	Search for Gravitational-Wave Burst Candidates in LIGO–Virgo-KAGRA O4a Using the cWB-XP Pipeline	University of Florida
Edmonds	13	Multi-Field Fuzzy Dark Matter Models and the Radial Acceleration Relation	Penn State University
Evans		No talk	University of North Carolina
Fornal	6	New Gravitational Wave Signatures of Theories with Extended Gauge Symmetries	Barry University
Frampton		TBD	University of Salento
Gleyzer	37	Machine Learning for High Energy Physics and Astrophysics	University of Alabama
Gogoladze	19	Flavour Symmetry and the Gravitational Wave Background	University of Delaware
Gomis		Remembering Luca Mezincescu	Perimeter Institute
Guendelman	14	Dynamical Tension Strings with Target Scale Symmetry producing DE, DM and why 4D?	Ben Gurion University of the Negev
Hoq		Scalar Field Theories with Non-Polynomial Lagrangians	University of Miami
Ivanov		Remembering Luca Mezincescu	JINR
Jones		Remembering Luca Mezincescu	University of Liverpool
Kephart	43	Magnetic Monopoles as Ultra High Energy Cosmic Rays	Vanderbilt University
Klimenko		Observations of intermediate mass black holes with LIGO	University of Florida
Kumar	1	Probing remnant properties of binary black hole mergers using a novel ringdown analysis	University of Florida
Manson	31	Fine-tuning and the Multiverse	University of Mississippi
Matchev	24	AI in HEP and Beyond	University of Alabama
Matcheva	22	Quantum Machine Learning for Analyzing Exoplanet Transmission Spectra	University of Alabama
McCarty	42	Development of the one loop computation for nonperturbative SU(2) Yang Mills	Atlanta
McCoy	26	BSM and Neutrino Physics with the FASER Detector	U C Irvine
Menzo	5	Agents in HEP	University of Alabama



Miami 2025

Speaker	Link to Abstract	Talk title	Affiliation
Minic	12	The Weight of the Quantum	Virginia Tech
Nayak		Search for eV-scale sterile neutrinos at MicroBooNE	Brookhaven National Lab
Otero y Garzón	17	Recent Searches for New Phenomena with the ATLAS Detector	University of Buenos Aires
Pfaller	21	Recent Results of LHCb	University of Cincinnati
Poston	40	Philosophy & Fine-tuning	University of Alabama
Rahman		No talk	University of Miami
Ramond	32	Neutrinos Have Come a Long Way	University of Florida
Roman	3	Orchestral AI: Accelerating Scientific Discovery with Agentic Workflows	University of Alabama
Romano	29	Highlights of SM Measurements Including Top with the ATLAS Experiment at the LHC	INFN - Bologna
Sapkota	36	The Kähler-Fisher Framework for Fuzzy Dark Matter: Stability, Entropy, and Observational Constraints	Miami University (Ohio)
Shifman	30	Instantons, sphalerons and all that in scalar QFT with $N=1,2$: tunneling in topologically nontrivial ground states	University of Minnesota
Stelzer	7	Highlights on Higgs Physics with ATLAS	Simon Fraser University
Stiffler	25	Towards a Common Fundamental Source of Inflation, Dark Matter, and Dark Energy within Thomas-Whitehead Gravity	University of Iowa
Stojkovic	10	Physics from Quantum Information	SUNY at Buffalo
Szczepanczyk	28	The next ten years of core-collapse supernova gravitational-wave astronomy	University of Warsaw
Thomas	9	Recent Highlights from the ALICE Experiment at LHC	University of Texas - Austin
Turbiner	4	Instanton Vacua in Quantum Mechanics	UNAM & Stony Brook
Van Kortryk		No talk	Paris
Verma		No talk	University of Miami
Vivekananthaswamy	16	Reconstructing the origin of black hole mergers using sparse astrophysical models	University of Wisconsin Milwaukee
Xue	27	From LIGO to LISA: Black Hole Mergers and EMRI Formation in AGN Disks	University of Florida
Zuniga-Galindo	44	Statistical Field Theory of Deep Neural Networks: An Ultrametric Approach to Deep Learning	University of Texas Rio Grande Valley