



# Karpacz Winter Kindergarten of Theoretical Physics

## Tuesday 21 May 2024

### Kindergarten: Invited lecture (14:30 - 16:00)

time	[id] title	presenter
14:30	[44] Lecture "Accelerator Disaster Scenarios, the Unabomber and Scientific Risk"	Prof. KAPUSTA, Joseph

### Kindergarten: Participants' presentations (16:00 - 18:00)

time	[id] title	presenter
16:00	[30] Presentation "Bounce of spinning sports balls"	JANKOWSKI, Stanisław
16:30	[31] Presentation "Public opinion dynamics in the active voter model"	RAKOWSKI, Stanisław
17:00	[32] Presentation "Energy levels in a 2D spin-dependant optical lattice"	DUTKIEWICZ, Kamil
17:30	[33] Presentation "Theory of stellar nucleosynthesis at low-energy scales"	SOKOŁOWSKI, Marcin

# Wednesday 22 May 2024

## Kindergarten: Students' presentations (14:30 - 18:00)

time	[id] title	presenter
14:30	[23] Presentation "Introductions to generalised symmetries"	KALINOWSKI, Stanisław
15:00	[24] Presentation "Haldane phase in fermionic systems"	JAŹDŹEWSKA, Agnieszka
15:30	[25] Presentation "Spontaneous symmetry breaking and Goldstone Theorem"	SZYMAŃSKA, Emilia
16:00	[26] Presentation "Spontaneous symmetry breaking of global symmetries"	SMOLENCHENKO, Dariia
16:30	[27] Presentation "Non-Hermitian control of Hermitian waveguide arrays"	RIZOS, Spyros
17:00	[28] Presentation "Closing the gap in XXZ chain via magnon interactions"	WALICKI, Mikołaj
17:30	[29] Presentation "Unveiling the mysteries of diamagnetism: from theory to fabrication"	BLAUT, Marcel

# Thursday 23 May 2024

## Kindergarten: Poster session 1 (10:15 - 12:00)

time	[id] title	presenter
10:30	[45] Poster "Uncertainty relations in Defermed Special Relativity"	DZIEWISZ, Grzegorz
10:30	[46] Poster "Simulating and explaining the mechanism behind magnetic gears"	MAZUR, Tomasz
10:30	[47] Poster "Spontaneous Symmetry Breaking and Goldstone Theorem"	SZYMAŃSKA, Emilia
10:30	[48] Poster "The mystery of classical cepheids in globular clusters"	RYDUCHOWSKA, Zuzanna
10:30	[49] Poster "The Mass And Possible Quantum Numbers of X(6900)"	KUCHTA, Morgan
10:30	[50] Poster "Gravitational waves"	MILAS, Maja

## Kindergarten: Participants' posters session (14:00 - 15:00)

time	[id] title	presenter
14:00	[57] Poster "Energy levels in a 2D spin dependent optical lattice"	DUTKIEWICZ, Kamil
14:00	[56] Poster "QED synchrotron radiation extension for PIConGPU simulation"	OPTOŁOWICZ, Filip
14:00	[55] Poster "Black hole shadows"	BUSAK, Laura
14:00	[54] Poster "The effect of late-time heating in hybrid millisecond pulsars"	PANASIUK, Pavlo
14:00	[53] Poster "Quantum Kinetic Equation for Pair Production in a Laser Field: Is There a Berry Phase?"	ASTARYAN, Levon

## Kindergarten: Invited lecture (16:30 - 18:00)

time	[id] title	presenter
16:30	[42] Lecture "Looking at the Universe: Neutron Stars as laboratories for nuclear and particle physics "	Prof. PROVIDENCIA, Constanca

# Friday 24 May 2024

## **Kindergarten: Invited lecture (14:30 - 15:30)**

time	[id] title	presenter
14:30	[43] Lecture "A Journey through the Mysteries of Neutron Stars"	Dr BURGIO, Fiorella

## **Kindergarten: Participants' presentations (15:30 - 18:00)**

time	[id] title	presenter
15:30	[34] Presentation "The mystery of classical cepheids in globular clusters"	RYDUCHOWSKA, Zuzanna
16:00	[36] Presentation "Green's Function method for Tetraquarks"	KUCHTA, Morgan
16:30	[37] Presentation "Simulating cosmic ray air shower radio emission for the Askaryan Radio Array"	MOLLER, Nicolas
17:00	[38] Presentation "Cosmological horizons and conserved quantities"	MATYSIAK, Robert
17:30	[39] Presentation "The footprint of nuclear saturation properties on the neutron star f mode oscillation frequencies: a machine learning approach"	KUMAR, Deepak