

Session: **AT1 -**

Chairperson: Salvatore Capozziello Mariafelicia De Laurentis

Day: **Thursday, July 5**

Room: **CNR / MARC**

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Arrived	Accept	N.	Hour	Time	Talk Type	Speaker	Talk Title	Talk view
√	Yes	1	14:45	15'	Oral abstract	<u>Di Troia, Claudio</u>	<u>The Non Perturbative Gyro-Phase Is The Kaluza-Klein 5th Dimension</u>	
√	Yes	2	15:00	15'	Oral abstract	<u>Gergely, Cecília</u>	<u>Doubly-foliable space-times and gauge-fixing of scalar-tensor perturbations</u>	
√	Yes	3	15:15	20'	Oral abstract	<u>Gergely, László Árpád</u>	<u>Shock-waves in the gravitational wave compatible Horndeski theories with linear kinetic term</u>	
√	Yes	4	15:35	20'	Oral abstract	<u>Stornaiolo, Cosimo</u>	<u>Tomographic Analysis Of The De Sitter Models in Quantum and Classical Cosmology</u>	
√	Yes	5	15:55	20'	Oral abstract	<u>Anselmi, Damiano</u>	<u>Consistent, local quantum field theory of gravity</u>	
√	Yes	6	16:15	20'	Oral abstract	<u>Aristov, Vladimir</u>	<u>Relational Statistical Spacetime And Theory Of Quantum Gravity</u>	
<i>COFFEE BREAK</i>								
√	Yes	8	17:10	20'	Oral abstract	<u>Kamenshchik, Alexander</u>	<u>Darkness without dark matter and energy -- generalized unimodular gravity</u>	
√	Yes	9	17:30	20'	Oral abstract	<u>Levi Said, Jackson</u>	<u>Gravitational Waves in Modified Teleparallel Theories</u>	
√	Yes	10	17:50	20'	Oral abstract	<u>Kanti, Panagiota</u>		
√	Yes	11	18:10	15'	Oral abstract	<u>Ualikhanova, Ulbossyn</u>	<u>Gravitational waves in the most general teleparallel theories.</u>	
√	Yes	12	18:25	15'	Oral abstract	<u>Addazi, Andrea</u>	<u>The fate of Schwarzschild-de Sitter Black Holes in f(R).</u>	

						<u>f(R)_gravity</u>	

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Speaker	Gergely, Cecília
Coauthors	<i>Keresztes, Zoltán; Gergely, László Árpád</i>
Talk Title	Doubly-foliable space-times and gauge-fixing of scalar-tensor perturbations
Abstract	The direct detection of gravitational waves and gamma-ray counterparts has confirmed that gravitational waves propagate with the speed of light, disruling some of the scalar-tensor gravity models. A huge class of Horndeski theories (those with generic G2 and G3 and with G4 depending only of the scalar field) however survived the test. The study of perturbations of such models is important to establish the ghost-free and instability-free parameter regimes. This has been investigated for a wide range of scalar-tensor theories in the spherically symmetric setup, exploring a 2+1+1 decomposition of space-time based on an orthogonal double foliation. The orthogonality however consumed one gauge degree of freedom, allowing the discussion of only the odd sector of the scalar part of perturbations. In order to describe the even sector perturbations, we worked out a novel 2+1+1 decomposition of space-time and gravitational dynamics, based on a non-orthogonal double foliation. We explore this new formalism for the perturbations of both the spherically symmetric metric tensor and scalar field in generic scalar-tensor theories, achieving an unambiguous gauge-fixing. This opens up the way for the discussion of the full spectrum of perturbations of spherically symmetric scalar-tensor gravity, including both the odd and even sectors of the scalar part of perturbations.
Talk view	

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