

Masroor C. Pookkillath

PERSONAL DATA	Centre for Theoretical Physics and Natural Philosophy (NAS) Mahidol University, Nakhonsawan Campus. 402/1 Moo 5 Khaothong, Phayuha Khiri, Nakhonsawan, Thailand 60130. Email: masroor.cha@mahidol.ac.th , masroorcp@gmail.com .	
RESEARCH INTERESTS	Dark Energy/Modified Gravity Theories, Test of Gravity, Tensions in Cosmology	
EMPLOYMENT	Postdoctoral Fellow	September 2022 - Present
	Centre for Theoretical Physics and Natural Philosophy, NAS, Mahidol University.	Nakhonsawan , Thailand
	Postdoctoral Fellow Yukawa Institute for Theoretical Physics, Kyoto University.	October 2021 Kyoto, Japan
EDUCATION	Ph.D. in Physics and Astronomy Yukawa Institute for Theoretical Physics, Kyoto University. Thesis: <i>Theoretical and Observational Constraints on the Cosmology of theories of Gravity</i> . Advisor: Prof. Antonio De Felice, Prof. Shinji Mukohyama.	September 2021 Kyoto, Japan
	M.Sc. Physics Mahatma Gandhi University. Thesis: <i>Thermodynamics of Black-holes in Massive Gravity</i> .	September 2014 Kottayam, India
	B.Sc. Physics University of Calicut , Kerala, India. Thesis: <i>Photometric Identification of HII Region in SDSS</i>	March 2012
AWARDS & FELLOWSHIPS	Monbukagakusho: MEXT Scholarship Awarded by the Japanese government.	2018-2021
	Mahidol University International Relation Postdoctoral Fellowship Awarded International relations division, Mahidol University, Thailand.	2023-2026
RESEARCH GRANTS	Co-PI of Fundamental Fund “Relativistic dynamics of alternative gravity” funded by the National Research Agency (NRCT), Thailand.	2023-2024
ORAL AND POSTER PRESENTATION	<i>Interacting vector dark energy and dark matter fluid.</i> Waseda University, Tokyo, Japan	December 05, 2023 (Invited Talk)
	<i>Extended minimal theories of massive gravity.</i> ICTS, Bangalore, India	April 23, 2023 (Invited Talk)
	<i>Extended minimal theories of massive gravity.</i> Testing gravity 2023 SFU Harbour Center, Vancouver, Canada	January 18-21, 2023 (Contributed Talk)
	<i>VCDM and Cuscuton.</i> Department of Physics, Tokyo Institute of Technology Tokyo, Japan	October 12, 2022 (Invited Talk)

<i>VCDM: Minimal theory of gravity.</i> NAS Workshop 2022	September 15 -18, 2022 (Invited Talk)
<i>Minimal theory of massive gravity and constraints on the graviton mass.</i> 11th Australasian conference on General Relativity and Gravitation	February 2-4, 2022 (Contributed Talk)
The 30th Workshop on General Relativity and Gravitation in Japan.	December 6–10, 2021 (Contributed Talk)
8th Korea-Japan workshop on Dark Energy.	October 18–22, 2021 (Contributed Talk)
<i>Reduction of H_0 tension by means of VCDM</i> The JPS 2021 Autumn Meeting. Online virtual meeting by the Physical Society of Japan.	September 14–17, 2021 (Contributed Talk)
<i>Minimally Modified Gravity fitting Planck data better than ΛCDM</i> The Fourth Zeldovich virtual meeting. ICRANet and National Academy of Sciences of Belarus.	September 7–11, 2020 (Contributed Talk)
<i>Reducing the H_0 tension with generalized Proca theory</i> Vienna Summer School 2020 on Gravitational Quantum Physics, University of Vienna.	September 3–6, 2020 (Poster)
<i>Baryon Physics and Tight Coupling Approximation in Boltzmann Code</i> The 14th Kavli Asian Winter School on Strings, Particles and Cosmology Katahira Campus, Tohoku University, Japan.	January 13–22, 2020 (Poster)
<i>Baryon Physics and Tight Coupling Approximation in Boltzmann Code</i> The 29th Workshop on General Relativity and Gravitation in Japan Kobe University, Japan.	November 25–29, 2019 (Contributed Talk)
<i>Baryon Physics and Tight Coupling Approximation in Boltzmann Code</i> Cosmo'19, RWTH Aachen University, Germany.	September 2–6 2019 (Contributed Talk)

PUBLIC OUTREACH

[Talk] <i>Watching the Expanding Universe</i> (Upcomming) Public Lecture organized by Nakhon Sawan province local government, Thailand.	27 January, 2023
[Meet a scientist] <i>Interaction with high school students</i> at Phayuha Pittayakhom School, Nakhon Sawan province. Organized by Nakhon Sawan NAS MANA Camp, Centre for Theoretical Physics and Natural Philosophy, Mahidol University.	25 August, 2023
[Talk] <i>On the edge of what we know?</i> Public Lecture organized by Café Física & Public Forum, Centre for Theoretical Physics and Natural Philosophy, Mahidol University.	29 May, 2023
[Talk] <i>Understanding our Universe: Current status</i> Organized by MES Ponnani College, Ponnani, India.	27 June, 2022

SYNERGISTIC
ACTIVITIES

Organizing workshop/conference:

Organizer of conference [CosmoGravitas](#) (Upcomming), June 10– 14, 2024.

Organizer of workshop [Gravity 2023: Dawn of field theoretic approach](#), June 18-20, 2023.

Organizer of workshop [Gravity: Current challenges in black hole physics and cosmology](#), June 20 – July 1, 2022.

Journals refereed: The European Physical Journal C

Other academic activities:

⇒ Examiner for undergraduate students at Mahidol University on presenting research works.

⇒ Orientation on reading research paper at *Mahachulalongkornrajavidyalaya University*, a public Buddhist university in Thailand, Ayutthaya Province, Thailand.

COMPUTER SKILLS

Operating System: Linux, Windows

Programming Language: Julia, Python, C, Groovy.

Others: Maple, Experienced in using Super Computer, Mathematica (xAct, FeynArts), Redberry.

REFERENCES

Antonio De Felice

E-mail: antonio.defelice@yukawa.kyoto-u.ac.jp

Associate Professor,

Yukawa Institute for Theoretical Physics,

Kyoto University, Japan.

Shinji Mukohyama

E-mail: shinji.mukohyama@yukawa.kyoto-u.ac.jp

Professor,

Yukawa Institute for Theoretical Physics,

Kyoto University, Japan

Kazuya Koyama

E-mail: kazuya.koyama@port.ac.uk

Professor of Cosmology,

Institute of Cosmology Gravitation, University of Portsmouth,

Portsmouth, UK