

Masroor C. Pookkillath

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| 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 Centre for Theoretical Physics and Natural Philosophy, NAS, Mahidol University. | September 2022 - Present 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. | |
| | 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 AND FELLOWSHIPS | Monbukagakusho:MEXT Scholarship Awarded by Japanese government. | 2018-2021 |
| ORAL AND POSTER PRESENTATION | <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 | February 2-4, 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) |

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| 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) |

SYNERGETIC ACTIVITIES

Organizing workshop:

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

Journals refereed: The European Physical Journal C

Public outreach: Talk on *Understanding our Universe: Current status*
MES Ponnani College, Ponnani, India, 27 June, 2022.

COMPUTER SKILLS

Operating System: Linux, Windows

Programming Language: Julia, Python, C, Groovy.

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

REFERENCES

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| Antonio De Felice Associate Professor, Yukawa Institute for Theoretical Physics, Kyoto University, Japan. | E-mail: antonio.defelice@yukawa.kyoto-u.ac.jp |
| Shinji Mukohyama Professor, Yukawa Institute for Theoretical Physics, Kyoto University, Japan | E-mail: shinji.mukohyama@yukawa.kyoto-u.ac.jp |
| Kazuya Koyama Professor of Cosmology, Institute of Cosmology Gravitation, University of Portsmouth, Portsmouth, UK | E-mail: kazuya.koyama@port.ac.uk |