

## Jishnu Suresh

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## POSITIONS HELD

October 2021 – onwards: Post-Doctoral Fellow

Centre for Cosmology, Particle Physics and Phenomenology (CP3),  
Institute de Recherche en Mathématique et Physique (IRMP),  
Université catholique de Louvain,  
Ottignies-Louvain-la-Neuve, Belgium.

February 2019 – September 2021: Post-Doctoral Fellow

Institute for Cosmic Ray Research (ICRR),  
The University of Tokyo,  
Kashiwa, Japan.

August 2016 – January 2019: Post-Doctoral Fellow

Inter-University Centre for Astronomy and Astrophysics (IUCAA),  
Pune, India.

## EDUCATION

August 2016: Ph. D. (*awarded in March 2017*)

Cochin University of Science and Technology (CUSAT), Kochi, India.

Thesis Title: “Thermodynamics and Geometrothermodynamics of black holes in  
Modified theories of Gravity.”

Supervisor: (Late) Prof. V. C. Kuriakose

Co-supervisor: Prof. Ramesh Babu. T.

May 2012: Master of Science,

Department of Physics, Cochin University of Science and Technology, Kochi,  
India.

Project Title: “Modified holographic Ricci dark energy model and statefinder  
diagnosis in the flat universe.”

Supervisor: Prof. Titus. K. Mathew

May 2010: Bachelor of Science,  
Government. College Madappally, Department of Physics, University of Calicut,  
Calicut, India.

### **SCHOLARSHIP/RESEARCH FELLOWSHIPS RECEIVED**

- 2021 - Post-doctoral fellowship through Actions de recherche concertées (ARC) grant awarded to Université catholique de Louvain.
- 2019 - 2021 Post-doctoral fellowship through Japan Society for the Promotion of Science KAKENHI Grant No. JP17H06361 (awarded to the Institute for Cosmic Ray Research).
- 2016 - 2019 Post-doctoral fellowship to work at the Inter-University Centre for Astronomy and Astrophysics through the LIGO-India project grant.
- 2014 - 2016 Ph. D. Fellowship from Cochin University of Science and Technology Awarded to the winners of the Department Admission Test.
- 2012 - 2014 Research grant from University Grant Commission, India Awarded to Cochin University of Science and Technology through the project titled: "Extended theories of gravity" (Ref. No: 41- 843/2012).

### **MAJOR COLLABORATIONS**

- 2023- LISA Consortium
- 2023- Cosmic Explorer Consortium
- 2021 - Virgo collaboration
- 2021 - Einstein Telescope (ET) collaboration
- 2019 - KAGRA collaboration
- 2016 - 2022 LIGO collaboration
- 2016 - 2019 Indigo Consortium, LIGO-India

### **MEMBERSHIPS IN SCIENTIFIC SOCIETIES**

- 2023 - Junior member, International Astronomical Union (IAU).
- 2022 - Working group member, COST action CosmoVerse.
- 2022 - Working group member, COST action CosmicWISPer.
- 2021 - 2022 Member, American Astronomical Society.
- 2019 - Member, International Society on General Relativity and Gravitation.
- 2018 - Member, Indian Association for General Relativity and Gravitation.

## ORGANIZATION OF SCIENTIFIC MEETINGS

- 2022 Organizer, Gravitational Wave Orchestra, two-day international workshop, UCLouvain, Belgium.
- 2020 Co-organizer, Astronomy Society of Kerala: VCK memorial workshop-II, UC College, Aluva, Kerala, India.
- 2019 Co-organizer, Astronomy Society of Kerala: VCK memorial workshop-I, UC College, Aluva, Kerala, India.
- 2016 Co-organizer/Resource person, School on Gravitation and Cosmology-II, Cochin University of Science and Technology, Kochi, India.
- 2015 Co-organizer/Resource person, School on Gravitation and Cosmology-I, Cochin University of Science and Technology, Kochi, India.
- 2014 Co-organizer/Resource person, Recent Developments in Cosmology, IUCAA resource center and SH College, Kochi, India.

## EXTENDED ACADEMIC VISITS

- Instituto de Física Corpuscular (IFIC), Valencia, Spain - October 2023
- Laboratoire d'Annecy de Physique des Particules (LAPP), Annecy, France - February 2023
- Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, India - July 2022
- Istituto Nazionale di Fisica Nucleare (INFN), Pisa, Italy - January 2022
- KAGRA observatory, Toyama, Japan - June, September 2019
- Istituto Nazionale di Fisica Nucleare (INFN), Pisa, Italy - September 2017

## PRESENTATIONS/ATTENDANCE AT CONFERENCES AND MEETINGS

*(in this academic year)*

- Mapping the anisotropies of Stochastic gravitational-wave Background with Ground-Based Detectors, Data analysis challenges for stochastic gravitational wave backgrounds, 19-07-2023 to 21-07-2023, CERN, Switzerland.
- Searches for Stochastic Gravitational-wave Background using ground-based detectors, Progress on Old and New Themes in Cosmology (PONT), 02-05-2023 to 05-05-2023, Avignon, France.
- Searches for Stochastic Gravitational-wave Background: O3 Lessons and Future, 57th Rencontres de Moriond 2023, 18-03-2023 to 25-03-2023, La Thuile, Italy.

## INVITED TALKS AT UNIVERSITIES AND COLLEGES

*(in this academic year)*

- Gravitational Wave Orchestra; Being Sensitive is Crucial, 10-10-2023, Instituto de Física Corpuscular (IFIC), Valencia, Spain.

- Quest for Stochastic Gravitational-Wave Background and the anisotropies, 10-02-2023, Laboratoire d'Annecy de Physique des Particules (LAPP), Annecy, France.

## **TRAVEL/CONFERENCE GRANTS**

- FNRS grant Accomplissement d'un séjour à l'étranger 2023 to visit LAPP, Annecy (postponed the visit and fund usage due to the timeline change from the host institute)
- ARISF grant to participate and present my research in the 56th Rencontres de Moriond 2022.
- A grant from INFN Pisa for a one-week visit to Giancarlo Cella (University of Pisa) in 2021.
- A grant from INFN Pisa for a one-week visit to Giancarlo Cella (University of Pisa) in 2017.

## **PUBLIC OUTREACH ACTIVITIES**

- Astronomical Society of Kerala (ASK): Organizing workshops and skywatch programs across Kerala, India (2019 - onwards)
- Astronomy for school students: Monthly events organized by Cochin University of Science and Technology in collaboration with the IUCAA resource center (2012 - 2016)
- National Science Day Celebrations at IUCAA, India (2017,2018)

## **RECENT PUBLICATION**

1. Estimating Astrophysical Population Properties using a multi-component Stochastic Gravitational-Wave Background Search, F. De Lillo, J. Suresh, arXiv:2310.05823 [gr-qc] (submitted to Journal).
2. Measurement of the Cross-Correlation Angular Power Spectrum Between the Stochastic Gravitational-Wave Background and Galaxy Over-Density, Kate Z. Yang, J. Suresh, G. Cusin, et al., Phys.Rev.D 108 (2023) 4, 043025, arXiv: 2304.07621.
3. Angular power spectra of anisotropic stochastic gravitational wave background: developing statistical methods and analyzing data from ground-based detectors, D. Agarwal, J. Suresh, S. Mitra, A. Ain, Phys.Rev.D 108 (2023) 2, 023011, arXiv: 2302.12516.
4. Probing Ensemble Properties of Vortex-avalanche Pulsar Glitches with a Stochastic Gravitational-Wave Background Search, F. De Lillo J. Suresh, A.

**The entire list can be found at: [INSPIRE](#)**

## REFERENCE

(Email ID and contact details can be provided upon request)

1. Giacomo Bruno  
Professor,  
Centre for Cosmology, Particle Physics and Phenomenology (CP3),  
Université catholique de Louvain, Louvain-la-Neuve, Belgium.
2. Sanjit Mitra  
Professor,  
Inter-University Centre for Astronomy and Astrophysics (IUCAA),  
Post Bag 4, Ganeshkind, Pune - 411007, India.
3. Tania Regimbau  
Director of Research at CNRS,  
Laboratoire d'Annecy de Physique des Particules (LAAP),  
9 chemin de Bellevue, BP 110, Annecy le vieux, 74941 Annecy cedex, France.
4. Vuk Mandic  
Professor,  
School of Physics and Astronomy, Minnesota Institute for Astrophysics,  
Minneapolis, MN 55455, USA.
5. Joseph D Romano  
Professor and Director of the Institute of Space Sciences,  
The University of Texas Rio Grande Valley,  
Brownsville, Texas, 78520, USA.
6. Hideyuki Tagoshi  
Professor,  
Institute for Cosmic Ray Research, The University of Tokyo,  
Kashiwanoha 5-1-5, Kashiwa, Chiba 277-8582, Japan.