CURRICULUM VITAE

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POSITIONS HELD

2021 – Post Doctoral Fellow
Centre for Cosmology, Particle Physics and Phenomenology (CP3),
Université catholique de Louvain,
Ottignies-Louvain-la-Neuve

2019 – 2021 Post Doctoral Fellow
Institute for Cosmic Ray Research (ICRR), University of Tokyo,
Kashiwa, Japan

2016 – 2019 Post Doctoral Fellow
Inter-University Centre for Astronomy and Astrophysics (IUCAA),
Pune, India.

EDUCATION

2016 Ph. D.
Cochin University of Science and Technology (CUSAT), Kochi, India.
Title: "Thermodynamics and Geometrothermodynamics of black holes in modified theories of gravity"
Supervisor: Prof. V. C. Kuriakose

2012 Master of Science,
Department of Physics, Cochin University of Science and Technology, Kochi, India.
M.Sc. Project Title: "Thermodynamics and Geometrothermodynamics of black holes in modified theories of gravity"
Supervisor: Prof. V. C. Kuriakose

2010 Bachelor of Science,
Govt. College Madappally, Department of Physics, University of Calicut, Calicut, India.

FELLOWSHIPS AND AWARDS

2012 University Grant Commission major research fellowship, Department of Physics, Cochin University of Science and Technology, Kochi, India.

2012 Qualified the Graduate Aptitude Test in Engineering (GATE), conducted by the Ministry of Human Resource Development (MHRD).

SUPERVISION OF GRADUATE STUDENTS AND PROJECT FELLOWS

2018 — 3-Master Students:
Sambit Panda – BITS Pilani, Rajasthan, India.
Anitta Sunny – Calicut University, Kerala, India.
Radhika Manoj – Calicut University, Kerala, India. (Now, Ph. D student at University of Delhi, Delhi, India)

2017 — 1-Master Student:
Mahith Madankumar - Cochin University of Science and Technology, Kochi, India. (Now, Ph. D student at University of New Brunswick)

2015 — 2-Master Students:
Masroor CP – Mahathma Gandhi University, Kottayam, India. (Now, Ph. D student at YITP, Kyoto University, Kyoto, Japan)
Geethu Prabhakar – Mahathma Gandhi University, Kottayam, India. (Now, Ph. D student at IIST, Trivandrum, Kerala, India)

TEACHING ACTIVITIES

2017 — Tutor - General relativity, Pune University Masters course, Pune, India.
2016 — Tutor - Group theory and Advanced mathematical techniques, Cochin University of Science and Technology, Kochi, India.
2015 — Tutor - General relativity, Cochin University of Science and Technology, Kochi, India.

ORGANISATION OF SCIENTIFIC MEETINGS

2015 — Co-organizer, Gravitational Wave Workshop, Cochin University of Science and Technology, Kochi, India.

2015 — Co-organizer, School on Gravitation and Cosmology-II, Cochin University of Science and Technology, Kochi, India.

2014 — Co-organizer, School on Gravitation and Cosmology-I, Cochin University of Science and Technology, Kochi, India.

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

2019 — Member, KAGRA collaboration since 2019
2019 — Member, International Society on General Relativity and Gravitation (ISGRG) since 2019
2018 — Member, Indian Association for General Relativity and Gravitation (IAGRG) since 2018
2016 — Member, LIGO-Scientific Collaboration (LSC) since 2016

MAJOR COLLABORATIONS

2019 - — KAGRA collaboration
2016 - — LIGO Scientific Collaboration
2016 – 2019 — Indigo Consortium, LIGO-India

TRACK RECORD

- Co-developer of a very fast python based stochastic gravitational wave background data analysis pipeline, named 'PyStoch' (LVK collaboration is using this pipeline for directional searches for persistent gravitational wave sources).
- Co-developer of enhanced PyStoch pipeline which can perform analysis in pixel and spherical harmonic bases.
- Delivered the folded data set of each scientific and observational run of LIGO and Virgo to the LVK collaboration (delivered S5, O1, O2 and O3 data sets)
- Contributor to the new analysis called all-sky-all-frequency (ASAF) analysis as a combined stochastic-continuous wave group effort.
- Contributed to the offline Parameter Estimation Rota (PERota) for the gravitational wave candidates in third observation run (O3).
- Contributed to the KAGRA detector's data quality shift during the observing run preparation.
- Part of the upcoming LVK stochastic directional search paper writing and analysis team.
- Extended the idea of Geometrothermodynamics (incorporating differential geometry idea to the black hole thermodynamics) to modified theories of gravity.

PRESENTATIONS/ATTENDENCE IN CONFERNCES AND MEETINGS

- (presenter), Component separation in Stochastic Gravitational Wave Background searches, *J. Suresh*, A. Parida and S. Mitra, GW Physics and Astronomy Symposium: Genesis Symposium, 10-02-2020 to 12-02-2020, Konan University, Kobe, Japan.
- (presenter), Stochastic Gravitational Wave Background map making techniques, *J. Suresh*, Gravitational Wave Physics and Astronomy Workshop (GWPAW), 14-10-2019 to 17-10-2019, RESCEU, The University of Tokyo, Japan.
- (presenter), Stochastic Gravitational Wave Background Mapmaking using regularized deconvolution, *J. Suresh*, S. Panda, S. Bhagwat and S. Mitra, Topics in Astroparticle and Underground Physics (TAUP), 09-09-2019 to 13-09-2019, Toyama International Conference Center, Toyama, Japan.
- (presenter-poster), PyStoch: Stochastic gravitational wave background map-making tool, *J. Suresh*, A.Ain, S. Sudhagar and S. Mitra, 22nd International Conference on General Relativity and Gravitation 13th Edoardo Amaldi Conference on Gravitational Waves, 07-07-2019 to 12-07-2019, Valencia, Spain.
- (presenter), PyStoch and Folded data set for O3 analysis, *J. Suresh*, LIGO-Virgo Collaboration meeting, 18-03-2019 to 21-03-2019, Lake Geneva, Wisconsin.
- (presenter-poster), Stochastic Gravitational Wave Background map-making, *J. Suresh*, A.Ain and S. Mitra, Multi-messenger astronomy in the era of LIGO-India, 15-01-2019 to 18-01-2019, Khandala, Pune, India.
- (presenter), O2 folded data set, PyStoch and O3 plans, *J. Suresh* and S. Mitra, LIGO-Virgo Collaboration meeting, 04-09-2018 to 07-09-2018, Maastricht University, Maastricht.
- (panelist), Physics and Astrophysics at the eXtreme (PAX) meeting, Cosmology and gravitation session, 07-08-2018 to 10-08-2018, IUCAA, Pune
- (contributor), Efficient Techniques to Probe Stochastic Gravitational Wave Background Anisotropy with Ground-based Detectors, A. Ain, *J. Suresh* and S. Mitra, Fifteenth Marcel Grossmann Meeting – MG15, 01-07-2018 to 07-07-2018, University of Rome "La Sapienza", Rome.
- (presenter), O1/O2 folded data set and PyStoch updates, *J. Suresh* and S. Mitra, LIGO-Virgo Collaboration meeting, 19-03-2018 to 22-03-2018, Sonoma State University, Sonoma.

- (contributor), Efficient mapmaking of the stochastic gravitational wave background, A. Ain and *J. Suresh*, 03-09-2017 to 05-09-2017, INFN-Pisa, Pisa.
- (contributor), Updates on PyStoch, A. Ain and *J. Suresh*, LIGO-Virgo Collaboration meeting, 28-08-2017 to 01-09-2017, CERN, Geneva.

REFERENCE

1 . Giacomo Bruno
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2. Hideyuki Tagoshi
Associate Professor
Institute for Cosmic Ray Research, The University of Tokyo,
Kashiwanoha 5-1-5, Kashiwa, Chiba 277-8582, Japan
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3. Sanjit Mitra
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Inter-University Centre for Astronomy and Astrophysics (IUCAA)
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4. Tania Regimbau
Director of Research at CNRS
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