

## CURRICULUM VITAE

### PERSONAL INFORMATION

Jishnu Suresh

18-01-1990

<https://jishnu-suresh.github.io/jishnu.html>

#### ○ EDUCATION

- 2016                      Ph. D.  
Supervisor: Prof. V. C. Kuriakose,  
Department of Physics,  
Cochin University of Science and Technology (CUSAT), Kochi, India.  
Topic: “Thermodynamics and Geometrothermodynamics of black holes in modified theories of gravity”
- 2012                      Master of Science  
Department of Physics, Cochin University of Science and Technology, Kochi, India.
- 2010                      Bachelor of Science  
Department of Physics, University of Calicut, Calicut, India.

#### ○ POSITIONS HELD

- 2019 –                      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.

#### ○ 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.
- 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, the 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 - 2019 LIGO-India, Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, India

**LIST OF PUBLICATIONS**

- 1) Search for transient gravitational wave signals associated with magnetar bursts during Advanced LIGO's second observing run  
By LIGO Scientific and Virgo Collaborations (B.P. Abbott et al.).  
arXiv:1902.01557 [astro-ph.HE].
- 2) Low-Latency Gravitational Wave Alerts for Multi-Messenger Astronomy During the Second Advanced LIGO and Virgo Observing Run  
By LIGO Scientific and Virgo Collaborations (B.P. Abbott et al.).  
arXiv:1901.03310 [astro-ph.HE].

- 3) First measurement of the Hubble constant from a dark standard siren using the Dark Energy Survey galaxies and the LIGO/Virgo binary-black-hole merger GW170814  
By DES and LIGO Scientific and Virgo Collaborations (M. Soares-Santos et al.).  
arXiv:1901.01540 [astro-ph.CO].  
Submitted to: *Astrophys.J.*.
- 4) Searches for Continuous Gravitational Waves from Fifteen Supernova Remnants and Fomalhaut b with Advanced LIGO  
By LIGO Scientific and Virgo Collaborations (B.P. Abbott et al.).  
arXiv:1812.11656 [astro-ph.HE].
- 5) Binary Black Hole Population Properties Inferred from the First and Second Observing Runs of Advanced LIGO and Advanced Virgo  
By LIGO Scientific and Virgo Collaborations (B.P. Abbott et al.).  
arXiv:1811.12940 [astro-ph.HE].
- 6) GWTC-1: A Gravitational-Wave Transient Catalog of Compact Binary Mergers Observed by LIGO and Virgo during the First and Second Observing Runs  
By LIGO Scientific and Virgo Collaborations (B.P. Abbott et al.).  
arXiv:1811.12907 [astro-ph.HE].
- 7) Tests of General Relativity with GW170817  
By LIGO Scientific and Virgo Collaborations (B.P. Abbott et al.).  
arXiv:1811.00364 [gr-qc].
- 8) Search for Multi-messenger Sources of Gravitational Waves and High-energy Neutrinos with Advanced LIGO during its first Observing Run, ANTARES and IceCube  
By ANTARES and IceCube and LIGO and Virgo Collaborations (A. Albert et al.).  
arXiv:1810.10693 [astro-ph.HE].  
[10.3847/1538-4357/aaf21d](https://doi.org/10.3847/1538-4357/aaf21d).  
*Astrophys.J.* 870 (2019) no.2, 134.
- 9) Search for gravitational waves from a long-lived remnant of the binary neutron star merger GW170817  
By LIGO Scientific and Virgo Collaborations (B.P. Abbott et al.).  
arXiv:1810.02581 [gr-qc].
- 10) A Fermi Gamma-ray Burst Monitor Search for Electromagnetic Signals Coincident with Gravitational-Wave Candidates in Advanced LIGO's First Observing Run  
By LIGO Scientific and Virgo Collaborations and Fermi Gamma-ray Burst Monitor Team (E. Burns et al.).  
arXiv:1810.02764 [astro-ph.HE].
- 11) Search for Substellar-Mass Ultracompact Binaries in Advanced LIGO's First Observing Run  
By LIGO Scientific and Virgo Collaborations (B.P. Abbott et al.).  
arXiv:1808.04771 [astro-ph.CO].  
[10.1103/PhysRevLett.121.231103](https://doi.org/10.1103/PhysRevLett.121.231103).  
*Phys.Rev.Lett.* 121 (2018) no.23, 231103.
- 12) Properties of the binary neutron star merger GW170817  
By LIGO Scientific and Virgo Collaborations (B.P. Abbott et al.).  
arXiv:1805.11579 [gr-qc].  
[10.1103/PhysRevX.9.011001](https://doi.org/10.1103/PhysRevX.9.011001).  
*Phys.Rev. X* 9 (2019) no.1, 011001.

13) GW170817: Measurements of neutron star radii and equation of state

By LIGO Scientific and Virgo Collaborations (B.P. Abbott et al.).

arXiv:1805.11581 [gr-qc].

[10.1103/PhysRevLett.121.161101](https://arxiv.org/abs/10.1103/PhysRevLett.121.161101).

Phys.Rev.Lett. 121 (2018) no.16, 161101.

14) Very fast stochastic gravitational wave background map making using folded data

By Anirban Ain, Jishnu Suresh, Sanjit Mitra.

arXiv:1803.08285 [gr-qc].

[10.1103/PhysRevD.98.024001](https://arxiv.org/abs/10.1103/PhysRevD.98.024001).

Phys.Rev. D98 (2018) no.2, 024001.

15) Search for Tensor, Vector, and Scalar Polarizations in the Stochastic Gravitational-Wave Background

By LIGO Scientific and Virgo Collaborations (Benjamin P. Abbott et al.).

arXiv:1802.10194 [gr-qc].

[10.1103/PhysRevLett.120.201102](https://arxiv.org/abs/10.1103/PhysRevLett.120.201102).

Phys.Rev.Lett. 120 (2018) no.20, 201102.

16) Full Band All-sky Search for Periodic Gravitational Waves in the O1 LIGO Data

By LIGO Scientific and Virgo Collaborations (Benjamin P. Abbott et al.).

arXiv:1802.05241 [gr-qc].

[10.1103/PhysRevD.97.102003](https://arxiv.org/abs/10.1103/PhysRevD.97.102003).

Phys.Rev. D97 (2018) no.10, 102003.

17) GW170817: Implications for the Stochastic Gravitational-Wave Background from Compact Binary Coalescences

By LIGO Scientific and Virgo Collaborations (Benjamin P. Abbott et al.).

arXiv:1710.05837 [gr-qc].

[10.1103/PhysRevLett.120.091101](https://arxiv.org/abs/10.1103/PhysRevLett.120.091101).

Phys.Rev.Lett. 120 (2018) no.9, 091101.

18) Search for High-energy Neutrinos from Binary Neutron Star Merger GW170817 with ANTARES, IceCube, and the Pierre Auger Observatory

By ANTARES and IceCube and Pierre Auger and LIGO Scientific and Virgo Collaborations (A. Albert et al.).

arXiv:1710.05839 [astro-ph.HE].

[10.3847/2041-8213/aa9aed](https://arxiv.org/abs/10.3847/2041-8213/aa9aed).

Astrophys.J. 850 (2017) no.2, L35.

19) On the Progenitor of Binary Neutron Star Merger GW170817

By LIGO Scientific and Virgo Collaborations (B.P. Abbott et al.).

arXiv:1710.05838 [astro-ph.HE].

[10.3847/2041-8213/aa93fc](https://arxiv.org/abs/10.3847/2041-8213/aa93fc).

Astrophys.J. 850 (2017) no.2, L40.

20) Estimating the Contribution of Dynamical Ejecta in the Kilonova Associated with GW170817

By LIGO Scientific and Virgo Collaborations (B.P. Abbott et al.).

arXiv:1710.05836 [astro-ph.HE].

[10.3847/2041-8213/aa9478](https://arxiv.org/abs/10.3847/2041-8213/aa9478).

Astrophys.J. 850 (2017) no.2, L39.

21) A gravitational-wave standard siren measurement of the Hubble constant

By LIGO Scientific and Virgo and 1M2H and Dark Energy Camera GW-E and DES and DLT40 and Las Cumbres Observatory and VINROUGE and MASTER Collaborations (B.P. Abbott et al.).

arXiv:1710.05835 [astro-ph.CO].

[10.1038/nature24471](https://doi.org/10.1038/nature24471).

Nature 551 (2017) no.7678, 85-88.

22) Gravitational Waves and Gamma-rays from a Binary Neutron Star Merger: GW170817 and GRB 170817A

By LIGO Scientific and Virgo and Fermi-GBM and INTEGRAL Collaborations (B.P. Abbott et al.).

arXiv:1710.05834 [astro-ph.HE].

[10.3847/2041-8213/aa920c](https://doi.org/10.3847/2041-8213/aa920c).

Astrophys.J. 848 (2017) no.2, L13.

23) GW170817: Observation of Gravitational Waves from a Binary Neutron Star Inspiral

By LIGO Scientific and Virgo Collaborations (B. P. Abbott et al.).

arXiv:1710.05832 [gr-qc].

[10.1103/PhysRevLett.119.161101](https://doi.org/10.1103/PhysRevLett.119.161101).

Phys.Rev.Lett. 119 (2017) no.16, 161101.

24) First narrow-band search for continuous gravitational waves from known pulsars in advanced detector data

By LIGO Scientific and Virgo Collaborations (Benjamin P. Abbott et al.).

arXiv:1710.02327 [gr-qc].

[10.1103/PhysRevD.96.122006](https://doi.org/10.1103/PhysRevD.96.122006), [10.1103/PhysRevD.97.129903](https://doi.org/10.1103/PhysRevD.97.129903).

Phys.Rev. D96 (2017) no.12, 122006, Erratum: Phys.Rev. D97 (2018) no.12, 129903.

25) Geometrothermodynamics of BTZ black hole in new massive gravity

By Jishnu Suresh, V.C. Kuriakose.

arXiv:1606.06098 [gr-qc].

26) Thermodynamics and Geometrothermodynamics of Black holes in Modified Theories of Gravity

By Jishnu Suresh.

27) Entropy spectrum of BTZ black hole in massive gravity

By Jishnu Suresh, V.C. Kuriakose.

arXiv:1605.00142 [gr-qc].

28) Thermodynamics and Geometrothermodynamics of Charged black holes in Massive Gravity

By Jishnu Suresh, C P Masroor, Geethu Prabhakar, V C Kuriakose.

arXiv:1603.00981 [gr-qc].

29) Thermodynamics of Charged Lovelock - AdS Black Holes

By C.B. Prasobh, Jishnu Suresh, V.C. Kuriakose.

arXiv:1510.04784 [gr-qc].

[10.1140/epjc/s10052-016-4062-4](https://doi.org/10.1140/epjc/s10052-016-4062-4).

Eur.Phys.J. C76 (2016) no.4, 207.

30) Entropy spectrum of (1+1) dimensional stringy black holes

By Jishnu Suresh, V.C. Kuriakose.

arXiv:1501.04852 [gr-qc].

[10.1140/epjc/s10052-015-3444-3](https://doi.org/10.1140/epjc/s10052-015-3444-3).

Eur.Phys.J. C75 (2015) no.5, 214.

31) A unified thermodynamic picture of Hořava-Lifshitz black hole in arbitrary space time

By Jishnu Suresh, R. Tharanath, V.C. Kuriakose.

arXiv:1408.0911 [gr-qc].

[10.1007/JHEP01\(2015\)019](https://arxiv.org/abs/10.1007/JHEP01(2015)019).

JHEP 1501 (2015) 019.

32) Phase transitions and Geometrothermodynamics of Regular black holes

By R. Tharanath, Jishnu Suresh, V.C. Kuriakose.

arXiv:1406.3916 [gr-qc].

[10.1007/s10714-015-1884-6](https://arxiv.org/abs/10.1007/s10714-015-1884-6).

Gen.Rel.Grav. 47 (2015) no.4, 46.

33) Thermodynamic Geometry of Reissner-Nordström-de Sitter black hole and its extremal case

By R. Tharanath, Jishnu Suresh, Nijo Varghese, V.C. Kuriakose.

arXiv:1404.6789 [gr-qc].

[10.1007/s10714-014-1743-x](https://arxiv.org/abs/10.1007/s10714-014-1743-x).

Gen.Rel.Grav. 46 (2014) 1743.

34) The thermodynamics and thermodynamic geometry of the Park black hole

By Jishnu Suresh, R. Tharanath, Nijo Varghese, V.C. Kuriakose.

arXiv:1403.4710 [gr-qc].

[10.1140/epjc/s10052-014-2819-1](https://arxiv.org/abs/10.1140/epjc/s10052-014-2819-1).

Eur.Phys.J. C74 (2014) 2819.

35) Thermodynamics and quasinormal modes of Park black hole in Horava gravity

By Jishnu Suresh, V.C. Kuriakose.

arXiv:1310.2011 [gr-qc].

[10.1140/epjc/s10052-013-2613-5](https://arxiv.org/abs/10.1140/epjc/s10052-013-2613-5).

Eur.Phys.J. C73 (2013) no.10, 2613.

36) Area spectrum and thermodynamics of KS black holes in Horava gravity

By Jishnu Suresh, V.C. Kuriakose.

arXiv:1307.6438 [gr-qc].

[10.1007/s10714-013-1565-2](https://arxiv.org/abs/10.1007/s10714-013-1565-2).

Gen.Rel.Grav. 45 (2013) 1877-1886.

37) Modified holographic Ricci dark energy model and statefinder diagnosis in flat universe

By Titus K. Mathew, Jishnu Suresh, Divya Divakaran.

arXiv:1207.5886 [astro-ph.CO].

[10.1142/S0218271813500569](https://arxiv.org/abs/10.1142/S0218271813500569).

Int.J.Mod.Phys. D22 (2013) 1350056.

#### PRESENTATIONS/ATTENDENCE IN CONFERNCES AND MEETINGS

- (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), 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.
- (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. Prof. Hideyuki Tagoshi  
Institute for Cosmic Ray Research,  
The University of Tokyo,  
Kashiwanoha 5-1-5, Kashiwa, Chiba 277-8582, Japan  
Phone: +81-4-7136-5147(ext. 65147)  
Email: tagoshi@icrr.u-tokyo.ac.jp
2. Prof. Sanjit Mitra  
Associate Professor  
Inter-University Centre for Astronomy and Astrophysics (IUCAA)  
Post Bag 4, Ganeshkind, Pune - 411007, India.  
Email: sanjit@iucaa.in
3. Prof. Joseph D Romano  
Professor  
Department of Physics and Astronomy  
The University of Texas Rio Grande Valley (UTRGV)  
BCAVL 105 H  
Email: joseph.d.romano@gmail.com
4. Prof. Bala Iyer  
International Centre for Theoretical Sciences (ICTS)  
Tata Institute for Fundamental Research,  
Survey No. 151, Shivakote Village,  
Hesaraghatta Hobli, Bengaluru (North) – 560089, India  
Email: bala.iyer@icts.res.in