CURRICULUM VITAE

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Date of Birth	:	28 December 1952
Nationality	:	Indian
Marital Status	:	Married with one child
Mailing Address	:	International Centre for Theoretical Sciences
	:	Tata Institute for Fundamental Research,
	:	Survey No. 151, Shivakote Village,
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Academic	:	Ph.D.(Physics)	Bombay University 1980
Career	:	M.Sc.	Bombay University 1976
	:	B.Sc.	Bombay University 1973

Research Interests	:	1. Gravitational Radiation : Theoretical Aspects of Generation, Radiation reaction, Data Analysis and Numerical Relativity 2. Perturbation and Approximation Techniques in General Relativity 3. Alternative Theories of Gravity 4. Black Holes and Neutron Stars
Honours	:	**1) Fellowship of American Physical Society (2012)** *Citation: For his important contributions to gravitational theory, in particular the post-Newtonian approximation and equations of motion, his outstanding leadership in creating the gravitational wave community in India through the IndIGO consortium, and his key role in the LIGO-India initiative.* **2) Fellowship of International Society of General Relativity and Gravitation (2013)** *Citation: For his work in applying the post-Minkowskian and post-Newtonian approximations to the problem of compact binary systems, and for his leadership of the gravitational-wave community of India.* **3) Beller Lectureship for APS April meeting (2015)** **4) Vaidya-Raychaudhuri Endowment award of IAGRG (2015)**
	:	**5) Honoris Causa by Central University of Karnataka, Kalaburagi (2018)**
Honours	:	**Shared with the LIGO Scientific Collaboration** 1) Gruber Cosmology Prize , Gruber Foundation (2016). 2) Special Breakthrough Prize in Fundamental Physics , The Breakthrough Prize in Life Sciences. (2016) 3) The Physics World 2016 Breakthrough of the Year for its revolutionary, first-ever direct observations of gravitational waves" 4) The UK Royal Astronomical Society 2017 Group Achievement Award in Astronomy , for the direct detection of gravitational waves by the LIGO detectors. 5) Bruno Rossi Prize "for the first direct detections of gravitational waves, for the discovery of merging black hole binaries, and for beginning the new era of gravitational-wave astronomy." 6) Einstein Medal from the Einstein Society in Bern, Switzerland 7) 2017 Princess of Asturias Award for Technical and Scientific Research

Memberships :

1. The International Society on General Relativity and Gravitation (GRG)
2. International Astronomical Union (IAU)
3. Indian Association for General Relativity and Gravitation (IAGRG)
4. Indian Physics Association Bangalore Chapter
5. American Physical Society (APS) USA

Positions held

at ICTS, TIFR, Bangalore, India

1 Visiting Professor (2015 -)

2 Adjunct Professor (2011 - 2014)

at Raman Research Institute, Bangalore, India

1. *Professor II (2008 -2014)*
2. *Professor (2001 - 2008)*
3. *Associate Professor - II (1997 - 2001)*
4. *Associate Professor - I (1994 - 1997)*
5. *Research Associate (1982 - 1994)*
6. *Scientist (1980 -1982)*
7. *Chairman, Theoretical Physics Group, Oct 1998 - Oct 2001 and June 2004 - July 2005.*

Visiting Scientist at

1. Washington University, St. Louis , USA
2. University of Wales, Cardiff, UK.
3. DARC, Observatoire de Paris Meudon, France
4. Institut d'Astrophysique de Paris, Paris, France
5. Institut des Hautes Etudes Scientifiques, Bures sur Yvette, France
6. Max-Planck-Institut für Physik und Astrophysik Garching , Germany
7. International Centre for Theoretical Physics Trieste, Italy
8. School of Mathematical Sciences Queen Mary and Westfield College, London U.K.
9. Astrophysics Group and LIGO , Caltech, Pasadena, USA.
10. Albert Einstein Institute, Max Planck Institut für Gravitationsphysik, Golm, Germany
11. Department of Earth and Space Science, Osaka University, Toyonaka, Japan

l2. Center for Gravitational Wave Physics, Penn State University, State College, USA

13. Institut Henry Poincaré (IHP), Paris, France.

GRG/GW Organization	:	1. Committee Member, International Society of General Relativity and Gravitation (2010 - 2019). 2. PI of IndIGO-LSC in LIGO Scientific Collaboration (LSC) (2014 -), Chair LISC ExComm (2018-) 3. Member, Governing Council, BASE, Jawaharlal Nehru Planetarium, Bangalore (2013 -) 4. IndIGO-LSC Council member in LIGO Scientific Collaboration (LSC) Council (2013 -) Member LSC Council Representative Group (2017), Member Program Committee (2018-19), Member LSC ExComm (2019-) 5. IndIGO Representative on Gravitational Wave International Committee (GWIC) (2011 -) 6. IndIGO-LSC member in LIGO Scientific Collaboration (LSC) (2011 -) 7. Chair, IndIGO Consortium (2009 -) 8. Member, IUPAP GRG Young Scientist Prize committee (2014) 9. Member, N.R. Sen Award committee (2015) 10. Member, Juergen Ehlers Thesis Prize committee of International Society for General Relativity and Gravitation (2010) 11. Member, Nominating Committee, International Society of General Relativity and Gravitation (2004 - 2010). 12. President, Indian Association for General Relativity and Gravitation (2006 - 2008). 13. Secretary, Indian Association for General Relativity and Gravitation (1994 - 1998).
Editorial	1.	Editor in Chief for the Online Journal Living Reviews in Relativity, (2016 -) Springer, Heidelberg, Germany.
	2.	Subject Editor on Gravitational Waves for the Online Journal Living Reviews in Relativity, (2000 -) Albert Einstein Institute, Golm, Germany. Springer, Heidelberg, Germany.
	3.	Member, Editorial Board of the Online Journal Living Reviews in Relativity, Albert Einstein Institute, Golm, Germany (1998 -). Springer, Heidelberg, Germany.
	4	Member, Editorial Board of Classical Quantum Gravity (2016 -) IOP, UK
Projects	1.	IUSSTF Project: *IndoUS Centre for the Exploration of Extreme Gravity* , No: IUSSTF-JC-029-2016 (2017 - 2019).
	2.	Indo-French Project on *Gravitational Waves from Neutron Star Binaries*, No: 2904-1 (2003 - 2007).
	3.	Indo-Australian project on *Establishing Australian-Indian collaboration on gravitational wave astronomy*, No: DST/INT/AUS/P-26/08 (2009 - 2011)
	4.	Indo-French Project on *High accuracy gravitational waves from black hole binaries*, No: 4204-2 (2010 - 2013).

References

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5. Prof. Bernard Schutz
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List of Publications

1. Search for gravitational-wave transients associated with magnetar bursts in Advanced LIGO and Advanced Virgo data from the third observing run (by LSC, Virgo and KAGRA), *Ap.J.* , (2022) (Submitted) arXiv:2210.10931

2. Model-based cross-correlation search for gravitational waves from the low-mass X-ray binary Scorpius X-1 in LIGO O3 data (by LSC, Virgo and KAGRA), *Ap.J. Lett* , (2022) (Accepted) arXiv:2209.02863

3. Search for continuous gravitational wave emission from the Milky Way center in O3 LIGO-Virgo data, (by LSC, Virgo, KAGRA), *Phys.Rev D* **106**, 042003 (2022). arXiv:2204.04523

4. Search for gravitational waves associated with Fast Radio Bursts Detected by CHIME/FRB During the LIGO-Virgo Observing Run O3a (by LSC, Virgo and KAGRA), *Ap.J.* , (2022) (Submitted) arXiv:2203.12038

5. First international joint observation of an underground gravitational-wave observatory, KAGRA, with GEO 600, (by LSC, Virgo, KAGRA), *Progress of Theor. and Exp. Phys.* **2022**,063F01 (2022). arXiv:2203.01270

6. Search for gravitational waves from Scorpius X-1 with a hidden Markov model in O3 LIGO data, (by LSC, Virgo, KAGRA), *Phys. Rev. D* **106**, 062002 (2022). arXiv:2201.10104

7. All-sky search for continuous gravitational waves from isolated neutron stars using Advanced LIGO and Advanced Virgo O3 data, (by LSC, Virgo, KAGRA), *Phys. Rev. D* , (2021) (Accepted) arXiv:2201.00697

8. Narrowband searches for continuous and long-duration transient gravitational waves from known pulsars in the LIGO-Virgo third observing run (by LSC, Virgo, KAGRA plus 28 radio astronomers and NICER science team members), *Ap. J* **932**, 133 (2022). arXiv:2112.10990

9. Tests of General Relativity using the third LIGO-Virgo Gravitational-Wave Transient Catalog, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration, *Phys. Rev, D* , (2021) (Accepted) arXiv:2112.06861

10. Search of the Early O3 LIGO Data for Continuous Gravitational Waves from the Cassiopeia A and Vela Jr. Supernova Remnants, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration, *Phys. Rev. D* **105**, 082005 (2022) arXiv:2111.15116

11. All-sky search for gravitational wave emission from scalar boson clouds around spinning black holes in LIGO O3 data, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration, *Phys. Rev. D* **105**, 102001 (2022) arXiv:2111.15507

12. Searches for Gravitational Waves from Known Pulsars at Two Harmonics in the Second and Third LIGO-Virgo Observing Runs, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration, *Ap.J* **935**, 1 (2022). arXiv:2111.13106

13. Constraints on the cosmic expansion history from the third LIGO-Virgo-KAGRA Gravitational-Wave Transient Catalog, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration, *Ap.J* , (2021) (Accepted) arXiv:2111.03604

14. GWTC-3: Compact Binary Coalescences Observed by LIGO and Virgo During the Second Part of the Third Observing Run, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration, *PRX* , (2021) (Submitted) arXiv:2111.03606

15. Search for Gravitational Waves Associated with Gamma-Ray Bursts detected by Fermi and Swift during the O3b LIGO-Virgo Run, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration, *Ap.J* **928**, 186 (2022) arXiv:2111.03608

16. The population of merging compact binaries inferred using gravitational waves through GWTC-3, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration, , (2021) (Submitted) arXiv:2111.03634

17. All-sky, all-frequency directional search for persistent gravitational waves from Advanced LIGO's and Advanced Virgo's first three observing runs, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration, *Phys. Rev. D* **105**, 122002 (2022). arXiv:2110.09834

18. Search for subsolar-mass binaries in the first half of Advanced LIGO and Virgo's third observing run, LSC, Virgo, KAGRA, D. Jeong and S. Shandera. *Phys. Rev. Lett.* **129**, 061104 (2022). arXiv:2109.12197

19. Search for continuous gravitational waves from 20 accreting millisecond X-ray pulsars in O3 LIGO data, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration, *Phys. Rev. D* **105**, 022002 (2022) arXiv:2109.09255

20. GWTC-2.1: Deep Extended Catalog of Compact Binary Coalescences Observed by LIGO and Virgo During the First Half of the Third Observing Run, LIGO Scientific Collaboration, the Virgo Collaboration *Phys. Rev. D* , (2022) (Submitted) arXiv:2108.01045

21. All-sky search for long-duration gravitational-wave transients in the third Advanced LIGO and Advanced Virgo run, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration, *Phys. Rev. D* **104**,102001 (2021). arXiv:2107.13796

22. All-sky search for short gravitational-wave bursts in the third Advanced LIGO and Advanced Virgo run, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration, *Phys. Rev. D* **104**, 122004 (2021) arXiv:2107.03701

23. All-sky Search for Continuous Gravitational Waves in the Early O3 LIGO Data, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration, *Phys. Rev. D* **104**, 082004 (2021). arXiv:2107.00600

24. Observation of gravitational waves from two neutron star-black hole coalescences, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration, *Ap.J. Lett.* **915**, L5 (2021). arXiv:2106.15163

25. Search for intermediate mass black hole binaries in the third observing run of Advanced LIGO and Advanced Virgo, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration, *Astron. Ap.* **659**, A 84 (2022) arXiv:2105.15120

26. Constraints on dark photon dark matter using data from LIGO's and Virgo's third observing run, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration, *Phys. Rev. D* **105**, 063030 (2022) arXiv:2105.13085

27. Searches for continuous gravitational waves from young supernova remnants in the early third observing run of Advanced LIGO and Virgo, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration, *Ap. J* **921**, 80 (2021) arXiv:2105.11641

28. Search for lensing signatures in the gravitational-wave observations from the first half of LIGO-Virgo's third observing run, LIGO Scientific Collaboration, the Virgo Collaboration, *Ap. J* **923**, 14 (2021). arXiv:2105.06384

29. Constraints from LIGO O3 data on gravitational wave emission due to r-modes in the glitching pulsar PSR J0537-6910, LSC, Virgo, KAGRA plus D. Antonopoulou, Z. Arzoumanian, T. Enoto, C. M. Espinoza, and S. Guillot, *Ap. J* **922**, 71 (2021) arXiv:2104.14417

30. Gravitational-wave physics and astronomy in the 2020s and 2030s, M. Bailes, B.K. Berger, P. Brady et al, *Nat. Rev. Phys* **3**, 344 (2021).

31. Search for anisotropic gravitational-wave backgrounds using data from Advanced LIGO's and Advanced Virgo's first three observing runs, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration *Phys.Rev. D*, **104**,022005 (2021). arXiv:2103.08520

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33. Upper Limits on the Isotropic Gravitational-Wave Background from Advanced LIGO's and Advanced Virgo's First Three Observing Runs, LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA Collaboration *Phys.Rev. D*, **104** , 022004 (2021). arXiv:2101.12130

34. Diving below the spin-down limit: Constraints on gravitational waves from the energetic young pulsar PSR J0537-6910, LIGO Scientific Collaboration, Virgo Collaboration, KAGRA plus D. Antonopoulou, Z. Arzoumanian, T. Enoto, C. M. Espinoza, and S. Guillot, *Ap. J Lett*,**913** L27 (2021). arXiv:2012.12926

35. All-sky search in early O3 LIGO data for continuous gravitational-wave signals from unknown neutron stars in binary systems, The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys.Rev. D*, **103**, 064017 (2021). arXiv:2012:12128

36. **GWTC-2: Compact Binary Coalescences Observed by LIGO and Virgo During the First Half of the Third Observing Run,** The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys.Rev. X*, **11** , 021053 (2021). arXiv:2010:14527

37. **Tests of general relativity with binary black holes from the second LIGO-Virgo gravitational-wave transient catalog,** The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys.Rev. D*, **103**, 122002 (2021). arXiv:2010:14529

38. Population properties of compact objects from the second LIGO-Virgo Gravitational-Wave Transient Catalog The LIGO Scientific Collaboration, the Virgo Collaboration, *Ap. J. Lett*, **913**, L7 (2021). arXiv:2010:14533

39. Search for Gravitational Waves Associated with Gamma-Ray Bursts Detected by Fermi and Swift during the LIGO-Virgo Run O3a, The LIGO Scientific Collaboration, the Virgo Collaboration, *Ap. J*, **915**, 86 (2021). arXiv:2010:14550

40. Properties and astrophysical implications of the 150 Msun binary black hole merger GW190521, The LIGO Scientific Collaboration, the Virgo Collaboration, *Ap. J. Lett*, **900**, L13 (2020). arViv:2009:01090

41. **GW190521: A Binary Black Hole Merger with a Total Mass of 150 Msun,** The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys.Rev. Lett*, **125** , 101102 (2020). arXiv:2009:01075

42. Gravitational-wave constraints on the equatorial ellipticity of millisecond pulsars, The LIGO Scientific Collaboration, the Virgo Collaboration, Radio Astronmers *Ap. J. Lett*, **902**, L21 (2020). arViv:2007.14251

43. Book review of Relativity: The Special and General theory. 100th Anniversary Edition. Albert Einstein, with commentries and background material by Hanoch Gutfreund and Jurgen Renn; Bala Iyer, Current Science, 119, 134 (2020).

44. **GW190412: Observation of a Binary-Black-Hole Coalescence with Asymmetric Masses,** The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys.Rev*, **D 102** , 043015 (2020). arXiv:2004.08342

45. **GW190814: Gravitational Waves from the Coalescence of a 23 Solar Mass Black Hole with a 2.6 Solar Mass Compact Object,** The LIGO Scientific Collaboration, the Virgo Collaboration, *Ap. J. Lett*, **896**, L44 (2020). arXiv:2006:12611

46. **GW190425: Observation of a compact binary coalescence with total mass 3.4 Msun,** The LIGO Scientific Collaboration, the Virgo Collaboration, *Ap. J. Lett*, **892**, L3 (2020). arXiv:2001.1761

47. A joint Fermi-GBM and LIGO/Virgo analysis of compact binary mergers from the first and second gravitational-wave observing runs, Fermi-GBM instrument team, The LIGO Scientific Collaboration, the Virgo Collaboration, *Ap.J*, **893**, 100 (2020) . arXiv: 2001.00923

48. Open data from the first and second observing runs of Advanced LIGO and Virg o, The LIGO Scientific Collaboration, the Virgo Collaboration, *SoftwareX13*, 100658 (2021). arXiv: 1912.11716

49. Prospects for Observing and Localizing Gravitational-Wave Transients with Advanced LIGO, Advanced Virgo and KAGRA (by KAGRA, LSC and Virgo), The LIGO Scientific Collaboration, the Virgo Collaboration, the KAGRA collaboration, *Liv. Rev Rel.*, **23**, 3 (2020). arXiv:1304.0670

50. A guide to LIGO-Virgo detector noise and extraction of transient gravitational-wave signals, The LIGO Scientific Collaboration, the Virgo Collaboration, *Class. Quant. G*, **37**, 055002 (2020). arXiv:1908.11170

51. **A gravitational-wave measurement of the Hubble constant following the second observing run of Advanced LIGO and Virgo,** The LIGO Scientific Collaboration, the Virgo Collaboration, *Ap. J* **909**, 218 (2021). arXiv:1908.06060

52. An Optically Targeted Search for Gravitational Waves emitted by Core-Collapse Supernovae during the First and Second Observing Runs of Advanced LIGO and Advanced

Virgo, The LIGO Scientific Collaboration, the Virgo Collaboration, DLT-40, ASSASN *Phys. Rev. D* **101** , 084002 (2020) (Accepted) arXiv:1908.03584

53. Model comparison from LIGO-Virgo data on GW170817's binary components and consequences for the merger remnant, The LIGO Scientific Collaboration, the Virgo Collaboration, *Class. Quant. G*, **37**, 045006 (2020). arXiv:1908.01012

54. Search for eccentric binary black hole mergers with LIGO and Virgo during the first and second observing runs, The LIGO Scientific Collaboration, the Virgo Collaboration, *Ap. J*, **883**, 149 (2019). arXiv:1907.09384

55. Search for gravitational wave signals associated with gamma-ray bursts during the second observing run of Advanced LIGO and Advanced Virgo, The LIGO Scientific Collaboration, the Virgo Collaboration, IPN, *Ap. J*, **886**, 75 (2019). arXiv:1907.01443

56. Search for gravitational waves from Scorpius X-1 in the second Advanced LIGO observing run with an improved hidden Markov model, The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys. Rev. D* **100**, 122002 (2019). arXiv:1906.12040

57. Search for intermediate mass black hole binaries in the first and second observing runs of the Advanced LIGO and Virgo network, The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys. Rev. D* **100**, 064064 (2019). arXiv:1906.08000

58. **Gravitational wave amplitudes for compact binaries in eccentric orbits at the third post-Newtonian order: Memory contributions,** M. Ebersold, Y. Boetzel, C. K. Mishra, G. Faye, B. R. Iyer, P. Jetzer, *Phys. Rev. D* **100** , 084043 (2019). arXiv:1906.06263

59. All-sky search for short gravitational-wave bursts in the second Advanced LIGO and Advanced Virgo run, The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys. Rev. D* **100**, 024017 (2019). arXiv:1905.03457

60. **Gravitational-wae amplitudes for compact binaries in eccentric orbits at the third post-Newtonian order: Tail contributions and post-adiabatic corrections,** Y. Boetzel, C. K. Mishra, G. Faye, A. Gopakumar, B. R. Iyer *Phys. Rev. D* **100** , 044018 (2019) arXiv:1904.11814

61. Search for sub-solar mass ultracompact binaries in Advanced LIGO's second observing run, The LIGO Scientific Collaboration, the Virgo Collaboration and S. Shandera, *Phys. Rev. Lett* **123**, 161102 (2019). arXiv: 1904.08976

62. All-sky search for long-duration gravitational-wave transients in the second Advanced LIGO observing run, The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys. Rev. D* **99**, 104033 (2019). arXiv: 1903.12015

63. Directional limits on persistent gravitational waves using data from Advanced LIGO's first two observing runs, The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys. Rev. D* **100**, 062001 (2019). arXiv: 1903.08844

64. **Tests of General Relativity with the Binary Black Hole Signals from the LIGO-Virgo Catalog GWTC-1**, The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys. Rev. D* **100**, 104036 (2019). arXiv: 1903.04467

65. A search for the isotropic stochastic background using data from Advanced LIGO's second observing run, The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys. Rev. D* **100**, 061101(R) (2019). arXiv: 1903.02886

66. All-sky search for continuous gravitational waves from isolated neutron stars using Advanced LIGO O2 data, The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys. Rev. D* **100**, 024004 (2019). arXiv: 1903.01901

67. Searches for gravitational waves from known pulsars at two harmonics in 2015-2017 LIGO data, The LIGO Scientific Collaboration, the Virgo Collaboration, radio astronomers and NICER science team members, *Astrophys. J.* **879**, 10 (2019). arXiv: 1902.08507

68. Search for transient gravitational wave signals associated with magnetar bursts during Advanced LIGO's second observing run, The LIGO Scientific Collaboration, the Virgo Collaboration, *Astrophys. J.* **874**, 163 (2019). arXiv: 1902.01557

69. Narrow-band search for gravitational waves from known pulsars using the second LIGO observing run, The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys. Rev. D* **99**, 122002 (2019). arXiv: 1902.08442

70. Low-latency gravitational wave alerts for multi-messenger astronomy during the second Advanced LIGO and Virgo observing run, The LIGO Scientific Collaboration, the Virgo Collaboration, *Astrophys. J.* **875**, 161 (2019). arXiv: 1901.03310

71. 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, Dark Energy Survey, The LIGO Scientific Collaboration, the Virgo Collaboration, *Astrophys. J. Lett.* **876**, L7 (2019). arXiv: 1901.01540

72. Searches for Continuous Gravitational Waves from Fifteen Supernova Remnants and Fomalhaut b with Advanced LIGO, The LIGO Scientific Collaboration, the Virgo Collaboration, *Astrophys. J.* **875**, 122 (2019). arXiv:1812.11656.

73. **GWTC-1: A Gravitational-Wave Transient Catalog of Compact Binary Mergers Observed by LIGO and Virgo during the First and Second Observing Runs**, The LIGO Scientific Collaboration, the Virgo Collaboration, *PRX*, **9**, 031040 (2019). arXiv:1811.12907.

74. Binary Black Hole Population Properties Inferred from the First and Second Observing Runs of Advanced LIGO and Advanced Virgo, The LIGO Scientific Collaboration, the Virgo Collaboration, *Ap. J. Lett* **882** L24 (2019). arXiv:1811.12940.

75. **Tests of General Relativity with GW170817**, The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys. Rev. Lett.* **123**, 011102 (2019). arXiv:1811.00364.

76. Search for multimessenger sources of gravitational waves and high-energy neutrinos with Advanced LIGO during its first observing run, ANTARES, and IceCube, ANTARES, IceCube, The LIGO Scientific Collaboration, the Virgo Collaboration, *Astrophys. J.* **870**, 134 (2019). arXiv:1810.10693.

77. Search for gravitational waves from a long-lived remnant of the binary neutron star merger GW170817, The LIGO Scientific Collaboration, the Virgo Collaboration, *Astrophys. J.* **875**, 160 (2019). arXiv:1810.02581.

78. A Fermi Gamma-ray Burst Monitor search for electromagnetic signals coincident with gravitational-wave candidates in Advanced LIGO's first observing run, Fermi-GBM, The LIGO Scientific Collaboration, the Virgo Collaboration, *Astrophys. J.* **871**, 90 (2019). arXiv:1810.02764.

79. Search for sub-solar mass ultracompact binaries in Advanced LIGO's first observing run, The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys. Rev. Lett.* **121**, 231103 (2018). arXiv:1808.04771.

80. GW170817: Measurements of neutron star radii and equation of state, The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys. Rev. Lett.* **121**, 161101 (2018). arXiv:1805.11581.

81. Properties of the binary neutron star merger GW170817, The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys. Rev. X***9**, 011001 (2019), arXiv:1805.11579.

82. A Search for Tensor, Vector, and Scalar Polarizations in the Stochastic Gravitational-Wave Background, The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys. Rev. Lett.* **120**, 201102 (2018). arXiv:1802.10194.

83. Full Band All-sky Search for Periodic Gravitational Waves in the O1 LIGO Data, The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys. Rev. D* **97**, 102003 (2018). arXiv:1802.05141

84. Constraints on cosmic strings using data from the first Advanced LIGO observing run, The LIGO Scientific Collaboration, the Virgo Collaboration, *Phys. Rev. D* **97**, 102002 (2018). arXiv:1712.01168

85. All-sky search for long-duration gravitational wave transients in the first Advanced LIGO observing run, The LIGO Scientific Collaboration, the Virgo Collaboration, *Class.Quant.Grav.* **35**, 065009 (2018) arXiv:1711.06843

86. GW170608: Observation of a 19-solar-mass Binary Black Hole Coalescence, The LIGO Scientific Collaboration, the Virgo Collaboration, *Astrophys.J.* **851** L35 (2017). arXiv:1711.05578

87. Search for post-merger gravitational waves from the remnant of the binary neutron star merger GW170817, The LIGO Scientific Collaboration, the Virgo Collaboration, *Ap.J.L.*, **851**, L16 (2017). arXiv:1710.09320

88. Nobel for gravitational waves, P. Ajith and B.R. Iyer, *Curr.Sc.*, **113**, 1490 (2017).

89. Search for High-energy Neutrinos from Binary Neutron Star Merger GW170817 with ANTARES, IceCube, and the Pierre Auger Observatory, The LIGO Scientific Collaboration, the Virgo Collaboration, *Astrophys.J.* **850**, L35 (2017). arXiv:1710.05839

90. On the Progenitor of Binary Neutron Star Merger GW170817, The LIGO Scientific Collaboration, the Virgo Collaboration, *Ap.J. L.,* **850**, L40 (2017). arXiv:1710.05838

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7. *Quantum Gravity, Gravitational Radiation and Large Scale Structure in the Universe,*
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10. *Highlights in Gravitation and Cosmology,*
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Internal reports

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7. Proposal Outline of IndIGO-I, IndIGO participation in LIGO-Australia, April 2011

8. Executive Summary Minutes of meeting on The Indian Road-Map for Gravitational Wave Astronomy: IndIGO - ACIGA meeting on LIGO-Australia, Delhi, February 2011.

9. Summary of the meeting on Australian International Gravitational Observatory: Project Plan and benefits, and 3 day Workshop on Experimental General Relativity at Perth, February 2010

10. Summary of the GW sessions during first Galileo-Xu meeting at Shanghai, October 2009.

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Invited Talks at Conferences and Meetings

1. Gravitational Physics at RRI: 1975 - 2022, Themes and Highlights, Platinum Jubilee Year Launch Event, Raman Research Institute, Bangalore, 7 Nov 2022

2. MPM-PN Explorations of Inspiraling Compact Binaries: Down Indo-French Memory Lane, Damour Fest - Adventures in Gravitation, IHES, Bures sur Yvette, France Oct 14 2021 (online).

3. Gravitational Wave astronomy: Current status and Future Prospects, Regional Astronomy Meet: Future astronomy in India, 8 Sept 2021 (Online).

4. Introduction to General Relativity, Providence Women's college, Kozhikode (3 Lectures) 25-26 Nov 2019

5. From Gravitational Wave Detection to Multi-Messenger Astronomy, Keynote Lecture XI Biennial Conference of Physics Academy of North East (PANE), Assam Univ, Diphu Campus, 21 -23 Nov 2018

6. Introduction to General Relativity, Workshop on Gravitation and Gravitational Waves, Assam Univ, Silchar Campus, (3 Lectures) Oct 7 - 13 2018

7. Chair of Panel on Binary Black Holes -1 at PAX, IUCAA, 7 -10 August 2018

8. Chair of Panel Discussion on Ringdown, and Panel Member for Science drivers for 3G detectors: Fundamental Physics and Cosmology, PAX Nikhef, 14 -17 Aug 2017

9. Deciphering the universe with gravitational waves, National Conference on Recent Trends in the Study of Compact Objects Theory and Observation (RETCO - III), IIST, Thiruvananthapuram, 5 June 2017

10. C.V. Vishveshwara: Beyond the Black Hole Trail, Discussion meeting "Remembering C.V. Vishveshwara", ICTS-TIFR, Bangalore, 23 Feb 2017

11. Advanced LIGO: The Discovery Instrument, 104^{th} Indian Science Congress, Tirupati, Session on GW, 6 Jan 2017

12. The fascinating story of gravitational wave detection, XXII DAE-BRNS High Energy Physics Symposium, Delhi University, 13 Dec 2016

13. One small strain in LIGO, one giant leap for Gravitational Wave astronomy, Evening Lecture, 61 DAE-BRNS Symposium on Nuclear Physics, SINP, Kolkata 7 Dec 2016

14. From IndIGO to LIGO-India, Asian-Pacific Gravitational Wave Forum, Hong Kong, 30 Sept 2016

15. The first direct detection of gravitational waves: Not with a whimper but a bang, M.C. Joshi memorial lecture, Mumbai Univ, 19 Oct 2016

16. LIGO-India, GWIC, Columbia Univ, 10 July 2016

17. From prediction to detection: Highlights of the fascinating history of gravitational waves, Mid year meeting of Indian Academy of Sciences, Bangalore, 1 July 2016.

18. Beyond linearized approximation of General Relativity for Gravitational Wave detection, Summer School in GW Astronomy, (3 Lectures) ICTS-TIFR, Bangalore July 1-3, 2015

19. Experiments driving Theory: Gravitational wave detection and the two body problem in general relativity, Amaldi 11 meeting, Gwanju, Korea, 22 June 2015

20. IndIGO update on LIGO-India, GWIC, Gwanju, Korea, 21 June 2015

21. LIGO-India: expanding the international network of gravitational wave detectors, Focus Session: Beller Lectureship on Gravitational wave Detection, APS April meeting April 12 2015.

22. Chipping in to detect and locate the elusive gravitational wave sources: Looking back and Looking forward, Vaidya Raychaudhuri Endowment Lecture, XXI IAGRG meeting, RRI, 19 March 2015

23. Status of LIGO-India, LVC Caltech Remote Plenary, 12 March 2015

24. LIGO-India: Towards Multi-messenger Astronomy, Astronomy, Cosmology and Fundamental Physics with Gravitational Waves, CMI 2 March 2015

25. LIGO-India: Beyond detection to Gravitational Wave Astronomy, 33rd Meeting of The Astronomical Society of India, NCRA, 19 Feb 2015

26. Report on LIGO-India, LIGO Virgo Collaboration meeting, Stanford University,Stanford, 25 - 28 August 2014

27. IndIGO update on LIGO-India, GWIC, Banff, June 2014

28. LIGO-India status update, (19 March 2014), LIGO Virgo Collaboration meeting, Artemis group (Observatoire de la Nice), Nice, 17-21 March 2014

29. LIGO-India update, (25 Sept), LIGO Virgo Collaboration meeting, AEI, Hannover, 22-27 Sept 2013

30. IndIGO, Report 2012-13, GWIC meeting, Warsaw July 7, 2013.

31. From IndIGO to LIGO-India, Interface of Numerical Relativity with Gravitational wave astronomy, neutrino physics and high energy astrophysics, ICTS, Bangalore, July 1 2013.

32. PN convergence for spinning binaries, Interface of Numerical Relativity with Gravitation al wave astronomy, neutrino physics and high energy astrophysics, ICTS, Bangalore, June 25, 2013.

33. LIGO-India update, LIGO Virgo Collaboration meeting, Bethesda, 20 March 2013.

34. The long walk towards gravitational wave astronomy, Keynote address, IAGRG-27, Srinagar, Garhwal, 7 March 2013.

35. Gravitational Waves from inspiraling compact binaries in general orbits and their applications to EOM, Equations of motion in relativistic gravity, 21 Feb 2013

36. Update on LIGO-India, LIGO Virgo Collaboration meeting, Rome Sept 12, 2012

37. IndIGO, Report 2011-12, GWIC meeting, Rome Sept 11, 2012.

38. LIGO-India, Current Update, IPR, Bhat, Feb 2012

39. LIGO-India, Current Status, Workshop on GW, IUCAA, Pune, 2011, Dec 2011

40. IndIGO and LIGO-India, Introductory remarks, EGO-IndIGO meeting on GW, IUCAA, Pune Nov 2011

41. IndIGO and LIGO-India, IndIGO meeting on LIGO-India, HBCSE, Mumbai, Aug 2011

42. The case for IndIGO membership of GWIC, GWIC meeting, Cardiff, July 2011.

43. IndIGO: Genesis, Highlights and current status, Welcome address at The Indian Road-Map for Gravitational Wave Astronomy: IndIGO - ACIGA meeting on LIGO-Australia, Delhi, February 2011.

44. Gravitational waves from binary black holes, Chandrasekhar Centenary Conference, IIA, Bangalore (2010).

45. A Comparison of PN templates for inspiralling compact binaries, Australian International Gravitational Observatory: Project Plan and benefits, Perth, Australia Feb, 2010

46. Gravitational Waves: A new window to the universe, SERC winter school on Nuclear astrophysics and neutrino astrophysics, Calicut University, February 2010

47. From Einstein's quadrupole formula to GW phasing, Feb 2010 SERC winter school on Nuclear astrophysics and neutrino astrophysics, Calicut University, February 2010

48. From Principle of Equivalence to Nature of Gravitation: Albert Einstein's Inspiration (4 Lectures), Physics Department, Calicut University, Kozikode, Feb 2010

49. Gravitational Waveforms for Binary Black Holes, First Galileo-Xu Guangqi Meeting, Shanghai, China, October, 2009

50. Gravitational waves from inspiralling compact binaries in quasi-elliptical orbits - A ready reckoner,
    Post Newton 2008, International conference, Jena, June 2008.

51. The Long Walk Towards Gravitational Wave Detection,
    Recent Advances in Gravitation and Cosmology, Jamia Millia Islamia, New Delhi, 2007.

52. Gravitational waves from inspiralling compact binaries in elliptical orbits,
    Gravitational wave data analysis workshop, Institut Henri Poincare, Paris, France, 2006.

53. A course of 6 lectures on
    a.) Gravitational waves from inspiralling compact binaries in general orbits;
    b.) Comparison of detection templates for gravitational waves from inspiralling

compact binaries;
c.) Parameter estimation of gravitational wave chirps by using the 3.5PN phasing formula;
GR Trimester, Institut Henri Poincarè, Paris, France, 2006.

54. Picking up strains of the gravitational wave symphony,
Einstein's Theories Centenary Conference, Mumbai 2005

55. Chairman of the Workshop on Analytical Approximation and Perturbation Methods at the 17th International Conference on General Relativity and Gravitation, Dublin, Ireland, 2004.

56. The search for Gravitational waves: Current status of selected topics,
XXII IAGRG Meeting, IUCAA, Pune, India 2002.

57. Gravitational waves from inspiraling compact binaries: PN waveforms and resummed extensions,
Focus workshop on Initial Data, State College, USA, 2002.

58. Current status of PN computations of binary inspiral,
Gravitational wave source workshop, Livingston, USA, 2002.

59. Gravitational Wave Astronomy - Probing Physics and Unravelling Astrophysics,
21^{st} Meeting of Astronomical Society of India, IUCAA,
Pune, 2002.

60. Padé approximants for gravitational waves from inspiraling compact binaries,
JGRG-2000, Osaka, Japan (2000).

61. Second post-Newtonian gravitational wave polarisations for inspiralling compact binaries in elliptical orbits,
Rencontres de Moriond on Gravitational waves and experimental gravity, Les arcs, France, 1999.

62. Co - Chairman with Luc Blanchet of Workshop on Analytical Approximation and Perturbation Methods at the 15th International
Conference on General Relativity and Gravitation, Pune, India, 1997.

63. Gravitational Radiation Reaction,
Golden Jubilee Discussion Meeting on Gravitational Waves, RRI, Bangalore, 1997.

64. Gravitational wave generation and radiation reaction for inspiralling compact binaries,
Golden Jubilee Symposium on Gravitation and Particle Physics, PRL, Ahmedabad, 1996.

65. Gravitational waves from inspiralling compact binaries,
XVIII IAGRG meeting, IMSc., Madras, 1996.

66. Joint Coordinator with K. Kokkotas of Workshop on Gravitational Waves at ICGC95, IUCAA, Pune, 1995.

67. Gravitational Radiation Reaction,
Workshop on Gravitational Waves, IUCAA, 1995.

68. Approximation and Perturbation techniques in gravitational radiation theory,
Indian Math. Soc. Symposium on Gravitational waves and Astrophysics, Pune University, 1994.

69. The Post Newtonian Spin Octupole Moment,
Workshop on Gravitational Waves from Coalescing Binaries, Caltech, Pasadena, 1994.

70. Lectures on Approximation Methods, Multipole Techniques and Gravitational Radiation Damping,
Mini Workshop on Gravitational Radiation Theory, IUCAA, Pune, 1993.

71. Chairman of the Workshop on Approximation and Perturbation Methods at the 13th International Conference on General Relativity and
Gravitation, Cordoba, Argentina, 1992.

72. Lectures on Multipole Expansion Techniques for Gravitation Radiation Problems,
Advanced Institutes on Gravitation Theory, Cochin, 1991.

73. The Generation Problem in Gravitational Radiation Theory,
Second International Conference on Gravitation and Cosmology, Ahmedabad, 1991.

74. Lectures on Killing Vectors, Symmetries, Gravitational Collapse and Compact Objects,
Silver Jubilee Institute on General Relativity and Cosmology, Mysore, 1989.

75. Black Hole Thermodynamics,
South Zone Winter School in General Relativity and Cosmology, Mysore, 1987.

76. Lectures on Quantum Field Theory in Black Hole Spacetimes,
UGC Instructional Workshop on Gravitation, Quantum Fields and Superstrings, Madras, 1986.

77. Lectures on Quantum Field Theory in Curved Spacetime: Canonical Quantisation,
UGC Instructional Workshop on Gravitation, Gauge theories and the Early Universe, Bangalore, 1985.

78. Quantum Field Theory in Curved Spacetime: A Biased Status Report,
Annual IAGRG Meeting, Burdwan, 1985.

79. Black Holes are not forever,
Indian Academy of Sciences Meeting, Madurai, 1985.

80. Lectures on General Relativity,
Summer Institute on Relativity and Cosmology, Madurai, 1984.

81. Core-Envelope Models of Collapsed Objects,
Workshop on Gravitation and Relativistic Astrophysics, Ahmedabad, 1982.

Contributed Papers at Conferences

1. IndIGO update on LIGO-India, APS Physics April 2013 meeting, Denver.

2. The 2.5PN linear momentum flux and associated recoil from inspiralling compact binaries in quasi-circular orbits: Non-spinning case, Chandra Kant Mishra, K.G. Arun and Bala R Iyer, Relativity and Gravitation - 100 years after Einsten in Prague, June 2012.

3. Post-Newtonian prediction for the (2,2) mode of the gravitational wave emitted by compact binaries, G. Faye, S. Marsat, L. Blanchet and B. R. Iyer, 9th LISA Symposium, Paris, 21 25 May 2012.

4. Nonspinning inspiralling compact binaries in quasi circular orbits: 2.5 PN linear momentum loss and associated recoil, Chandra Kant Mishra, K.G. Arun and Bala R Iyer, 9 ICGC, Goa, Dec 2011.

5. Parametrized tests of post-Newtonian theory using Advanced LIGO and Einstein Telescope: C.K. Mishra, K.G. Arun, B.R.Iyer and B.S. Sathyaprakash, Amaldi 9, Cardiff, July 2011.

6. Parametrized tests of post-Newtonian theory using GW observations,
C. K. Mishra, K. G. Arun, B. R. Iyer and B. s. Sathyaprakash, XXVI meeting of IAGRG, HRI, Allahabad, India, January 2011.

7. 5.5PN spherical harmonic modes and resummed waveforms for a particle in circular orbit around a Schwarzschild black hole,
R. Fujita and B. R. Iyer, 19th International Conference on General Relativity and Gravitation, (GR19), Mexico city, Mexico, July 2010.

8. Testing post-Newtonian theory using Advanced LIGO and Einstein Telescope,
C. Mishra, K.G. Arun, B.R. Iyer, and B.S. Sathyaprakash, 19th International Conference on General Relativity and Gravitation, (GR19), Mexico city, Mexico, July 2010.

9. 3PN gravitational wave polarisations from inspiralling compact binaries,
Luc Blanchet, Guillaume Faye, Bala R. Iyer and Siddhartha Sinha, 7th International LISA Symposium, Barcelona, June 2008.

10. LISA as a Dark energy probe,
K.G. Arun, Bala R. Iyer, Chandrakant Mishra, B.S. Sathyaprakash, Siddhartha Sinha and Chris Van den Broeck, 7th International LISA Symposium, Barcelona, June 2008.

11. Precision Cosmology with LISA,
K.G. Arun, B. R. Iyer, B.S. Sathyaprakash, S. Sinha and C. Van den Broeck, 6th International Conference on Gravitation and Cosmology, IUCAA, Pune, Dec 2007

12. The 3PN gravitational wave luminosity from inspiralling compact binaries in eccentric orbits;
(K.G. Arun, L. Blanchet, B.R. Iyer and M.S.S. Qusailah) - XVIII International Conference on General Relativity and Gravitation (GR18), Sydney, Australia, 2007.

13. Testing post-Newtonian structure of general relativity using black hole inspirals;
(K. Arun, B. R. Iyer, M. S. S. Qusailah and B. S. Sathyaprakash) - XVIII International Conference on General Relativity and Gravitation (GR18), Sydney, Australia, 2007.

14. How higher harmonics can help LISA to see more massive binary supermassive black hole inspirals;
(K. Arun, B. R. Iyer, B. S. Sathyaprakash and S. Sinha) - XVIII International Conference on General Relativity and Gravitation (GR18), Sydney, Australia, 2007.

15. Higher signal harmonics, LISA's angular resolution and, dark energy;
(K.G. Arun, Bala R. Iyer, B.S. Sathyaprakash, Siddhartha Sinha and Chris Van den Broeck) - XVIII International Conference on General Relativity and Gravitation (GR18), Sydney, Australia, 2007.

16. Testing post-Newtonian theory with gravitational wave observations,
(K. Arun, B. R. Iyer, M. S. S. Qusailah and B. S. Sathyaprakash) - LISA: Gravitational-wave astronomy in space, RAS, London, U.K.; 2006

17. The 2.5PN gravitational wave polarisations from inspiralling compact binaries in circular orbits,
(K. G. Arun, L. Blanchet M. S. S Qusailah and B. R. Iyer) - GR XVII Dublin, Ireland, 2004.

18. The 2.5PN gravitational wave polarisations from inspiralling compact binaries in circular orbits,
(K. G. Arun, L. Blanchet and B. R. Iyer) - International Conference on Gravitation and Cosmology, Kochi, 2004.

19. Padé approximants for truncated post-Newtonian neutron star models,
(A. Gupta, A. Gopakumar, B. R. Iyer and Sai Iyer) - Numerical Relativity 2001, Krugersdorp, South Africa, 2001.

20. Effective one body search templates for gravitational waves from binary inspiral,
(T. Damour, B. R. Iyer and B. S. Sathyaprakash) - 16th International conference on General Relativity and Gravitation, Durban, South Africa, 2001.

21. Gravitation-wave phasing of compact binary systems to 7/2 post Newtonian order,
(L. Blanchet, G. Faye, B. R. Iyer and B. Joguet) - 16th International conference on General Relativity and Gravitation, Durban, South Africa, 2001.

22. Third post-Newtonian generation of gravitational waves by binary systems: the multipole moments,
(L. Blanchet, B. R. Iyer and B. Joguet) - 15th International conference on General Relativity and Gravitation, IUCAA, Pune, 1997.

23. P-approximants and improved filters for gravitational waves from inspiralling compact binaries,
(T. Damour, B. R. Iyer and B. S. Sathyaprakash) - 15th International conference on General Relativity and Gravitation, IUCAA, Pune, 1997.

24. Second post-Newtonian gravitational radiation reaction for two body systems,
(A. Gopakumar, B. R. Iyer and Sai Iyer) - 15th International conference on General Relativity and Gravitation, IUCAA, Pune, 1997. (T. Damour, B. R. Iyer and B. S. Sathyaprakash) - Second Amaldi conference on gravitational waves, Geneva, 1997.

25. Second post newtonian gravitational radiation reaction for inspiralling compact binaries,
(A.Gopakumar, B. R. Iyer and Sai Iyer) - Second Amaldi conference on gravitational waves, Geneva, 1997.

26. Gravitational waves from inspiralling compact binaries: 2PN Evolution for general orbits,
(A. Gopakumar and B. R. Iyer) - Third International conference on Gravitation and Cosmology, IUCAA, Pune, 1995.

27. Gravitational waves from inspiralling compact binaries: Energy and angular momentum fluxes to 2PN order for general orbits,
(A. Gopakumar and B. R. Iyer) - 14th International Conference on General Relativity and Gravitation, Florence, 1995.

28. Gravitational waves from inspiralling compact binaries: 2PN Evolution of the orbital period,
(A. Gopakumar and B. R. Iyer) - Conference on Astrophysical Sources of Gravitational Waves, State College, 1995.

29. The 1PN accurate Current Octupole Moment,
(T. Damour and B. R. Iyer) - Gravitational Waves from Coalescing Binaries, Pasadena, 1994.

30. Separability of the Dirac Equation in an Extended Class of Spacetimes with Local Rotational Symmetry,
(B.R. Iyer and N. Kamran) - 13th International Conference on General Relativity and Gravitation, Cordoba, 1992.

31. Post-Newtonian Generation of Gravitational Waves : Semirelativistic Spin Moments,
(T. Damour and B.R. Iyer) - TEXAS/ESO-CERN
Symposium, Brighton, 1990.

32. The Radiating Vaidya Metric in Higher Dimensional Spacetime,
(B.R. Iyer and C.V. Vishveshwara) - 12th International Conference on General Relativity and Gravitation, Boulder, 1989.

33. Scalar Perturbations of Higher Dimensional Spherical Black Holes,
(B.R. Iyer, Sai Iyer and C.V. Vishveshwara) - 12th International Conference on General Relativity and Gravitation, Boulder, 1989.

34. The Geometry of Killing Trajectories and Black Holes in Higher Dimensions,
(B.R. Iyer and C.V. Vishveshwara) - International Conference on Gravitation and Cosmology, Goa, 1987.

35. Spacetimes with Local Rotational Symmetry and the Dirac Equation,
(B.R. Iyer and C.V. Vishveshwara) - 11th International Conference on General Relativity and Gravitation, Stockholm, 1986.

36. Magnetisation of all Stationary Cylindrically Symmetric Vacuum Metrics,
(B.R. Iyer and C.V. Vishveshwara) - 10th International Conference on General Relativity and Gravitation, Padova, 1983.

37. Hawking Radiation of Scalar and Dirac Quanta from a Kerr black hole,
(B.R. Iyer and Arvind Kumar) - Einstein Centenary Symposium, Ahmedabad, 1979.

Science Outreach

1. General Relativity:From Insight and Inspiration to Spectacular Observational Success, JNP, Bangalore, Summer Program From Web of Life to the Universe, 28 May 2022.
2. Gravitational Waves: Current Status and Future Prospects, Optica students chapter, IIT-Delhi, 18 Dec 2021 (online).
3. Probing the universe with gravitational waves, Eureka 5.0, Thapar Amateur Astronomers Society, 5 Dec 2021 (Online)
4. Unravelling the Universe with Gravitational Waves and Multi-messenger Astronomy, Seminar series, Physics Dept, IIT Delhi, 27 Aug 2021. (Online).
5. From Gravitational Wave Detection to Multi-messenger Astronomy, AstraX 21, IIT Mandi 14 May 2021 (ONline).
6. The Detection of Gravitational Waves and the Dawn of Multi-messenger Astronomy. One-day Symposium on High Energy Physics, SRM University AP 1 May 2021 (Online)
7. Gravitational waves: The strains of a new astronomy, in The First (quantum) Gravitation and Astrophysics Meet (qGAME), SeshFest, Delhi Univ, 12 April 2021 (online)
8. Gravitational Waves: The whispers of a new astronomy, National science day program on The first five years of direct detection of gravitational waves, 28 Feb 2021, JNP, Bangalore (online)
9. Nobel Prize in Physics 2020, KAAS and Davangere University, 23 Dec 2020 (Online).
10. Conversation associated with the screening of the movies on P.C. Vaidya and A.K. Raychaudhuri, ICTS and BIC 17 Dec 2020
11. Gravitational waves: From a fascinating marathon to a spectacular sprint, Golden Jubilee Alumini Network (GYAN) lecture, 26 Aug 2020.
12. Deciphering the Universe with Gravitational Waves, Breakthrough Science Society Webinar on Science and Scientific Thinking, 5 July 2020.
13. Gravitational Waves and the Two Body problem in General Relativity, GW@Home with LIGO-India, 15 April 2020
14. The fascinating interplay of gravitational wave detection and the two-body problem in general relativity, Colloquium, Institute of Mathematical Sciences, Chennai, 6 Feb 2020
15. Experiments driving theory: The two-body problem in general relativity, Brahmagupta Physics Colloquium, IIT, Madras, 22 Jan 2020
16. The Detection of Gravitational Waves and the Dawn of the associated Multi-messenger Astronomy, Scientia, BITS Pilani, Pilani, 17 Jan 2020.

17. Faint Strains of the Gravitational Wave Symphony and the Dawn of Multi-messenger Astronomy, Einstein Lecture, Calicut University, Kozhikode, 25 Nov 2019

18. The physical basis of general relativity and its implications, Providence Women's College, Kozhikode, 25 Nov 2019

19. The Long Walk Towards Gravitational Wave Detection and the Rapid Sprint Towards Multi-Messenger Astronomy, 2 Nov 2019, Vishveshwara-Sarabhai Endowment lectures, IIIT, Allahabad.

20. Not with a Whimper but a Bang: From Gravitational Wave Detection to Multi-Messenger Astronomy, Oct 21 2019, Justin Huang Colloquium, Univ of Missouri, Columbia

21. From Gravitational Wave Detection to Multi Messenger Astronomy JNP Summer Program "From the Web of Universe to Life", 1 June 2019

22. Introduction to Einstein's General Relativity, JNP Summer Program "From the Web of Universe to Life", 1 June 2019

23. The discovery of Gravitational waves and the spectacular launch of multi-messenger astronomy, PES University, Bangalore, 26 Sept 2018

24. One small strain in LIGO and Virgo, One giant leap for multi-messenger astronomy, Central University of Karnataka, Kalaburagi 13 July 2018

25. One small strain in LIGO and Virgo, One giant leap for multi-messenger astronomy, Science Festival - 2018, Bangalore Science Forum, National College, Bangalore, 10 July 2018

26. From Gravitational Wave Detection to Multi-Messenger Astronomy, Founder's Day celebrations, Poornaprajna Institute of Scientic Research (PPISR), Bangalore, 5 July 2018.

27. The Dawn of MultiMessenger Astronomy, JNP Summer Program, 24 May 2018.

28. Einstein's Theory of Gravitation: General Relativity, JNP Summer Program, 24 May 2018.

29. The Detection of Gravitational Waves and the Dawn of Multi Messenger Astronomy, Stephen Hawking memorial Lecture, S&T club, Dr. Ambedkar Institute of Technology, Bangalore, 12 April 2018.

30. The Detection of Gravitational Waves and the Dawn of Multi Messenger Astronomy, Seminar on "Relativity and Gravitational Waves", J.S.S. College, Mysore, 9 March 2018.

31. The Rapid Leap from Gravitational Wave Detection to Multi-Messenger Astronomy, Distinguished BOSE-125 Lecture, S.N.Bose Centre for Basic Sciences, Kolkata, March 9 2018.

32. From Gravitational Wave Detection to Multi-Messenger Astronomy, Science Day, Vijaya College, Bangalore 28 Feb 2018.

33. The detection of gravitational waves and the two body problem in general relativity - A personal recall, IOP, Bhubaneswar 29 Jan 2018.

34. Deciphering the universe by gravitational wave observations, Silver Jubilee year of Samanta Chandrasekhar Amateur Astronomy Association (SCAAA), Bhubaneswar, 28 Jan 2018.

35. The detection of gravitational waves and the two body problem in general relativity - A personal view, KL Memorial Distinguished Lecture, CMI, Chennai, 17 Jan 2018

36. The fascinating story of gravitational wave detection: Physics Nobel 2017 and Beyond.., VII All India Young Scientist Convention, Periyar University, Salem 21 Dec 2017

37. The fascinating story of gravitational wave detection: Physics Nobel 2017 and Beyond.., MES Nobel Lectures 2017, MES College, Bangalore, 19 Nov 2017

38. The fascinating story of gravitational wave detection: Physics Nobel 2017 and Beyond.., Phi Delta Aplha, IISc, Bangalore, 11 Nov 2017

39. The fascinating story of gravitational wave detection: Physics Nobel 2017 and Beyond.., IIAR, Gandhinagar, 8 Nov 2017

40. Einstein's General Relativity: From Insight to Inspiration, IIAR, Gandhinagar,8 Nov 2017

41. The fascinating story of gravitational wave detection: Physics Nobel 2017 and Beyond.., ICTS-TIFR, Bangalore, 30 Oct 2017

42. Introduction to General Relativity, JNP Summer Program, 24 May 2017

43. The detection of Gravitational waves by LIGO, JNP Summer Program, 24 May 2017

44. Introduction to General Relativity, One day seminar on Relativity, Gravity and cosmology, Govt College, Mandya, 5 April 2017

45. The detection of Gravitational waves by LIGO, One day seminar on Relativity, Gravity and cosmology, Govt College, Mandya, 5 April 2017

46. An Introduction to General Relativity and Gravitational Waves, HBCSE, Mumbai, 1 Mar 2017

47. The top scientific breakthrough of 2016: The detection of Gravitational waves by LIGO, Science Day Lecture of TIFR Alumini Association, 28 Feb 2017

48. The long walk towards gravitational wave detection; But Right again, Albert Einstein, XIV Abdus Salam Memorial Lecture 2016-17, Jamia Milia Islamia, Delhi Jan 14, 2017

49. The detection of Gravitational waves by LIGO: The top scientific breakthrough of 2016, KAAS, VVS, Bangalore, 12 Jan 2017

50. The discovery of gravitational waves by LIGO, Christ Junior College, Bangalore, 25 Nov 2016

51. Einstein's General Relativity: From Insight to Inspiration, Christ Junior College, Bangalore, 25 Nov 2016

52. Introduction to general relativity, Ramiah University, 12 Nov 2016

53. LIGO-India: From gravitational wave detection to gravitational wave astronomy, Physics Dept, Central University of Kalburgi, 4 Nov 2016

54. Einstein's General Relativity: From Insight to Inspiration, Physics Dept, Central University of Kalburgi, 4 Nov 2016

55. Triple golds at the centenary of general relativity, NCRA, Pune, 19 Sept 2016

56. An introduction to Gravitational waves and LIGO-India, BASE, JNP, Bangalore, 2 June 2016.

57. An Introduction to General Relativity, BASE, JNP, Bangalore, 2 June 2016.

58. LIGO-India: From Gravitational Wave Detection to Gravitational Wave Astronomy, IAPT, IISc, Bangalore 29 May 2016.

59. Einstein's General Relativity: From Insight to Inspiration, IAPT, IISc, Bangalore 29 May 2016.

60. Introducing LIGO-India, Technology Day Celebrations 2016, NAL, Bangalore 12 May 2016

61. Modelling Gravitational waves from coalescing compact binaries, Indo-French meeting on 750 GEV excess, ICTS-TIFR, Bangalore, 5 May 2016

62. LIGO-India Status, LVC Budapest Meeting Plenary, Budapest, 2 Sept 2015

63. LIGO-India: From Gravitational Wave Detection to Gravitational Wave Astronomy, at 100th year celebration of Einstein's works, BIT, Bangalore, 23 April 2016

64. Einstein's General Relativity: From Insight to Inspiration, at 100th year celebration of Einstein's works, BIT, Bangalore, 23 April 2016

65. Panel Discussion during The Future of Gravitational-Wave Astronomy, ICTS, Bangalore, 7 April 2016

66. Modeling gravitational waves from coalescing compact binaries, Phys. Dept., IISc, Bangalore, March 3 2016

67. Press meeting at JNP, Bangalore on The science of the Detection of gravitational waves, Feb 26 2016

68. Press Meet, The Universe in a New Light: Gravitational Waves Detected 100 Years after Einstein's Prediction, ICTS, Bangalore Feb 13 2016

69. LIGO-India: Towards gravitational-wave astronomy, The Universe in a New Light: Gravitational Waves Detected 100 Years after Einstein's Prediction, ICTS, Bangalore Feb 13 2016

70. Einstein's General Relativity: From Insight to Inspiration, Sacred Hearts College, Chalakudy, Feb 3, 2016

71. General Relativity: Beyond insight and elegance to observations and astronomy, Mahathma Gandhi University, Feb 2 2016

72. LIGO-India: Beyond Gravitational Wave Detection to Gravitational Wave Astronomy, Mahathma Gandhi University, Feb 2 2016

73. General Relativity: Beyond insight and elegance to observations and astronomy, CUSAT, Kochi, Feb 1 2016

74. LIGO-India: Beyond Gravitational Wave Detection to Gravitational Wave Astronomy, CUSAT, Kochi, Feb 1 2016

75. Gravitational Wave Primer, Utkal University, Bhubaneshwar, Nov 16 2015

76. LIGO-India: Beyond Gravitational Wave Detection to Gravitational Wave Astronomy, Year of Light Conference, Einstein Series of Lectures (ICTS), Utkal University, Bhubaneshwar, Nov 15 2015

77. Einstein's General Relativity: From Insight to Inspiration, Utkal University, Bhubaneshwar, Nov 14 2015

78. The elusive GW: A GR centenary Perspective, IIA, Bangalore, 22 Oct 2015

79. LIGO-India, Beyond GW detection to GW Astronomy, JNP, Bangalore, 11 Oct 2015

80. The elusive GW: A GR centenary Perspective, TIFR, Mumbai, 8 Aug 2015

81. LIGO-India: Where do Einstein's messengers come from? IISER Thiruvananthapuram, 9 Feb 2015

82. Einstein's General Relativity: From Insight to Inspiration, IISER Thiruvananthapuram, 9 Feb 2015

83. Panel discussion on *Cultivation and spread of a scientific culture and the challenges ahead*, All India Science Congress 2014, Breakthrough Science society, 18 Oct 2014

84. The detection of gravitational waves and the two body problem in general relativity, LIGO Caltech, 19 Aug 2014

85. What is Einstein's General Relativity? ICTS outreach, Jain Univ, 13 Sept 2014

86. Panel Discussion on *Necessity of Basic Science in the present world, People's Science Fest*, Breakthrough Science society, KLEN College Bangalore 26 July 2014

87. LIGO-India: Inaugurating Gravitational Wave Astronomy, JNP, Bangalore, 21 May 2014

88. From Newtonian gravity to general relativity, JNP, Bangalore, 21 May 2014

89. From GW detection to GW Astronomy, IISER, Bhopal, 5 April 2014

90. LIGO-India: Locating Einstein's messengers and Inaugurating Gravitational Wave Astronomy, IISER, Bhopal 4 April 2014

91. Relativistic Gravitation: From Insight to Inspiration, IISER, Bhopal 4 April 2014

92. LIGO-India: Locating Einstein's messengers and Inaugurating Gravitational Wave Astronomy, IISER, Kolkata 22 Feb 2014

93. LIGO-India: Locating Einstein's messengers and Inaugurating Gravitational Wave Astronomy, Presidency university, 21 Feb 2014

94. LIGO-India: Locating Einstein's messengers and Inaugurating Gravitational Wave Astronomy, IIT Kharagpur 20 Feb 2014

95. LIGO-India: Locating cosmic chirps in the dark universe, Public lecture on 6 Sept during Field Theoretic Aspects of Gravity (FTAG 2013), IIT Gandhinagar, 5 8 Sept 2013.

96. Relativistic gravitation: From insight to inspiration, NIT, Surathkal (Science day celebrations), 28 Feb 2013.

97. LIGO-India : Where do Einstein's messengers come from? NIT, Surathkal (Science day celebrations), 28 Feb 2013.

98. From Relativistic Gravitation to Einstein's Messengers, Jawaharlal Nehru Planetarium, Bangalore, May 2012

99. Beyond Insight and Inspiration to Einstein's messengers, Breakthrough Society, RRI, May 2012.

100. Gravitational Waves: When Theory met Experiment, IISER, Pune, Feb 2012

101. Einstein's Theory of Gravitation and Gravitational Waves, Jawaharlal Nehru Planetarium, Bangalore, May 2011

102. The search for gravitational waves: A century of waiting, IPR, Bhat, May 2011

103. Gravitational waves: A century of waiting, Physics Dept, Bangalore University, April 2011

104. The detection of gravitational waves and the two body problem in general relativity, IHES, Bures-sur-Yvette, Oct 2010

105. Impact of Astronomy on Basic Science,
Summer Program, BASE, Jawaharlal Nehru Planetarium, June 2010.

106. Einstein's Insight: It is all about Time,
MES College, Bangalore, March 2010

107. The search for gravitational waves: Current status and future prospects,
IISc, Bangalore, Oct 2009

108. Special Relativity,
Teacher's Training programme, Jain College, Bangalore, Aug 2009

109. From backwaters of basic science to frontiers of technology: Gravitational Waves and their detection;
JCE, Mysore Oct 2007.

110. The Long Walk towards Gravitational Wave Astronomy;
Dept Of Physics, Mumbai University, Oct 2007.

111. Deciphering the universe with gravitational wave astronomy;
IIA, Sept 2007.

112. Albert Einstein's insight: Its all about time!;
Teachers Training programme, Bhagawan Mahaveer Jain College July 2006

113. From principle of relativity to nature of time: Albert Einstein's insight;
BASE, Bangalore Planetarium, June 2006

114. (i) From principle of relativity to nature of time: Albert Einstein's insight;
(ii) From principle of equivalence to nature of gravity: Albert Einstein's inspiration;
(iii) From General Relativity to Gravitational wave detectors: Albert Einstein's triumph;
Dept of Physics, NIT, Surathkal, Mar 2006

115. From General Relativity to Gravitational wave detectors: Albert Einstein's triumph;
Dept of Physics, CUSAT, Cochin, Jan 2006

116. (i) From principle of relativity to nature of time: Albert Einstein's insight;
(ii) From principle of equivalence to nature of gravity: Albert Einstein's inspiration;
Mahatma Gandhi Memorial College, Udupi, State level physics workshop, Dec 2005

117. Gravitational wave detectors: Opening a new window to the universe;
B. M. S. College, Bangalore, Dec 2005

118. From General Relativity to Gravitational wave detectors: Albert Einstein's triumph;
M. G. University, Kottayam, Nov 2005

119. Theory of relativity: Special and General;
CMS College, Kottayam, Nov 2005

120. From principle of relativity to nature of time: Albert Einstein's insight;
Catholicate College, Pathanamthitta Nov 2005

121. Special Relativity: Albert Einstein's insight;
BEL High School, Bangalore, Nov 2005

122. Special Relativity: Albert Einstein's insight;
Presidency College, Bangalore, Nov 2005

123. From principle of relativity to nature of time: Albert Einstein's insight;
Sri Jagadguru Renukacharya college of Science, Arts and Commerce, Bangalore, Sept 2005

124. Picking up strains of the gravitational wave symphony;
IISc, Bangalore, August 2005

125. The Relativity of Albert Einstein; 125 Birth Anniversary Celebration,
AIDSO and Srujana, Bangalore Aug, 2004

126. What is Special Relativity? Two Lectures;
BASE, Bangalore - May 2004

127. Gravitational Radiation, Two Lectures at the Summer School;
HRI, Allahabad - May 2004

128. Gravitational Waves: A new window to the universe; Delhi University, Physics Dept - May, 2004

129. Introduction to General Relativity and Gravitational waves;
Dept of Physics, Jaipur university, Dec 2004

130. Albert Einstein's Insight: Special Relativity;
Breakthrough Science Society, 2nd Science Festival, Bangalore Jan 2005

131. Albert Einstein's Insight: Special Relativity;
Gyan Vani, Radio Talk, Mar 2005

132. Einstein's Spacetime
Talk on Science Day , RRI Feb 2005

133. Picking up strains of the gravitational wave symphony;
Einstein's Theories Centenary Conference, Mumbai Jan 2005

134. Two Lectures on The search for Gravitational waves;
Calicut University, Mar 2004

135. Two Lectures on General Relativity: Einstein's theory of Gravitation;
Calicut University, Mar 2004

136. Two Lectures on Special Relativity: Beyond Newton;
Calicut University, Mar 2004

137. Preparing for a Career in Physics;
Calicut University, Mar 2004

138. Two Lectures on Special Relativity;
Bangalore University, Refresher course, Dec, 2003

139. The Gravitational Wave Symphony: A New Window to the Cosmos;
Faculty Lecture, Gorakhpur university, Sept, 2003

140. Special Relativity;
BASE, May, 2003.

141. General Relativity;
BASE, May 22, 2003.

142. Introduction to general relativity;
Summer School, RRI, May 2003.

143. Gravitational radiation;
Summer School, RRI, May 2003.

144. Introduction to General Relativity;
BASE, May 2002.

145. Invitation to a new astronomy;
BASE, May 2002.

146. What will the gravitational wave detective first see?;
IIA, March, 2003.

147. Gravitation, General Relativity and Gravitational Waves;
Technion university, Durban, South Africa, 2001.

148. Picking up Strains of the Gravitational Wave Symphony;
RRI Colloquium, May 2001.

149. Gravitational Waves, (2 lectures);
BASE, Bangalore Planetarium; May, 2000.

150. Gravitational Waves;
IPA Lecture at Christ college, Bangalore, October, 1998.

151. Gravitational waves: a new window to the universe;
Dept. Of Physics, Bombay University, Mumbai; September, 1998.

152. Radiation reaction in general relativity;
Tata Institute of Fundamental Research, Mumbai; September 1998.

153. Gravitational Waves;
Bangalore Science Forum, National College, Bangalore, July 1998.

154. Gravitational wave astronomy;
Physics Department, Bangalore University, March 1997.

155. Gravitational wave astronomy: A new window to the universe;
Physical Research Laboratory, Ahmedabad, December 1996.

156. Algebraic computations in gravitational radiation theory;
Indian Institute of Astrophysics, Bangalore, January 1997.

Miscellaneous Academic Contributions

Ph.D. Students

- A. Gopakumar (TIFR), M.S.S. Qusailah (Yemen), K.G. Arun (CMI), Siddhartha Sinha , Chandrakant Mishra (ICTS-TIFR)

Post-Docs

- Kanti Jotania, Anshu Gupta, Shrirang Deshingkar, Ryuichi Fujita

Teaching

- Reading course on General Relativity at ICTS (2020) (Online).
- MPM-PN generation of GW at ICTS - 6 Lectures (2020)
- Reading course on General Relativity at ICTS (2019).
- Basic Mechanics, Electromagnetic Theory, Special Relativity and Mathematical methods, Bangalore Association for Science Education, REAP Program for B.Sc. students from city colleges over weekends, Bangalore Planetarium, (1995 - 2010, 2015, 2016, 2017, 2018)

- RRI minimum on Mathematical methods, 12 Lectures on Vector and tensor analysis and elementary differential geometry, (2005).
- Reading course on General Relativity (2004).
- Reading course on General Relativity (2003).
- Reading course on General Relativity (2002).
- Basic Mechanics and Electromagnetic Theory (Physics Study Circle, MES College), 1993-95.
- Basic Mathematical Methods for Physics (RRI), 1994-95.
- Mathematical Methods for Physics (RRI), 1993-94.
- Joint Astronomy Programme of the Indian Institute of Science : Courses on General Relativity and Cosmology for Ph.D. students during the years 1988-89, 1987-88, 1986-87 and 1985-86.
- Tutor at M.Sc. level in core courses: Quantum Mechanics and Mathematical Methods, Department of Physics, University of
  Bombay (1976 - 1978).
- Lecturer in Physics, C.H.M. College, Bombay University (November 1979 - April 1980).
- Tutor at M.Sc. level in core courses: Quantum Mechanics and Mathematical Methods, Department of Physics, University of
  Bombay (1976 - 1978).

Mentoring Visiting Research Students

- Regularly mentored Visiting Research Students many of whom have gone on to do a Ph.D. T. Nithyanandan (2002), Anosh Joseph (2003), Partha Nag (2003), P. Ajith (2004), Pranesh Sundarajan (2004), R. Krishnan (2005), Deepak Khurana (2005), K. Karthik (2006), K. Karthik (2007), Aseem Rastogi (2009), Raghuvir Kasturi (2009), Anton Joe (2010) Madhusudan Raman (2011, 2012) and Sumanth Reddy (2011), Ashok Chaudhuri (2012), Vijay Varma (2012).
  Ashok Chaudhuri (2012-13), Vijay Varma (2012-13).
  Seema Gorur (2013), Nikhil Mukund Menon (2013), Paritosh Varma (2013)
  Soham Mukherji (2014), Nikhila Suma Bhatt (2014), Anil Tolamatti (2014-15), K. Rajaram (2014)
  I have been organiser of Summer Schools in RRI in the past.

Ph.D Examiner

- For students in General Relativity and Cosmology from IUCAA (Pune University, JNU), CUSAT, Nagpur University, IISc, Bangalore, Calicut University, University of Jena and Nikhef.

Training for Researchers

- I have been involved in the **Academic** planning of various Conferences and Schools for Ph.D. Students and Research workers in the fields of General Relativity, Cosmology and Relativistic Astrophysics. I have also lectured in some of them.

Teacher Training

- I have given lectures at Refresher courses for Teachers in Bangalore.

Academic responsibilities at RRI

- Chair of the Theory group, Member of Institute Advisory Collective, Organiser Journal club, Summer School Co-Organiser, Convener Admissions, Chair 4th year Ph.D students review committee, Chair Library Committee, Coordinator REAP, Co-Organiser RRI Inhouse meeting, Coordinator RRI Minm Course on Mathematical and Numerical methods, Co-Organiser of Golden Jubilee Conferences, Member of student academic committes

External Academic responsibilities

- Member, JNU - IUCAA Academic Committee (2009 - 2013)
- Chair, IndIGO Consortium

Vision Document

- Chair of the **Gravitation and Particle Astrophysics** panel for 'Decadal Vision Document on Astronomy and Astrophysics', Indian Academy of Sciences, Bangalore (2004).

Referee for

- Referee for Physical Review Letters, Physical Review D, Classical Quantum Gravity General Relativity and Gravitation and Pramana
- Referee for IndoFrench, Indo-US projects Max Planck Partner Group, Netherlands Foundation for Fundamental Research on Matter: FOM
- Tenure confirmation at Univ Texas, Brownsville , USA; Syracuse UniversityUSA.
- Faculty promotions at TIFR; Saha Institite; IISER, Kolkata; IUCAA
- Faculty hiring at TIFR, HRI, IISER's, IISc, CMI, ICTS, University of Delhi, Rochester Inst of Technology (USA), NIKHEF (Holland), IIT- Gandhinagar

Member Scientific Organising Committee

- I have been on the Scientific organising committees of the following *International* Conferences:
  1. IAU Symposium on Neutron Star Astrophysics at the Crossroads: Magnetars and the Multimessenger Revolution, L Aquila, June 22 26, 2020
  2. 2019 Asian-Pacific Winter School and Workshop on Gravitation and Cosmology, YITP, Kyoto, 11-15 February 2019
  3. 22nd International Conference on General Relativity and Gravitation, (GR22), Valencia, Spain (2019).
  4. 15th Marcel Grossman meeting (MG14) at Rome, (Member, International Coordinating committee) 2018.

5. XII Amaldi meeting, Pasadena, (2017)
6. VIIIth ICGC meeting, Mohali (2015)
7. 14th Marcel Grossman meeting (MG14) at Rome, (Member, International Coordinating committee) 2015.
8. 21st International Conference on General Relativity and Gravitation, (GR21), Columbia, USA (2016).
9. The Next Detectors for Gravitational Wave Astronomy, KITP, China 5 Apr - 8 May 2015
10. 10th International LISA Symposium, Gainesville, USA (2014)
11. Gravitational Wave Physics and Astronomy Workshop, Pune, India 2013
12. 20th International Conference on General Relativity and Gravitation, (GR20), Warsaw, Poland, (Chairperson, SOC)
13. 10th Amaldi meeting on GW, Warsaw, Poland, 2013.
14. Astrod5, RRI, Bangalore, 2012, (Co-Chair, SOC; Chair, LOC)
15. 13th Marcel Grossman meeting (MG13) at Stockholm, (Member, International Coordinating committee) 2012.
16. Eighteenth International Conference on General Relativity and Gravitation, Sydney, 2007.
17. International Conference on Gravitation and Cosmology, Kochi, 2004 (Chairman, SOC)
18. Sixteenth International Conference on General Relativity and Gravitation, Durban, 2001.
19. International Conference on Gravitation and Cosmology, Pune, 1995.
20. Fourteenth International Conference on General relativity and Gravitation, Florence, 1995.
21. International Conference on Gravitation and Cosmology, Ahmedabad, 1991
22. International Conference on Gravitation and Cosmology, Goa, 1987

- I have been on the Scientific organising committees of the following *National Conferences, Schools and Meetings*:

1. Summer School on Gravitational-Wave Astronomy, (Co-Organizer), 15 July - 26 2019
2. Summer School on Gravitational-Wave Astronomy, (Co-Organizer), 13 Aug - 24 Aug 2018
3. Summer School on Gravitational-Wave Astronomy, (Co-Organizer), 17 July - 28 July 2017
4. Remembering C. V. Vishveshwara, (Co-organizer), 23 Feb 2017
5. Summer School on Gravitational-Wave Astronomy, (Co-Organizer), 25 July - 5 Aug 2016.
6. The Future of Gravitational-Wave Astronomy, (Co-organizer) (04 Apr - 08 Apr, 2016)
7. The Universe in a New Light: Gravitational Waves Detected 100 Years after Einstein's Prediction, (Co-organizer) (13 Feb 2016)

8. AEI-ICTS joint workshop on gravitational-wave astronomy (Co-Organizer) (04 Nov - 06 Nov, 2015)
9. Summer School on Gravitational wave astronomy, ICTS-TIFR, 29 June - 10 July 2015 (Co-organizer)
10. Astronomy, Cosmology and Fundamental Physics with Gravitational Waves, CMI Silver Jubilee meeting, March 24, 2015.
11. ICTS Winter School On Experimental Gravitational-Wave Physics, RRCAT, Indore, (2013) (Co-organizer)
12. Summer School on Numerical Relativity, ICTS, Bangalore, June 2013 (Co-organizer)
13. Workshop: Interface of Numerical Relativity with Gravitational-Wave Astronomy, Neutrino Physics and High-Energy Astrophysics, ICTS, Bangalore, June - July 2013 (Co-organizer)
14. IPR meeting on LIGO-India, IPR, Bhat Feb 2012 (Organizer).
15. Workshop on Gravitational Wave Astronomy, IUCAA, Pune, Dec 2011 (Co-Organizer)
16. EGO-IndIGO meeting on Gravitational Waves, IUCAA, Pune, Nov 2011 (Co-Chair SOC)
17. IndIGO meeting on LIGO-India, HBCSE, Mumbai, Aug 2011 (Organizer)
18. Discussion meeting on Gravitational Radiation and Quantum General Relativity, RRI, Bangalore, 1997, (Joint Organiser).
19. Physics of Black holes, IISc., Bangalore, 1997.
20. XVIII meeting of the IAGRG, IMSc., Madras, 1996, (Chairman).
21. Advanced Institutes on Gravitation Theory, Cochin, 1991, (Co-Director).
22. First Inter University Graduate School on Gravitation and Cosmology, Pune, 1989, (Co-Director).
23. Quantum Gravity and the Early Universe, Delhi, 1987.
24. Gravitation, Quantum Fields and Superstrings, Madras, 1986.
25. Gravitation, Gauge Theories and the Early Universe, Bangalore, 1985.
26. Summer Institute on General Relativity and Cosmology, Madurai, 1984.

Participant at the following International Conferences

1. LVK Meeting - Sept 2022, Online, 12 Sept 2022 to 16 Sept 2022
2. 14th International LISA symposium 2022, Univ of Glasgow July 25-29 2022 (offline)
3. 23 International conference on general relativity and gravitation, Beijing, China July 3-8 2022 (Online)
4. LVK Meeting - March 2022, Online, 14 Mar 2022 to 23 Mar 2022
5. Damour Fest - Adventures in Gravitation, IHES, Bures sur Yvette, France Oct 12 -15 2021 (online)

6. LVK Meeting - September 2021, online IJCLab, 06 Sep 2021 to 10 Sep 2021
7. 14th Edoardo Amaldi meeting on gravitational waves, OzGrav, Swinburne Univ of Technology, July 19 - 23 2021 (online) (Chair Plenary Session, 23 july)
8. Gravitational Wave Advanced Detector Workshop 2021 (GWADW21), May 17 - 21 2021(Online) (Member International Advisory Committee)
9. March 2021 LSC-Virgo-Kagra Meeting, Online, Wisconsin, USA, 15 Mar 2021 to 19 Mar 2021
10. 9th International Conference on Gravitation and Cosmology (ICGC 2019), IISER, Mohali, 10 Dec - 13 Dec 2019
11. Future of Gravitational Wave Astronomy, ICTS-TIFR, Bangalore 19 Aug - 22 Aug 2019
12. GR22 and Amaldi13, Valencia Spain July 7 - 12 2019
13. GWIC meeting, Valencia Spain July 6 2019
14. LVC meeting, Maastricht, Sept 4 - 7, 2018
15. LVC meeting, Sonoma, March 19 - 22, 2018
16. ICTS at Ten, ICTS, Bangalore, 4 - 7 Jan 2018
17. Physics and Astrophysics at the eXtreme (PAX), Nikhef, 14 - 17 Aug 2017
18. The Era of Gravitational Wave Astronomy, IAP, Paris, 26 -30 June 2017.
19. ICTS-SAMSI Workshop, ICTS-TIFR, Bangalore, March 20 - 23 2017
20. LVC meeting, Pasadena, March 13 - 16, 2017
21. Asian-Pacific Gravitational Wave Forum, Hong Kong, 30 Sept-1 Oct 2016
22. GR21, Columbia University, 10-15 July 2016
23. LIGO Virgo Collaboration meeting, Pasadena, USA 13 Mar - 18 Mar 2016
24. LIGO Press Conference, Washington DC, 11 Feb 2016 (IndIGO representative at the GW discovery announcement)
25. 8th International Conference on Gravitation and Cosmology (ICGC) IISER-Mohali, December 2015.
26. LIGO Virgo Collaboration meeting, Budapest, Hungary 26 Aug - 03 Sept 2015
27. APS Physics April 2015 meeting, Baltimore, April 2015.
28. LIGO Virgo Collaboration meeting, Stanford University,Stanford, 25 - 28 August 2014
29. LIGO Virgo Collaboration meeting, Artemis group (Observatoire de la Nice), Nice, 17-21 March 2014
30. ICTS Winter School On Experimental Gravitational-Wave Physics, RRCAT, Indore, (2013)
31. Gravitational Wave Physics and Astronomy Workshop, Pune, India 2013
32. 20th International Conference on General Relativity and Gravitation, (GR20), and 10th Amaldi meeting on GW, Warsaw, POland, July 2013.
33. GWIC meeting, Warsaw, Poland July 2013.

34. APS Physics April 2013 meeting, Denver, April 2013.
35. LIGO Virgo Collaboration meeting, Betheseda, Mar 2013
36. Equations of motion in relativistic gravity, Bad Honneaf, Feb 2013.
37. LIGO Virgo Collaboration meeting, Rome, Sept 2012
38. GWIC meeting, Rome, July 2012.
39. ASTROD 5 Meeting, RRI, Bangalore, July 2012
40. Relativity and Gravitation - 100 years after Einstein in Prague, Prague, June 2012
41. 7th International Conference on Gravitation and Cosmology (ICGC) Goa, December 2011.
42. Amaldi 9 and NRDA conference on Gravitational waves, Cardiff, UK, July 2011
43. GWIC meeting, July 2011.
44. 19th International Conference on General Relativity and Gravitation, (GR19), Mexico city, Mexico, July 2010.
45. Australian International Gravitational Observatory: Project Plan and benefits, Perth, Australia, Feb 2010
46. Experimental General Relativity, UWA, Perth, Australia, March 2010
47. Science without boundaries, ICTS inaugural meeting, Bangalore Dec 2009
48. First Galileo-Xu Guangqi Meeting, Shanghai, China October, 2009
49. Post Newton 2008, Jena, June 2008
50. 7th International LISA Symposium, Barcelona, June 2008.
51. 6th International Conference on Gravitation and Cosmology, IUCAA, Pune, Dec 17 - Dec 21 2007
52. Eighteenth International Conference on General Relativity and Gravitation, Sydney, 2007.
53. Gravitational wave data analysis, 2006; Institut Henri Poincare, Paris, France
54. From mathematics to numerics, 2006; Institut Henri Poincare, Paris, France
55. GR Trimester, Institut Henri Poincarè, France; 2006.
56. Seventeenth International Conference on General Relativity and Gravitation, Dublin, 2004.
57. Fifth International Conference on Gravitation and Cosmology, CUSAT, Kochi, 2004.
58. Focus workshop on Initial Data, State College, 2002.
59. Gravitational wave source workshop, Livingston, 2002.
60. Numerical Relativity 2001, Krugersdorp, 2001.
61. Sixteenth International Conference on General Relativity and Gravitation, Durban, 2001.
62. Meeting of The Japanese GRG Society, Osaka, 2000.
63. Rencontres de Moriond on Gravitational Waves, Les Arcs, 1999.
64. Fifteenth International conference on General Relativity and Gravitation, IUCAA, Pune, Dec 16 - 21, 1997.

65. Second Amaldi meeting on Gravitational Waves, CERN, Geneva, 1997.
66. Third International Conference on Gravitation and Cosmology, IUCAA, Pune, 1995.
67. 14th International Conference on General Relativity and Gravitation, Florence, 1995.
68. Astrophysical sources of Gravitational Waves, State College, 1995.
69. Workshop on Gravitational Waves from Coalescing Binaries, Caltech, Pasadena, 1994.
70. 13th International Conference on General Relativity and Gravitation, Cordoba, 1992.
71. Second International Conference on Gravitation and Cosmology, PRL, Ahmedabad, 1991.
72. TEXAS/ESO-CERN Symposium, Brighton, 1990.
73. International Conference on Gravitation and Cosmology, Goa, 1987.
74. Gravitation in Astrophysics, Cargese, 1986.
75. 11th International Conference on General Relativity and Gravitation, Stockholm, 1986.
76. Origin and History of the Early Universe, Liege, 1986.
77. International Astronomical Union General Assembly, New Delhi, 1985.
78. Einstein Centenary Symposium, Ahmedabad, 1979.

Participant at the following National Conferences and Meetings

1. The Future of Indian Astronomy, ICTS Bangalore, 31 Oct - 2 Nov 2022
2. RRI Platinum Jubilee Year Launch Event, Bangalore 7 NOv 2022
3. Meeting on an Indian space based gravitational wave observatory, IUCAA, Pune July 15-16 2022 (Participant), (Member, Panel discussion)
4. ICTS Summer School on Gravitational-Wave Astronomy (HYBRID), 30 May 2022 to 10 June 2022 (co-organizer, participant)
5. ICTS Summer School on Gravitational-Wave Astronomy (ONLINE), 05 July 2021 to 16 July 2021 (co-organizer, participant)
6. 31 IAGRG meeting, IIT, Gandhinagar (Online), Dec 19 -20 2020.
7. September 2020 LSC-Virgo-Kagra Meeting, (Online), 14 Sep 2020 to 18 Sep 2020
8. Gravitational Wave Astrophysics (ONLINE), 18 May 2020 to 22 May 2020 (co-organizer, participant)
9. March 2020 LSC-Virgo-Kagra Meeting, Wisconsin, USA (online), 16 Mar 2020 to 20 Mar 2020
10. Chennai Symposium on Gravitation and Cosmology, IIT Madras, 22 Jan - 24 Jan 2020.
11. Supermassive Black holes, ICTS-TIFR, Bengaluru, 16 Dec - 20 Dec 2019

12. Application of Data SCience in Astrophysics and Gravitational wave research, 1 Nov - 3 Nov 2019, IIIT, Allahabad.
13. Summer School on Gravitational Wave Astronomy, 15 July 2019 to 26 July 2019 (co-organizer, participant)
14. Multi-messenger Astronomy in the Era of LIGO-India (IUCAA), Khandala, 15 18 Jan 2019
15. XXX IAGRG Meeting, Bits Pilani, Hyderabad campus 3 - 5 Jan 2019.
16. Summer School on Gravitational-Wave Astronomy, 13 August 2018 to 24 August 2018 (co-organizer, participant)
17. Cosmic fireworks: The dawn of multimessenger astronomy, ICTS, Bengaluru, 19 Oct 2017
18. Summer School on Gravitational-Wave Astronomy, 17 July 2017 to 28 July 2017 (co-organizer, participant)
19. RETCO - III, IIST, Thiruvananthapuram, 5 - 7 June 2017
20. XXIX IAGRG meeting, IIT, Gauhati 18-20 May 2017
21. LIGO-India: The road ahead II, IUCAA, Pune, Dec 19 - 21 2016
22. One day seminar on Gravitational waves, Ramiah University, Bangalore, 12 Nov 2016
23. LIGO-India: The road ahead, IUCAA, Pune, Aug 16 - 18 2016
24. Summer School on Gravitational-Wave Astronomy, 25 July - 5 Aug 2016
25. Observing Black Holes, ICTS-TIFR, Bangalore 17 June 2016
26. Mid year meeting of the Indian Academy of Sciences, Bangalore 1 July 2016
27. The Future of Gravitational-Wave Astronomy, (04 Apr - 08 Apr, 2016)
28. The Universe in a New Light: Gravitational Waves Detected 100 Years after Einstein's Prediction (13 Feb 2016)
29. Year of Light Conference, Utkal University, Bhubaneshwar, 15 Nov 2015
30. AEI-ICTS joint workshop on gravitational-wave astronomy, ICTS, 4 - 6 Nov 2015
31. XXVIII IAGRG meeting, RRI, 18-20 March 2015
32. Astronomy, Cosmology and Fundamental Physics with Gravitational Waves, CMI 2 - 4 March 2015
33. 33rd Meeting of The Astronomical Society of India, NCRA, 17 - 20 Feb 2015
34. JVN at 75, IUCAA, July 2013
35. Workshop: Interface of Numerical Relativity with Gravitational-Wave Astronomy, Neutrino Physics and High-Energy Astrophysics, ICTS, Bangalore, June - July 2013
36. Summer School on Gravitational-Wave Astronomy, 29 June 2015 to 10 July 2015 (co-organizer, participant)
37. ICTS Winter School on Experimental Gravitational-Wave Physics, 23 December 2013 to 28 December 2013 (co-organizer, participant)
38. Summer School on Numerical Relativity, ICTS, Bangalore, June 2013
39. IUCAA meeting on LIGO-India, IUCAA, June 2013

40. IUCAA meeting on LIGO-India, IUCAA, Jan 2013
41. RRCAT meeting on LIGO-India, RRCAT, Jan 2013
42. IAGRG-27, Mar 2013.
43. IPR meeting on LIGO-India, IPR, Bhat Feb 2012.
44. Workshop on Gravitational Wave Astronomy, IUCAA, Pune, Dec 2011.
45. Astronomy Mega-Projects presentation, DST, Delhi, Nov 2011
46. EGO-IndIGO meeting on Gravitational Waves, IUCAA, Pune, Nov 2011.
47. IndIGO LIGO meeting on LIGO-India, IUCAA, Pune, Oct 2011
48. IndIGO meeting on LIGO-India, HBCSE, Mumbai, Aug 2011.
49. IndIGO presentation on LIGO-India, RRI, Bangalore, June 2011
50. The Indian Road-Map for Gravitational Wave Astronomy: IndIGO - ACIGA meeting on LIGO-Australia, Delhi, February 2011.
51. XXVI IAGRG meeting, Sangam: Confluence of Gravitation and Cosmology, HRI, Allahabad, India 2011
52. SERC winter school on Nuclear astrophysics and neutrino astrophysics, Calicut University, February 2010
53. Indian experimental gravitational wave effort: Scope and feasibility, IUCAA, Pune Aug 2009
54. XXIV IAGRG Meeting, Jamia Millia Islamia, New Delhi, India 2007.
55. Einstein's Theories Centenary Conference, Mumbai 2005.
56. XXIII IAGRG Meeting, IUCAA, Jaipur, India 2004.
57. XXII IAGRG Meeting, IUCAA, Pune, India 2002.
58. 21^{st} Meeting of Astronomical Society of India, IUCAA, Pune, 2002.
59. Geometric phases in physics and foundations of quantum mechanics, IISc., Bangalore, 2001.
60. Discussion meeting on Isolated Horizons and Quantum Geometry, RRI, Bangalore, 2001.
61. Discussion meeting on Gravitational Radiation and Quantum General Relativity, RRI, Bangalore, 1997.
62. Physics of Black holes, IISc., Bangalore, 1997.
63. Golden Jubilee Discussion Meeting on Gravitation and Particle Physics, PRL, Ahmedabad, 1996.
64. XVIII meeting of the IAGRG, IMSc., Madras, 1996.
65. Workshop on gravitational collapse and cosmic censorship, IUCAA, Pune, 1995.
66. Workshop on Gravitational Waves, IUCAA, Pune, 1995
67. Mini Workshop on Gravitational Radiation, IUCAA, Pune, 1993.
68. Advanced Institutes on Gravitation Theory, Cochin, 1991.
69. First Inter University Graduate School on Gravitation and Cosmology, Pune, 1989.

70. Quantum Gravity and the Early Universe, Delhi, 1987.
71. Gravitation, Quantum Fields and Superstrings, Madras, 1986.
72. Annual meeting of IAGRG, Burdwan, 1985.
73. Gravitation, Gauge Theories and the Early Universe, Bangalore, 1985.
74. Summer Institute on General Relativity and Cosmology, Madurai, 1984.

Nov 2022