C U R R I C U L U M V I T A E
(ABRIDGED)

PROFESSOR SUSHANT GHOSH

CURRENT APPOINTMENTS:

- **Professor,**Centre for Theoretical Physics, JamiaMilliaIslamia, New Delhi – 110 025; Email:- sgghosh@gmail.com, sghosh2@jmi.ac.in Telephone:-+91-11-26984830 EXT 25 [W]; +9199971348628 [H] .

- **Visiting Associate**, Inter University Centre for Astronomy and Astrophysics (IUCAA), Pune (Since July 2001).
- **Honorary Professor**, College of Agriculture and Engineering, School of Mathematics, Statistics and Computer Science, UKZN from 2013-2016

QUALIFICATIONS:

- **M.Sc.** (1986), M. Phi. (1988) , Nagpur University , Nagpur - India
- **Ph.D.** (1996) Numerical Methods for Some Two Point Boundary Value Problems, Nagpur University , Nagpur - India
- **Post-Doctoral Fellow**:-University of Zululand, Department of Mathematics & Computer Science, RSA

PREVIOUS POSTS HELD:

- **Professor:** Since 7/2009, Centre for Theoretical Physics,Jamia Millia Islamia – New Delhi, INDIA
- **Associate Professor** 8/2008 – 7/2009, BITS, Pilani **- DUBAI, UAE**
- **Assistant Professor** 12/2003 – 9/2008, BITS, Pilani - **DUBAI, UAE**
- **Reader** 3/2000 – 12/2003, Science College, Congress Nagar-Nagpur**, INDIA**
- **Head**: Computer Science Department Science College, Congress Nagar – Nagpur (July 1989-Oct 1995)
- **Sr. Lecturer** 3/1995 – 3/2000, Science College, Congress Nagar-Nagpur, Nagpur, INDIA

RESEARCH INTERESTS/EXPERTISE:GRAVITATIONAL COLLAPSE,SPINNING BLACK HOLES, EXACT SOLUTIONS, CAUSAL STRUCTURE OF SINGULARITIES, RELATIVISTIC STARS, MODIFIED THEORIES, GENERAL RELATIVITY

PH.D. / PROJECT SUPERVISION:-Three Ph.D.candidates at NagpurUniversity, Nagpur; Three at CTP, JMI; Several Masters / B. Tech Projects supervised

RESEARCH GRANTS AND FELLOWSHIP

- **Honorary Professor, College** of Agriculture and Engineering, School of Mathematics, Statistics and Computer Science, UKZN from 2013-2016**.**
- **Member,** ITUN Network Funded by ICTP, Italy
- Research Grants, University Grants Commission, MRP No.F.23-144/97(WRO), (1997)
- Research Grants, University Grants Commission, PUNE – MRP No.F.23-118/2001 (2001).
- Research Grants, University Grants Commission, New Delhi – MRP F. NO. 39-459/2011 (Ongoing).
- **Visiting Fellowship, ACRU, UKZN, Durban RSA January - March, 2012.**

- **Visiting Fellowship: Department of Mathematics, University of Zululand, RSA (Sep-Nov 1996, Jul-Aug'97, and May-August.'2001).**
- **Post Doctoral Fellowship: Department of Mathematics, University of Zululand, RSA (Aug'98-Aug'99).**
- Teachers Fellowship, Faculty Improvement Programme Unversity Grants Commision, New Delhi

MEMBER OF PROFESSIONAL BODIES

- Life Member, Indian National Science Congress, Calcutta.
- Life Member, Indian Mathematical Society, New Delhi.
- Life Member, Indian Association of General Relativity and Gravitation, Pune

(Council Member 2004-08).

- Life Member, South African Gravitational Society, RSA

PEER REVIEW FOR SCHOLARLY JOURNALS

- Physical Review D, General Relativity Gravitation, International Journal of Modern Physics D
- International Journal of Modern Physics A, Modern Physics Letter A
- Pramana J Phys, Astrophysics Space Science, International Journal of Modern Physics D

COURSES TAUGHT UPON (PAST AND PRESENT) INCLUDE:

Mathematical Physics – I and II, Real Analysis Advanced Differential & Integral Calculus, Linear Algebra & Theory Of Complex Variables, Ode, Pde, Laplace Transform Fourier Series & Special Function, Probability And Statistics, Discrete Structure For Computer Science, Numerical Analysis, Classical Mechanics, Basic & Fortran Programming. Dynamics Of A Particle & Rigid Dynamics, Theory Of Complex Variables, Special Functions, Differential & Integral Calculus, Group Theory & Linear Algebra, Operations Research

SCHOLARLY PEER-REVIEWED ARTICLES IN REFEREED JOURNALS: Please click

http://inspirehep.net/search?ln=en&p=find+a+ghosh%2C+s.+g.&of=hb&action_search=Search

1. Nonsingular rotating black hole solutions
   Sushant G. Ghosh.arXiv:1408.5668 [gr-qc].
2. Clouds of strings in third-order Lovelock gravity
   Sushant G. Ghosh, Uma Papnoi, Sunil D. Maharaj.
   10.1103/PhysRevD.90.044068.*Phys. Rev. D* 90, 044068 (2014).
3. Shadow of five-dimensional rotating Myers-Perry black hole
   Uma Papnoi, Farruh Atamurotov, Sushant G. Ghosh, Bobomurat Ahmedov.
   10.1103/PhysRevD.90.024073.Phys. Rev. D 90, 024073 (2014)
4. Spherical gravitational collapse in 5D Einstein-Gauss-Bonnet gravity
   Sushant G. Ghosh, Sanjay Jhingan, D.W. Deshkar
   10.1088/1742-6596/484/1/012013.J.Phys.Conf.Ser. 484 (2014) 012013.
5. Accretion onto a higher dimensional black hole
   Anslyn J. John, Sushant G. Ghosh, Sunil D. Maharaj
   10.1103/PhysRevD.88.104005.Phys.Rev. D88 (2013) 10, 104005.
6. Higher dimensional non-Kerr black hole and energy extraction
   Sushant G. Ghosh, Pankaj Sheoran.
   10.1103/PhysRevD.89.024023. Phys.Rev. D89 (2014) 024023.
7. Spinning Higher Dimensional Einstein-Yang-Mills black holes
   Sushant G Ghosh, Uma Papnoi.
   10.1140/epjc/s10052-014-3016-y .*Eur. Phys. J. C* 74, 3016 (2014).

8. Bound orbits and gravitational theory
Naresh Dadhich, Sushant G. Ghosh, Sanjay Jhingan.
10.1103/PhysRevD.88.124040.Phys. Rev. D **88**, (2013) 124040.

9. Gravitational collapse in pure Lovelock gravity in higher dimensions
Naresh Dadhich, Sushant G. Ghosh, Sanjay Jhingan.
10.1103/PhysRevD.88.084024.Phys.Rev. D88 (2013) 084024.
10. Radiating Kerr-Newman black hole in $f(R)$ gravity
Sushant G. Ghosh, Sunil D. Maharaj and Uma Papnoi.
10.1140/epjc/s10052-013-2473-z.Eur. Phys. J. C (2013) 73:2473
11. Gravitational collapse of null dust in f(R) gravity,
Sushant G. Ghosh and Sunil D. Maharaj.
10.1103/PhysRevD.85.124064. ***Phys. Rev. D* 85,** 124064 (2012)
12. The Lovelock gravity in the critical spacetime dimension,
Naresh Dadhich, Sushant G. Ghosh, Sanjay Jhingan.
10.1016/j.physletb.2012.03.084. ***Phys. Lett. B* 711**, 196-198 (2012).
13. Nonstatic charged BTZ-like black holes in N+1 dimensions.
Sushant G. Ghosh
10.1142/S0218271812500228. ***Int. J. Mod. Phys. D* 21**, 1250022 (2012)
14. 5D Radiating black holes in Einstein-Yang-Mills-Gauss-Bonnet gravity.
Sushant G. Ghosh.
10.1016/j.physletb.2011.08.066.**Phys.Lett.B**704:5-9,2011
15. Gravitating magnetic monopole in Vaidya geometry.
Sushant G. Ghosh & L.P. Singh.
10.1103/PhysRevD.83.067501.**Phys.Rev.D**83:067501,2011.
16. Radiating black holes in Einstein-Yang-Mills theory and cosmic censorship.
By Sushant G. Ghosh & Naresh Dadhich.
10.1103/PhysRevD.82.044038.**Phys.Rev.D82**:044038,2010,
17. Exact nonspherical relativistic star.
Sushant G. Ghosh & D.W. Deshkar**.**
10.1142/S0217751X10048457.**Int.J.Mod.Phys**.A25:2573-2583,2010,.
18. Quasispherical gravitational collapse in 5D Einstein-Gauss-Bonnet gravity.
Sushant G. Ghosh & Sanjay Jhingan.
10.1103/PhysRevD.82.024017.**Phys.Rev.D82**:024017,2010.
19. Inhomogeneous dust collapse in D-5 Einstein-Gauss-Bonnet gravity.
S. Jhingan & Sushant G. Ghosh.
10.1103/PhysRevD.81.024010.**Phys.Rev.D**81:024010,2010,.
20. Summary of the workshop: Classical general relativity and gravitational waves.
Sanjay Jhingan & S.G. Ghosh.
10.1088/1742-6596/140/1/012011.J.Phys.Conf.Ser.140:012011,2008,.
21. S. G. Ghosh and D.W.Deshkar.Horizons of radiating black holes in Einstein-Bonnet gravity,
10.1103/PhysRevD.77.047504.**Phys.Rev.D77**:047504,2008.
22. S.G. Ghosh and D.W.Deshkar, Higher Dimensional Dust Collapse with Cosmological ConstanT
10.1007/s10509-007-9485-9.Astrophys.Space Sci.310:111-117,2007.
23. S.G. Ghosh and D.W.Deshkar, Exact Non-Spherical Radiating Collapse,
10.1142/S0217751X07036270.Int.J.Mod.Phys.A22:2945-2960,2007.
24. S.G. Ghosh, **A.K. Dawood** Radiating black hole solutions in Higher Dimensions
10.1007/s10714-007-0511-6.**Gen. Relativ. Gravitation** (2007).
25. S.G. Ghosh and D.W.Deshkar Five Dimensional Inhomogeneous Dust Collapse with Cosmological Constant**,**
10.1142/S0218271807009309.Int.J.Mod.Phys.D16:53-64,2007.
26. Naresh Dadhich, S. G. Ghosh and D.W.Deshkar. The role of the space-time dimensions and the fluid equation of state in spherical gravitational collapse,
10.1142/S0217751X05021038.Int. J Mod. Phys. A Vol. 20 1495 (2005)
27. S. G. Ghosh, Inhomogeneous dust collapse with cosmological constant,
10.1142/S0218271805006456.Int. J Mod. Phys. D. Vol. 14(2004).
28. **A.K. Dawood** and S.G. Ghosh, Generating dynamical black hole solutions,
10.1103/PhysRevD.70.104010.**Physical Review D** Vol. 70, 104010 (2004).

29. S. G. Ghosh and D.W.Deshkar. Gravitational collapse of a string fluids, 10.1142/S0218271804004566.Int. J Mod. Phys. D. Vol 13 263(2004).
30. S. G. Ghosh and D.W.Deshkar, Gravitational collapse of a radiating star in higher dimensions, Gravitation and Cosmology (2004).
31. S. G. Ghosh and D.W.Deshkar. Gravitational collapse of perfect fluid in self-similar in higher dimensional space-times, 10.1142/S021827180300344X. Int. J Mod. Phys. D. Vol. 12 913(2003).
32. A. Beesham and S. G. Ghosh, Naked Singularities in Charged Vaidya – de Sitter space-timeInt. 10.1142/S0218271803003220.J Mod. Phys. D. Vol. 12 801(2003).
33. S. G. Ghosh and A. Banerjee Non-marginally bound self-similar higher dimensional inhomogeneous dust collapse, 10.1142/S0218271803003244.Int. J Mod. Phys. D. 12 630(2003).
34. S. G. Ghosh and Naresh Dadhich, Gravitational collapse of null strange quark fluid and cosmic censorship, 10.1023/A:1022361631003.Gen. Relativ. Gravitation Vol 35 359 (2003)
35. S. G. Ghosh and D.W.Deshkar.Non-spherical collapse of a radiating star, 10.1142/S0218271803002433.Int. J Mod. Phys. D. (2003)
36. S. G. Ghosh, S.B. Sarwe and R.V. Sarayakar, Collapsing perfect fluid in self-similar five dimensional space-time and cosmic, 10.1103/PhysRevD.66.084006.**Physical Review D** Vol 66 084006 (2002)
37. S. G. Ghosh and Naresh Dadhich, Gravitational Collapse of type II fluid in higher dimensions 10.1103/PhysRevD.65.127502.**Phys. Rev. D** Vol 65 127502 (2002)
38. S. G. Ghosh and R.V. Sarayakar Higher Dimensional Charged Null Fluid Collapse and Cosmic Censorship 10.1142/S0218271802001524.Int. J Mod. Phys. D Vol 11 237 (2002).
39. S.G. Ghosh and A. Beesham, Higher Dimensional Inhomogeneous Dust Collapse and Cosmic Censorship, 10.1103/PhysRevD.64.124005.**Phys. Rev. D** Vol 64. (2001).
40. S.G. Ghosh, R.V. Sarayakar and A. Beesham, Collapsing Shells of Radiation in Higher Dimensional Space-time and Cosmic Censorship, 10.1142/S0217751X01004943.Int. J Mod. Phys. A Vol 16. (2001)
41. S. G. Ghosh and N. Dadhich, On Naked Singularities in Higher Dimensional Vaidya Space-times. 10.1103/PhysRevD.64.047501.**Phys. Rev. D** Vol. 64 047501 (2001).
42. Naresh. Dadhich and S.G. Ghosh, Gravitational Collapse of null fluid on the brane. 10.1016/S0370-2693(01)01057-7.**Phys. Lett. B** Vol. 518 1 (2001).
43. S.G. Ghosh and A. Beesham, Naked Singularities in Higher Dimension Inhomogeneous Dust Collapse, 10.1088/0264-9381/17/24/301.**Classical and Quantum Grav**. Vol 17 4959 (2000).
44. S.G. Ghosh, Charged Null Fluid Collapse in Anti-de Sitter Space-times and Naked Singularities**,** 10.1103/PhysRevD.62.127505.**Phys. Rev. D** Vol 62 127505 (2000).
45. S. G. Ghosh and R.V. Sarayakar, Higher Dimensional Radiation Collapse and Cosmic Censorship, 10.1103/PhysRevD.62.107502.**Phys. Rev. D** Vol 62 107502 (2000).
46. S.G. Ghosh and A. Beesham, Strong Curvature Singularities in Vaidya-deSitter Space-time, 10.1103/PhysRevD.61.067502.**Phys. Rev. D** Vol 61 067502 (2000)
47. A. Beesham S.G. Ghosh and R. G. Lombard Anisotropic Cosmology with Variable G and Lambda*,* 10.1023/A:1001924300321.Gen. Relativ. Grav.Vol. 32 471 (2000).
48. G.P. Singh, S.G. Ghosh and A. Beesham, Generalised Scalar Tensor Theory with Causal Viscous Fluid 10.1142/S0218271898000565.Int. J. Mod. Phys. DVol. 7 849 (1998).
49. G.P. Singh, S.G. Ghosh and A. Beesham A New Class of Brans Dicke Cosmology with Causal Viscous Fluid 10.1071/PH96121.Vol. 50 Aust. J. Phys. 903. (1997).

50. S.G. Ghosh & A. G. Deshpande, Numerical Study of Unsteady Flow of Fluid Particle Suspension from an Infinite Rotating Disk Indian J. Pure Appl. Math. Vol. 2 245 (1997).
51. A Beesham & S G Ghosh, "Gravitational collapse of higher dimensional inhomogeneous dust" in Proceedings of the Australian Institute of Physics 15th Biennial Congress, ed. D Neilson, Causal Productions, Sydney, CD ROM, p. 189-191 (2002).
52. A Beesham & S G Ghosh, "Gravitational Collapse" in Frontiers of Fundamental Physics 4, eds. B G Sidharth & M V Altaisky, Kluwer Academic/Plenum Publishers, New York, p. 169-78 (2001).

OTHER PUBLICATIONS / PRESENTATION IN CONFERENCE

1. New Parallel Algorithms for a Class of Linear Singular Perturbation Problems, XI conference of RMS, M.A.C.T. Bhopal June 26-28 (1996).
2. Flow Between Two Counter Rotating Disks at High Reynolds Number Perturbation Problems, presented at XI conference of RMS, M.A.C.T.Bhopal June 26-28 (1996).
3. New Parallel Algorithms for a Class of Linear Singular Perturbation Problems, XI conference of RMS, M.A.C.T. Bhopal June 26-28 (1996).
4. Numerical Integration of a Class of Non-linear Singular Perturbation Problems,IX SAMS Annual Congress, University of Western Cape, Capetown, South Africa (1996)
5. New Parallel Algorithms for a Class of Linear Singular Perturbation Problems, XI conference of RMS, M.A.C.T. Bhopal June 26-28 (1996).
6. Cosmological Models in Scalar-Tensor Theory with Causal Viscous Fluid, GR-15,IUCAA, Pune, India (1998) (Abstract)
7. Naked Singularities and Weyl Tensor, XI Kwa-Zulu-Natal Mathematics Conference, University of Natal, Durban, (1999).
8. Naked Singularities in Higher Dimension Tolman Type Space-time, ICGC-2000, Kharagpur, India (Abstract). Presented (Poster)
9. Bulk Viscous Cosmological Model with Variable Lambda, ICGC-2000, Kharagpur, India (Abstract). Presented (Poster) at Conference
10. Null Fluid Collapse in Anti-de Sitter Space-times and Cosmic Censorship and HoopConjectures: 21st Meeting of IAGRG (2000) (Abstract). Presented (Oral)
11. Scalar-tensor Cosmologies and Bulk Viscosity.21st Meeting of IAGRG (2000) (Abstract). Presented (Poster) at Conference
12. Naked Singularities in Higher Dimension Tolman Type Space-time,13th International Conference on Mathematical Physics, ImperialCollege, London, (Abstract).
13. Gravitational Collapse in Higher Dimensional Space-time, SAMS Congress, Pretoria, SA, 2000 (Abstract).
14. Gravitational Collapse, Proceedings of FFP4, Hyderabad, India, 2001.On Naked Singularities in Higher Dimension Inhomogeneous Dust CollapseNational Symposium on Mathematical Physics 2001 (Abstract).
15. On Naked Singularities in Higher Dimensional Vaidya space-times(GR-16, Durban South Africa). (Abstract)
16. Gravitational Collapse on the Brane (GR-16, DurbanSouth Africa).
17. Gravitational Collapse in Higher Dimensions Bulk Viscous Cosmological Model with Variable Lambda (GR-16, Durban South Africa) (abstract)
18. Gravitational Collapse in a 5D space-time: 22nd Meeting of December IAGRG (2002) (abstract)
19. Exact Non-spherical radiating collapse 22nd Meeting of December IAGRG (2002) (abstract)
20. Some Non-spherical solutions with heat flow22nd Meeting of December IAGRG (2002) (abstract)
21. Gravitational collapse of perfect fluid in higher dimensional space-time22nd Meeting of December IAGRG (2002) (abstract)
22. Generating Radiating Black Hole solutions in Higher Diemsions. 24th Meeting of IAGRG Feb (2007) .