

Contact Address

Professor
Centre for Theoretical Physics
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Field of Specialization

Theoretical Physics, General Relativity Cosmology, Relativistic Astrophysics

Teaching Experience: 8 Years

Research Experience: 20 Years

Employment Profile

Job Title	Employer	From	To
Associate professor	Centre for Theoretical Physics, JMI	28/11/2009	28/11/2012
Reader	Centre for Theoretical Physics, JMI	28/11/2006	27/11/2009
Lecturer	Department of Physics, JMI	21/07/2006	27/11/2006
Visiting Fellow	Centre for Theoretical, JMI	08/06/2006	20/07/2006
Visiting Scientist	Inter University Centre for Astronomy and Astrophysics	April 2006	May 2006
JSPS Invitation fellowship Senior Researcher	Department of Physics Kyoto University, Japan	June 2005	April 2006
Post doctoral Fellow	Department of Physics U. of Basque Country, Spain	December 2002	May 2005
Research Associate, COE fellowship / JSPS fellowship	Yukawa Institute for Theoretical Physics, Kyoto, Japan	October 2000	November 2002
Post doctoral Fellow	Department of Physics U. of Basque Country, Spain	December 1999	September 2000
Postdoctoral Fellow	Department of Mathematics Politecnico of Milan Milan, Italy	September 1998	December 1999
Research Scholar	Tata Institute for Fundamental Research Mumbai	August 1993	August 1998

Academic Qualifications

Examination	Board / University	Year	Division/ Grade	Subjects
Ph D	TIFR/Mumbai University	1998		Physics
M Sc. Physics	Delhi	1993	First	Physics
B Sc. (Hons.) Physics	Delhi	1991	First	Physics
XII	CBSE	1988	First	English, Math, Physics Chemistry Biology
X	CBSE	1986	First	Sanskrit, English, Math, Science, Social Science

Awards/Fellowships/Associateships etc.

1. Visitor's award for best research group in the Central Universities in India, by the President of India (2015).
2. Awarded Foreign research professor fellowship to work at Rikkyo University, Tokyo Japan (2013)
3. Awarded Foreign research professor fellowship to work at Rikkyo University, Tokyo Japan (2012)
4. Associate, Inter-University Centre for Astronomy & Astrophysics, Pune.
5. ICSC world laboratory (Lusanne, Switzerland) fellowship (1998-99) in mathematical physics, in the memory of Subrahmanyan Chandrasekhar.
6. Council of Scientific and Industrial Research - University Grants Commission Fellowship (NET-1993).
7. Japan Society for Promotion of Science (JSPS) postdoctoral fellowship (2 years) to conduct research at Yukawa Institute for Theoretical Physics, Kyoto, Japan (2000) .
8. Center of Excellence (COE) research associate, Yukawa Institute for Theoretical Physics, Kyoto, Japan (2002).
9. Basque Government three year fellowship to conduct research at the department of Theoretical Physics, Bilabo Spain (2002).
10. JSPS Invitation Fellowship to conduct research at the Department of Physics, Kyoto University, Japan (2005).
11. Nominated by Indian National Science Academy for Third IAP Conference of Young scientists to be held in conjunctions with the World Economic Forum Annual Meeting of the New Champions in Tianjin, China (2010).
12. Research Associate, Center for International Studies, Rikkyo University, Tokyo, Japan (May-June 2011)

Details of National and International Research Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Completed/Ongoing
Probing Blackhole Environment with X-ray binaries	India Space Research Organisation (ISRO)	2014	2017	Ongoing
Blackholes and Visible Singularities	UGC	2013	2015	Ongoing
Particle physics models of inflation and dark energy and their observational constraints	Department of Science and Technology and Japan Society for Promotion of Science	2007	2009	Completed
Towards Understanding the Origin of Dark Energy, dark matter and Inflation	Department of Science and Technology and Japan Society for Promotion of Science	June 2009	June 2011	Completed
Brane World Cosmology with Quintessence, Phantom Fields Dark Matter and Dark Energy, effectively described by Non-linear Sigma Models	Department of Science and Technology and Russian Foundation for Basic Research	September 2008	September 2010	Completed
Models of Dark Energy: Theory and Observations	Department of Science and Technology	2009	2011	Completed

Invited Talks delivered

Topic	Date	Name of Institutes
Listening to Universe	January 2105	IIT Delhi
A Story of Spacetime, from Myth to Reality	2014	Astro Week IIT Delhi
An Introduction to General Relativity	2013	School on General Relativity and Cosmology, Bangalore University
Lecture series on Black Holes and Gravitational waves	May-June 2012	Astrophysics and Cosmology Group, University of Kwazulu Natal, Durban, South Africa
Gravitational Radiation Reaction	7 July 2011	Dept of Physics, Rikkyo University, Tokyo
RG in GR: Scaling Solutions	23 June 2011	Dept of Physics, Rikkyo University, Tokyo
Gravitational Collapse beyond General Relativity	18 June 2011	Dept of Physics, Rikkyo University, Tokyo
Guest Lecturer – XXVI SERC Main School	31 January 2011–09 February 2011	Centre For Theoretical Physics, JMI
Gravitational Collapse: General Relativity and Beyond	9 June 2010	Institute for Physics and Mathematics of the Universe, Tokyo, Japan
Singularities: Theory and Observations	7 June 2010	Department of Physics, Rikkyo University, Japan
1.Listening to black holes 2.Renormalization Group techniques in General Relativity	13 May 2010	UGC Academic Staff college Shimla
Gravitational collapse of a rotating star	2007	Yukawa Institute for Theoretical Physics, Kyoto University, Japan
Listening to Black holes	2006	Tata Institute of Fundamental Research Mumbai
Colloquium: Listening to Black Holes	2004	Theoretical Physics and Complex Systems Group, Physical Research Laboratory, Navarangpura, Ahmedabad, India
Gravitational Collapse		
Application of Renormalization group techniques in solving Einstein equations		
Renormalization Group approach to Cosmology	2005	Department of Fundamental Physics, University of Barcelona, Barcelona, Spain
Gravitational collapse and Spacetime singularities	2003	Theoretical Astrophysics Group, California Institute of

		Technology, Pasadena, USA
Gravitational Collapse: some new results	29 January 2002	Osaka City University, Osaka Japan
Spherical collapse in the framework of Einstein Theory	2001	Department of Physics, Waseda University, Tokyo, Japan
Continued gravitational collapse	August 2000	Tata Institute for Fundamental Research, Mumbai
Dynamics of Apparent Horizon	March 1998	Department of Theoretical Physics, Raman Research Institute, Bangalore, India
Gravitational collapse and space time singularities	February 1998	Center for Theoretical Studies Indian Institute for Sciences, Bangalore, India
Gravitational collapse: Black holes and Naked Singularities	June 1997	Department of Physics, University of Algarve, Portugal
Collapse and the boundary of Space time	May 1997	Institut für Astrophysik und Extraterrestrische Forschung der Universität Bonn, Bonn, Germany
Spacetime Singularities	April 1997	Department of Physics University of Freiburg, Germany
Gravitational Collapse	April 1997	Max-Planck Institute für Gravitationsphysik Albert-Einstein Institut, Potsdam, Germany
Gravitational Collapse	April 1997	Institute for Theoretical Physics, Utrecht University, The Netherlands
Gravitational Collapse	March 1997	Polytechnic of Milan, Italy
Gravitational Collapse	March 1997	International School for Advanced Studies (SISSA) Trieste, Italy

Participation in Workshops/Conferences /Summer/Winter Schools etc.

Date (s)	Title of Workshops/ Conferences/ Seminars	Organized by	Venue
May-June 2012	Gravitational Waves Astronomy in Africa	LIGO, USA NRF, South Africa	Pretoria, South Africa
December 2011	International Conference of General Relativity and Cosmology	ICTS, TIFR, IUCAA	Goa
March 2011	IUCAA sponsored school on gravitation and Astrophysics	IUCAA, Pune	Centre for Theoretical Physics, Jamia Millia Islamia
February 2011	India – Australia meeting on Gravitational waves	INDIGO Consortium	Centre for Theoretical Physics, JMI
October 2010	Fluis Dynamics from Gravity	IUCAA, Pune	IUCAA, Pune
December 2010	Indo Japan Workshop on Gravitation and Cosmology	Dept. of Science and Technology, Japan Society for Promotion of Science, Jamia Millia Islamia	Centre for Theoretical Physics, Jamia Millia Islamia
July 2010	Yukawa International Seminar – Cosmology the next generation	Yukawa Institute for Theoretical Physics	Kyoto, Japan
June 2010	Long term workshop on Gravitation and Cosmology	Yukawa Institute for Theoretical Physics	Kyoto, Japan
June 2010	Joint Seminar on Cosmology	Institute for Physics and Mathematics of Universe	Tokyo, Japan
April 2010	Cosmology Rapid Response Meeting	International Centre for Theoretical Studies	Tata Institute for Fundamental Research, Mumbai
August 2009	IUCAA Re-Union Meeting on "Gravitation and Astronomy : Frontiers in Theory and Observation	IUCAA	Pune

August 2009	Indian GW experimental effort -- Scope & feasibility, Pune	IUCAA	Pune
March 2009	Third Indo-American Frontiers of Science Symposium organized by U.S. National Academy of Sciences	Indo U.S. Science and Technology Forum	Agra
August 2008	Cosmology with the CMB and LSS	IUCAA/ICTS	Pune
December 2007	The Sixth International Conference on Gravitation & Cosmology	IUCAA	Pune
February 2007	24 th meeting of the Indian society for General Relativity and Gravitation	Jamia Millia Islamia/ IUCAA/ IAGRG	Jamia Millia Islamia, Delhi
2004	The 14 th workshop on General Relativity and Gravitation	Yukawa Institute for Theoretical Physics	Kyoto, Japan
April 2004	International Conference on "Perspectives in Particle Physics, Gravity and Cosmology	Physical Research Laboratory	Ahmedabad
July 2003	Sixth Capra meeting on Radiation Reaction in General Relativity	Yukawa Institute for Theoretical Physics	Kyoto, Japan
May 2002	Fifth Capra Meeting on Radiation Reaction in General Relativity	Center for Gravitational Wave Physics	Pennsylvania State University, USA
January 2002	Workshop on singularities and related physics	Osaka City University	Osaka, Japan
January 2002	Brane-World	Yukawa Institute for Theoretical Physics	Kyoto, Japan
April 1999	SIGRAV Graduate School in Contemporary Relativity and Gravitational Physics	Italian Society for Gravitation	(Lake Como) Milan, Italy
December 1997	International Gravity Conference (GR15)	IUCAA	IUCAA, Pune
July 1997	Workshop on The Internal Structure of Black Holes and Spacetime	Technion, Haifa	Haifa, Israel
June 1997	The Eighth Marcel Grossmann meeting on General Relativity	Jerusalem University	Jerusalem, Israel
August 1996	International Colloquium on Perspectives of High Energy Astronomy and Astrophysics	TIFR	TIFR, Mumbai
December 1995	Workshop on Gravitational Collapse and Cosmic Censorship	TIFR/IUCAA	IUCAA- Pune

Workshops/Conferences/Seminars Organized (as Chairman/ Convenor)

Title of Workshops/ Conferences/ Seminars	Date (s)	Funding Agency	Venue
24 th meeting of the Indian Association for General Relativity and Gravitation:	5 - 8 February, 2007	Jamia Millia Islamia, IUCAA, Pune, IAGRG society	Jamia Millia Islamia (Ansari Auditorium)
One-day Meeting on "Perspectives in High Energy Physics & Cosmology"	17th September, 2007	Jamia Millia Islamia	Nehru House, Jamia Millia Islamia
One-day Workshop "Indo-Japan Workshop on Cosmology"	27 December 2007	Dept. of Science and Technology, Japan Society for Promotion of Science, Jamia Millia Islamia	Centre for Theoretical Physics, Jamia Millia Islamia
Chairman, session on Classical General Relativity and Gravitational waves. International Conference of General Relativity and Cosmology	17-21 Dec 2007	IUCAA, ISRO, HRI	IUCAA Pune
Indo-Japan Workshop on Cosmology	27 December 2008	Dept. of Science and Technology, Japan Society for Promotion of Science, Jamia Millia Islamia	Centre for Theoretical Physics, Jamia Millia Islamia
Two day meeting on prospects and problems in Gravitation and Cosmology	29-30 January 2008	Jamia Millia Islamia	Centre for Theoretical Physics, Jamia Millia Islamia
Indo Japan Workshop on Gravitation and Cosmology	29-30 December 2009	Dept. of Science and Technology, Japan Society for Promotion of Science, Jamia Millia Islamia	Centre for Theoretical Physics, Jamia Millia Islamia
Indo Japan Workshop on Gravitation and Cosmology	December 2010	Dept. of Science and Technology, Japan Society for Promotion of Science, Jamia Millia Islamia	Centre for Theoretical Physics, Jamia Millia Islamia
India – Australia meeting on Gravitational waves	February 2011	INDIGO Consortium	Centre for Theoretical

			Physics, Jamia Millia Islamia
IUCAA sponsored school on gravitation and Astrophysics	March 2011	IUCAA, Pune	Centre for Theoretical Physics, Jamia Millia Islamia
Chairman, session on Classical General Relativity and Gravitational waves. International Conference of General Relativity and Cosmology	19-23 December 2011	ICTS, TIFR, IUCAA	Goa

Membership of Learned/Scientific Societies

Type of Membership (Member/Life Member Any other)	Organization	Membership No. with date
Life Member	Indian Association of General Relativity and Gravitation	02 January 2008

Academic Foreign Visits

Country	Year of Visit	Programme
Japan	2014	Foreign Professor, Invitation Program, Rikkyo University, Tokyo
Durban, South Africa	2012	Invited researcher, Astrophysics and Cosmology Group, Univ. of Kawazulu Natal Durban
Japan	2011	Foreign Professor, Invitation Program, Rikkyo University, Tokyo
Thailand	2011	Scientific collaboration
Japan	2010	JSPS Invitation fellowship
Japan	2010	DST-JSPS
Japan	2009	DST-JSPS
Japan	2008	DST-JSPS
Spain	2006	Grant from Spanish Ministry of Science

Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Vol.	Pages	Year
MD. Shah Alam, G. C. Dewangan, T Belloni, D. Mukherjee, Sanjay Jhingan	Millihertz QPOs and broad iron line from LMC X-1	Monthly Notices of Royal Astronomical Society	445	4259- 4266	2014
Sanjay Jhingan, Sahal Kaushik	On the global visibility of a singularity in spherically symmetric gravitational collapse	Physical Review D	90	024009	2014
Remya Nair, SanjayJhingan, Deepak Jain	On the global visibility of a singularity in spherically symmetric gravitational collapse	Journal of Cosmology and Astroparticle Physics	01	005	2014
Naresh Dadhich Sushant Ghosh Sanjay Jhingan	Bound orbits and gravitational theory	Physical Review D	88	124040	2013
Naresh Dadhich Sushant Ghosh Sanjay Jhingan	Gravitational collapse in pure Lovelock gravity in higher dimensions	Physical Review D	88	084024	2013
Tomohiro Harada, Sanjay Jhingan	Renormalization group approach to Einstein-Rosen waves	Physics Review D	87	064043	2013
Remya Nair, Sanjay Jhingan	Is dark energy evolving?	Journal of Cosmology and Astroparticle Physics	02	049	2013
Remya Nair, Sanjay Jhingan, Deepak Jain	Cosmic distance duality and cosmic transparency	Journal of Cosmology and Astroparticle Physics	12	028	2012
Seiju Ohashi, Tetsuya Shiromizu, Sanjay Jhingan	Spherical collapse of inhomogeneous charged dust cloud in the Lovelock theory	Physics Review D	86	044008	2012
Antonio Defallice, Burin Gumjudpai, Sanjay Jhingan	Cosmological Constraints for an Eddington-Born- Infeld field	Physics Review D	86	043525	2012
Naresh Dadhich, Sushant Ghosh, Sanjay Jhingan	Lovelock Gravity in critical Spacetime dimension	Physics Letters B	711	196	2012

Remya Nair, Sanjay Jhingan, Deepak Jain	Cosmokinetics: A joint analysis of standard candels, rules and clocks	Journal of Cosmology and Astroparticle Physics	01	018	2012
Seiju Ohashi, Tetsuya Shiromizu, Sanjay Jhingan	Spherical collapse of inhomogeneous dust cloud in the Lovelock theory	Physical Review D	84	024021	2011
Sanjay Jhingan I. H. Dwivedi Sukratu Barve	Depletion of energy from naked singular regions during gravitational collapse	Physical Review D	84	024001	2011
R. Nair, S. Jhingan D. Jain	Observational Cosmology And The Cosmic Distance Duality Relation	Journal of Cosmology and Astroparticle Physics	05	023	2011
S. G. Ghosh S. Jhingan	Quasispherical gravitational collapse in 5D Einstein-Gauss- Bonnet gravity	Physical Review D	82	024017	2010
S. Jhingan S. G. Ghosh	Inhomogeneous Dust Collapse in 5D Einstein-Gauss- Bonnet Gravity	Physical Review D	81	024010	2010
N. Joshi, S. Jhingan, T. Souradeep A. Hajian	Bipolar Harmonic encoding of CMB correlation patterns	Physical Review D	81	083012	2010
I. Thongkool, M. Sami, R. Gannouji, S. Jhingan	Constraining $f(R)$ gravity models with disappearing cosmological constant	Physical Review D	80	043523	2009
Abha Dev, D. Jain, S. Jhingan, S. Nojiri, M. Sami, I. Thongkool	Delicate $f(R)$ gravity models with disappearing cosmological constant and observational constraints on the model parameters	Physical Review D	78	083515	2008
S. Jhingan, S. Nojiri, S. D. Odintsov, M. Sami, I Thongkool, S. Zerbini	Phantom and non- phantom dark energy: The cosmological relevance of non- locally corrected gravity	Physics Letters B	663	424	2008

E. Elizalde, S. Jhingan, S. Nojiri, S. D. Odintsov, M. Sami, I. Thongkool	Dark energy generated from a (super)string effective action with higher order curvature corrections and a dynamical dilaton	European Journal of Physics C	53	447	2008
J. Ibanez, S. Jhingan	Renormalization Group Approach to Generalized Cosmological models	International Journal of Theoretical Physics	46	2313	2007
W. Hikida, S. Jhingan, H. Nakano, N. Sago, M. Sasaki, T. Tanaka	A new analytical method for self-force regularization II. Testing the efficiency for circular orbits	Progress in Theoretical Physics	113	283	2005
J. Ibanez S. Jhingan	Renormalization Group approach to Inhomogeneous Cosmology	Physical Review D	70	063507	2004
W. Hikida, S. Jhingan, H. Nakano, N. Sago, M. Sasaki, T. Tanaka	A new analytical method for self-force regularization I. scalar charged particle in Schwarzschild spacetime	Progress in Theoretical Physics	111	821	2004
A. Feinstein S. Jhingan	Ghosts in a mirror	Modern Physics Letters A	19	457	2004
S. Jhingan T. Tanaka	Improvement on the metric reconstruction scheme in the Regge-Wheeler-Zerilli formalism	Physical Review D	67	104018	2003
S. Goncalves S. Jhingan	A Note on Cylindrical Collapse	International Journal of Modern Physics D	11	1469	2002
S. Goncalves S. Jhingan G. Magli	The spectrum of endstates of gravitational collapse with tangential stresses	Physical Review D	65	064011	2002
S. Goncalves S. Jhingan	Singularities in gravitational collapse with radial pressure	Journal of General Relativity and Gravitation	33	2125	2001

S. Jhingan N. Dadhich P. S. Joshi	Gravitational Collapse in Constant Potential Bath	Physical Review D	63	044010	2001
S. Deshingkar, S. Jhingan, A. Chamorro, P. S. Joshi	Gravitational Collapse and Cosmological Constant	Physical Review D	63	124005	2001
S. Jhingan G. Magli	Black holes vs. naked singularities formation in collapsing Einstein's clusters	Physical Review D	61	124006	2000
S. S. Deshingkar, S. Jhingan, P. S. Joshi	On the global visibility of singularity in quasi- spherical collapse	Journal of General Relativity and Gravitation	30	1477	1998
S. Jhingan P. S. Joshi	The Structure of Singularity in Spherical Inhomogeneous Dust Collapse	Annals Israel Physical Society	13	357	1997
F. I. Cooperstock, S. Jhingan, P. S. Joshi T. P. Singh	Negative Pressure and Naked Singularities in Spherical Gravitational Collapse	Classical and Quantum Gravity	14	2195	1997
K. S. Virbhadra, S. Jhingan and P. S. Joshi	Nature of singularity in Einstein-massless scalar theory	International Journal of Modern Physics D	6	357	1997
S. Jhingan, P. S. Joshi, T. P. Singh	The final fate of spherical inhomogeneous dust collapse II: Initial data and causal structure of singularity	Classical and Quantum Gravity	14	3057	1996

(B) Conferences/Workshops/Symposia:

Author(s)	Title of Paper	Conference Theme	Venue	Year
R. Nair, S. Jhingan D. Jain	Observational Cosmology And The Cosmic Distance Duality Relation	Proceedings of the 7th International Conference on Gravitation and Cosmology	GOA	2011
R. Nair, S. Jhingan D. Jain	Spherical gravitational collapse in 5D Einstein- Gauss-Bonnet gravity	Proceedings of the 7th International Conference on Gravitation and Cosmology	GOA	2011
S. Jhingan S. G. Ghosh	Summary of the workshop: Classical general relativity and gravitational waves	Sixth International Conference On Gravitation and Cosmology	Pune	2007
S. Jhingan	Renormalization Group approach to Generalized Cosmology	The Yukawa International Seminar: The Next Chapter in Einstein's Legacy	Kyoto Japan	2005
S. Jhingan, J. Ibanez	Renormalization Group approach to Cosmology	The 14th Japan Workshop on General Relativity and Gravitation	Kyoto Japan	2004
W. Hikida, S. Jhingan, H. Nakano, N. Sago, M. Sasaki and T. Tanaka	Self-force on a particle orbiting a Schwarzschild black hole	The 14th Japan Workshop on General Relativity and Gravitation	Kyoto Japan	2004
N. Sago, Y. Mino, S. Jhingan and T. Tanaka	The orbital evolution of a point particle in the Kerr spacetime	The 12th Japan Workshop on General Relativity and Gravitation	Tokyo Japan	2002
S. Jhingan and G. Magli	Gravitational collapse of fluid bodies and cosmic censorship: analytic insights	SIGRAV Conference on. General Relativity and Gravitational Physics	Bari, Italy	1999
S. Jhingan	The Structure of Singularity in Gravitational Collapse	Eighth Marcel Grossmann Conference on General Relativity	Jerusalem, Israel	1997