

CURRICULUM VITAE OF KINSUK GIRI

Current Position and Address

Assistant Professor, Mathematics
Department of Science,
National Institute of Technical Teachers'
Training & Research (NITTTR), Kolkata
Block - FC, Sector - III, Salt Lake City,
Kolkata - 700106, India
Phone: +9133 23374125/23370479, Extension - 528
Fax: +9133 23376331

Permanent Address

C/O: Kalipada Giri
Vill + PO + PS : Mohanpur
Dist: Paschim Medinipur
West Bengal, PIN - 721436, India
Phone: +91 3220 232237

PERSONAL DETAILS

- Date of Birth : **7th October, 1984**
- Father's Name : Kalipada Giri, Mother's Name : Swapna Giri
- Gender : Male, Nationality : Indian, Mother Tongue : Bengali
- Religion : Hindu, Place of Birth : Mohanpur, WB, India
- Mobile : **+91 9547274335**
- Primary Email : **kinsuk84@gmail.com**
- Alternative Email : **kinsuk84@yahoo.co.in**
- Skype-ID : **kinsuk84**
- My Google Scholar Profile Link : <http://scholar.google.co.in/citations?user=oWfT2skAAAAJ&hl=en>

EDUCATIONAL QUALIFICATIONS

- **Doctor of Philosophy (Ph.D (Science)), Year of Passing : 2013**
Institution/University : *S. N. Bose National Centre for Basic Science, Kolkata*
Thesis Title : Numerical Simulation of Viscous Accretion Flow Around Black Holes Which Include Shocks
Name of Thesis Supervisor : *Prof. Sandip K. Chakrabarti*
- **Master of Science (M.Sc.), Year of Passing : 2007, Subject: Mathematics**
Institution/University : *Dept. of Mathematics, Visva-Bharati Central University, Santiniketan*
Marks Obtained : **978**, Maximum Marks : **1200**, Percentage : **81.50%**, Division/Class : **1st**
- **Bachelor of Science (B.Sc.), Year of Passing : 2005**
Subjects: **Mathematics** (Major), *Physics & Chemistry* (Minors)
Institution/University : *Dept. of Mathematics, Visva-Bharati Central University, Santiniketan*
Marks Obtained : **781**, Maximum Marks : **1000**, Percentage : **78.10%**, Division/Class : **1st**
- **Higher Secondary Degree (HS), Year of Passing : 2002**
School/Council : *Vidyasagar Vidyapith, Midnapore, WBCHSE*
Marks Obtained : **800**, Maximum Marks : **1000**, Percentage : **80.00%**, Division/Class : **1st**
- **Secondary Degree (Madhyamik), Year of Passing : 2000**
School/Board : *Baita M.N. High School, Baita, WBBSE*
Marks Obtained : **646**, Maximum Marks : **800**, Percentage : **80.75%**, Division/Class : **1st**

RESEARCH INTERESTS

The main area of my research is numerical and computational astrophysics. My research area includes hydrodynamic simulations of accretion disc models, outflows, shock oscillations in accretion, viscous accretion disc and two component accretion flow (TCAF). My Ph.D thesis deals with viscous accretion flow which include shocks. Till now, I am working with hydrodynamics. In future, I wish to carry out MHD simulations to study the both stability of shocks and TCAF in accretion disc.

RESEARCH AND TEACHING EXPERIENCES

- **11th September, 2015 - Present**, Position : Assistant Professor, Work Type : Teaching, Training & Research, Name of the Inst : National Institute of Technical Teachers' Training & Research (NITTTR), Kolkata, India

- **4th March, 2014 - 31st Auguts, 2015**, Position : Post Doctoral Research Fellow, Work Type : Research Work, Name of the Inst :IOA, National Tsing Hua University, Hsinchu, Taiwan

- **11th November, 2013 - 31st January, 2014**, Position : Lecturer, Work Type : Teaching and Research, Name of the Inst : Central Institute of Plastic Engineering and Technology (CIPET), Ahmedabad, India

- **1st January, 2013 - 8th November**, Position : Extended Senior Research Fellow, Work Type : Post Ph.D research work, Name of the Inst : S. N. Bose National Centre for Basic Sciences, Kolkata, India

- **8th January, 2010 - 31st December, 2012**, Position : Senior Research Fellow, Work Type : Ph.D research work, Name of the Inst : S. N. Bose National Centre for Basic Sciences, Kolkata, India

- **8th January, 2008 - 7th January, 2010**, Position :Junior Research Fellow, Work Type : Ph.D research work, Name of the Inst : S. N. Bose National Centre for Basic Sciences, Kolkata, India

ACADEMIC FELLOWSHIPS, AWARDS, GRANTS

- 1 · *Post Doctoral Research Fellowship* from National Science Council (NSC) of Taiwan, Taiwan, **Dec, 2013**
- 2 · *Springer Outstanding Ph.D Thesis Award* from Springer International Publication House, **Sept, 2014**
- 3 · *National Eligibility Test for Junior Research Fellowship (NET JRF)* from CSIR-UGC, India, **May, 2008**
- 4 · *National Eligibility Test for Lectureship (NET LS)* from CSIR-UGC, India, **May, 2007 & Oct, 2007**
- 5 · *SNBNCBS JRF & SRF* from S. N. Bose National Centre for Basic Science, Kolkata, **Jan, 2008 & Jan, 2010**
- 6 · *SNBNCBS ESRF* from S. N. Bose National Centre for Basic Science, Kolkata, **Jan, 2013**
- 7 · *HONOURABLE MENTION POSTER AWARD* from International Centre for Theoretical Physics (ICTP), Italy, **Nov, 2011**
- 8 · *BEST POSTER AWARD (3 times)* from S. N. Bose National Centre for Basic Science, Kolkata, **2009, 2011 & 2013**
- 9 · *Full Travel and Accomodation Grant* from International Centre for Theoretical Physics (ICTP), Italy, **Oct, 2011**

- 10 · *Travel and Accommodation Grant* from South Asian Physics Foundation (SAPF), Asia, **Oct, 2010**
- 11 · *Partial Travel and Accommodation Support* from International Union of Pure and Applied Physics (IUPAP), Sweden, **June, 2012**
- 12 · *Full Financial Grant* from COSPAR, Europe, **July, 2012**
- 13 · *Partial Financial Grant* from Kyoto University, Kyoto, Japan, **Oct, 2012**

PUBLICATIONS AND PREPRINTS

Papers in SCI Refereed Journals : 7

- 1 · “*Effects of Turbulent Viscosity on A Rotating Gas Ring Around A Black Hole: The Density Profile and Timescales in Numerical Simulation*” by **Kinsuk Giri** and H. K Chang in *Astronomische Nachrichten*, Wiley, Volume 336, Issue 10, pp - 1005-1012, 2015, **Impact Factor : 1.2**
- 2 · “*Segregation of a Keplerian disk and sub-Keplerian halo from a Transonic flow around a Black Hole by Viscosity and Cooling processes*”, by **Kinsuk Giri**, Sudip K. Garain and Sandip K. Chakrabarti in *Monthly Notices of the Royal Astronomical Society (MNRAS)*, Oxford University Press, Volume 448, Issue 4, pp 3221-3228, 2015, **Impact Factor : 5.226**
- 3 · “*Hydrodynamic Simulation of Two Component Advective Flows around Black Holes*”, by **Kinsuk Giri** and Sandip K. Chakrabarti in *Monthly Notices of the Royal Astronomical Society (MNRAS)*, Oxford University Press & Wiley-Blackwell, Volume 430, Issue 4, pp 2836-2843, 2013, **Impact Factor : 5.226**
- 4 · “*Hydrodynamic Simulations of Viscous Accretion Flows Around Black Holes*”, by **Kinsuk Giri** and Sandip K. Chakrabarti. Accepted in *Monthly Notices of the Royal Astronomical Society (MNRAS)*, Oxford University Press & Wiley-Blackwell, Volume 421, Issue 1, pp 666-678, 2012, **Impact Factor : 5.226**
- 5 · “*Effect of Compton Cooling on the Hydrodynamic and the Spectral Properties of a Two Component Accretion Flow around a Black Hole*”, by Himadri Ghosh, Sudip Garain, **Kinsuk Giri** and Sandip K. Chakrabarti. Published in *Monthly Notices of the Royal Astronomical Society (MNRAS)*, Oxford University Press & Wiley-Blackwell, Volume - 416, Issue - 2, pp 959-971, 2011, **Impact Factor : 5.226**
- 6 · “*Hydrodynamic simulations of oscillating shock waves in a sub-Keplerian accretion flow around black holes*”, by **Kinsuk Giri**, Sandip K. Chakrabarti, M.M. Samanta and D. Ryu. Published in *Monthly Notices of the Royal Astronomical Society (MNRAS)*, Oxford University Press & Wiley-Blackwell, Volume-403, Issue 1, Pages 516-524, 2010, **Impact Factor : 5.226**
- 7 · “*VLF signals in summer and winter in the Indian sub-continent using multi-station campaigns*”, by S. K. Chakrabarti et al., *Indian Journal of Phys. (IJP)*, Springer, Volume 86, Issue 5, pp 323-334, 2012, **Impact Factor : 1.7**

Papers Published in Conference Series (Peer Reviewed) : 6

- 1 · “*Role of Viscosity and Cooling in Hydrodynamic Simulation of Two Component Accretion Flow (TCAF) around Black Holes*”, by **Kinsuk Giri** and Sandip K. Chakrabarti, *Astronomical Society of India Conference Series (IASI)*, Vol. 8, pp 15-18, 2013
- 2 · “*Monte-Carlo Simulations of Comptonization Process in a Two Component Accretion Flow around a Black Hole in Presence of an Outflow*”, by Himadri Ghosh, Sudip Garain, **Kinsuk Giri** and Sandip K. Chakrabarti, *Proceedings of the Twelfth Marcel Grossmann Meeting on General Relativity*, World Scientific Publication, Singapore, ISBN - 9789814374514, pp 985, 2012
- 3 · “*Numerical simulations of a Two Component Advective Flow for the study of the spectral and timing properties of black holes*”, by **Kinsuk Giri** and Sandip K. Chakrabarti, *Proceedings of the*

Thirteenth Marcel Grossmann Meeting, World Scientific Publishing Co. Pte. Ltd., 2015. ISBN - 9789814623995, pp. 2401-2403, 2015

- 4 · “Numerical simulations of a Two Component Advective flow for the study of the spectral and timing properties of BHs and NSs” by **Kinsuk Giri** and Sandip K. Chakrabarti, 39th COSPAR Scientific Assembly, Mysore, India. Abstract PEX.1-7-12, p.622, 2012
- 5 · “Formation of Two Component Advective Flow by Numerical Simulations and Monte-Carlo simulations of their spectral properties”, by S. K. Chakrabarti, S. Garain, **Kinsuk Giri**, H. Ghosh, 40th COSAPAR Scientific Assembly, Moscow, Russia, Abstract E1.5-5-14, 2014
- 6 · “Two Component Advective Flows Around Black Holes: Theory, simulations and observational verifications”, by S. K. Chakrabarti et al., 40th COSAPAR Scientific Assembly, Moscow, Russia, Abstract E1.13-12-14, 2014

Papers Accepted in Conferences (Presented Only, Not Published) : 6

- 1 · “Effects of Turbulent Viscosity on A Rotating Gas Ring Around A Black Hole: Results of Numerical Simulation” in **Conference in Accretion and Outflows throughout the Scales** , Oct 1-3, 2014, Centre Blaise Pascal, ENS Lyon, France
- 2 · “Numerical simulations of a Two Component Advective Flow (TCAF) : Is The Flow Stable ?” in **East Asia Numerical Astrophysics Meeting (EANAM5)**, Oct 28 - Nov 2, 2012, YITP, Kyoto University, Kyoto, Japan
- 3 · “How does a Two Component Advective Flow Form ?” in **International Conference on Astrophysics & Cosmology**, March 19-21, 2012, Tribhuvan University, Kathmandu, Nepal
- 4 · “Numerical Simulation of Standard Keplerian Disc around a Black Hole”, in **ASROC Annual Meeting**, 23-25 May, 2014, NTU Experimental Forest, Nantou, Taiwan
- 5 · “Time Dependent Accretion on to Stellar Compact Objects” in in **Bose Fest 2009** (organized by SNBNCBS) at 2nd April, 2009, EZCC, Kolkata
- 6 · “Time Dependent Accretion on to White Dwarfs” in **Symposium on Developments in Space Research in the Last 25 Years**, 16th November, 2008, Indian Centre for Space Physics, Kolkata, India

Book Publications : 1

- 1 · “Numerical Simulation of Viscous Shocked Accretion Flows Around Black Holes”, by Kinsuk Giri, Published, Springer-Verlag, Berlin, 2014 ISBN: 978-3319095400 (Online), 978-3319095394 (print), DOI : 10.1007/978-3-319-09540-0

TALKS DELIVERED

- 1 · “Numerical Simulation of Viscous Shocked Accretion Flows Around Black Holes” in **IOA Colloquium**, 10 th March, 2014, National Tsing Hua University, Hsinchu, Taiwan
- 2 · “Numerical Simulation of Two Component Advective Flow (TCAF)” in **Accretion Onto Black Holes : A topical Conference**, 5-7 Sept., 2013, International Centre Goa, Dona Paula, Goa, India
- 3 · “Role of Viscosity and Cooling in Hydrodynamic Simulation of Two Component Accretion Flow (TCAF) around Black Holes” in **National Conference on Recent Trends in the Study of Compact Objects: Theory and Observation**, 11-13 March 2013, IITG, Guwahati, India
- 4 · “Numerical simulations of a Two Component Advective Flow (TCAF) : Is The Flow Stable ?” in **East Asia Numerical Astrophysics Meeting (EANAM5)**, Oct 28 - Nov 2, 2012, YITP, Kyoto University, Kyoto, Japan

- 5 · “Numerical simulations of a Two Component Advective flow for the study of the spectral and timing properties of BHs and NSs” in **39th COSPAR Scientific Assembly**, 14-22 July, 2012, Infosys Campus, Mysore, India
- 6 · “Numerical simulations of a Two Component Advective Flow for the study of the spectral and timing properties of black holes” in **The Thirteenth Marcel Grossmann Meeting - MG13**, 1-8 July, 2012, Stockholm University, Sweden
- 7 · “How does a Two Component Advective Flow Form ?” in **International Conference on Astrophysics & Cosmology**, March 19-21, 2012, Tribhuvan University, Kathmandu, Nepal
- 8 · “Hydrodynamic simulations of viscous accretion flows around black holes” in **BOSE FEST, 2011**, S. N. Bose National Centre for Basic Sciences, Kolkata, India
- 9 · “Hydrodynamic simulations of viscous accretion flows around black holes” in **International School and Conference on Analytical and Computational Astrophysics**, Nov 14-25, 2011, ICTP, Trieste, Italy
- 10 · “Time Dependent Accretion on to White Dwarfs” in **Symposium on Developments in Space Research in the Last 25 Years**, 16th November, 2008, Indian Centre for Space Physics, Kolkata, India

POSTER PRESENTATIONS

- 1 · “Numerical Simulation of Standard Keplerian Disc around a Black Hole”, in **ASROC Annual Meeting**, NTU Experimental Forest, Nantou, Taiwan, 23-25 May, 2014
- 2 · “Hydrodynamic Simulations of Two Component Accretion Flows (TCAF) Around a Black Hole” in **Bose Fest 2013** (organized by SNBNCBS) at SNBNCBS, Kolkata on 30th January, 2013
- 3 · “Hydrodynamic simulations of viscous accretion flows around black holes” in **International “School and Conference on Analytical and Computational Astrophysics”**, Nov 14-25, ICTP, Trieste, Italy
- 4 · “Hydrodynamic simulations of oscillating shock waves in a sub-Keplerian accretion flow around black holes” in **Bose Fest 2011** (organized by SNBNCBS) at SNBNCBS, Kolkata on 29th January, 2011
- 5 · “Hydrodynamic simulations of oscillating shock waves in a sub-Keplerian accretion flow around black holes” in **“International Conference on Wideband X-ray Astronomy: Frontiers in Timing and Spectroscopy”**, January 13-16, 2011, IUCAA, Pune, India
- 6 · “Hydrodynamic simulations of oscillating shock waves in a sub-Keplerian accretion flow around black holes” in **International Conference on Accretion and Outflow in Black Hole Systems**, October 10-15, 2010, Hotel Radisson, Kathmandu, Nepal
- 7 · “The Total Solar Eclipse, July 22, 2009” in the **Newsletter** of Vol-2, Issue-1, published in 28th October, 2009, SNBNCBS, Kolkata
- 8 · “Time Dependent Accretion on to Stellar Compact Objects” in **Bose Fest 2009** (organized by SNBNCBS) at EZCC, Kolkata on 2nd April, 2009

LIST OF SCHOOL/WORKSHOP/CONFERENCES ATTENDED

- 1 · Participated **TIARA Summer School on Numerical Astrophysics**, 13-17 July, 2015, TIARA, Academia Sinica, Taiwan
- 2 · Participated **ASROC Annual Meeting**, 22-24 May, 2015, Yilan University, Taiwan
- 3 · Participated **5th Fermi Asian Network (FAN) Workshop**, July 28 - Aug 1, 2014, NCTA, Yilan, Taiwan
- 4 · Participated **ASROC Annual Meeting**, 23-25 May, 2014, NTU Experimental Forest, Nantou, Taiwan

- 5 · *Participated **Accretion Onto Black Holes : A topical Conference***, 5-7 Sept., 2013, International Centre Goa, Dona Paula, Goa, India
- 6 · *Participated **National Conference on Recent Trends in the Study of Compact Objects: Theory and Observation***, 11-13 March 2013, IITG, Guwahati, India
- 7 · *Participated **East Asia Numerical Astrophysics Meeting (EANAM5)***, Oct 28- Nov 2, 2012, YITP, Kyoto University, Kyoto, Japan
- 8 · *Participated **39th COSPAR Scientific Assembly***, 14-22 July, 2012, Infosys Campus, Mysore, India
- 9 · *Participated **The Thirteenth Marcel Grossmann Meeting - MG13***, 1-8 July, 2012, Stockholm University, Stockholm, Sweden
- 10 · *Participated **International Conference on Astrophysics & Cosmology***, March 2011, 2012, Tribhuvan University, Kathmandu, Nepal
- 11 · *Participated **International School and Conference on Analytical and Computational Astrophysics***, Nov 14-25, 2011, ICTP, Trieste, Italy.
- 12 · *Attended **First Kolkata Workshop on Role of Small Telescopes in Modern Astronomy Research***, 7th-8th November, 2011, Kolkata, India
- 13 · *Participated **International Conference on Wideband X-ray Astronomy: Frontiers in Timing and Spectroscopy***, January 13-16, 2011, IUCAA, Pune, India.
- 14 · *Participated **International Conference on Accretion and Outflow in Black Hole Systems***, October 10-15, 2010, Kathmandu, Nepal
- 15 · *Attended **Symposium on Developments in Space Research in the Last 25 Years***, 16th November, 2008, Indian Centre for Space Physics, Kolkata, India
- 16 · *Participated **First International Conference on Science with Very Low Frequency Radio Waves***, March 13-18, 2010, Kolkata, India
- 17 · *Participated **International Conference on Observational Evidence for Black Hole in the Universe***, February 10-15, 2008, Kolkata, India
- 18 · *Attended **National Conference on Uncertainty: A Mathematical Approach***, An UGC Sponsored National Conference, September 7-8, 2006, Burdwan, West Bengal, India
- 19 · *Participated **Bose Fest, 2008, 2009, 2010, 2011, 2012 & 2013*** at S. N. Bose National Centre for Basic Sciences, Kolkata, India

Articles AND REVIEWS

- 1 · *“Time Dependent Accretion on to Stellar Compact Objects”*, under the supervision of Prof. Sandip K. Chakrabarti, during Ph.D course work of 2nd semester in S.N. Bose National Centre for Basic Sciences, Kolkata, 2008.
- 2 · *“Infall time-scales of sub-Keplerian accretion flow around black holes: Hydrodynamic simulation”*, under the supervision of Prof. Sandip K. Chakrabarti, during Ph.D course work in S.N. Bose National Centre for Basic Sciences, Kolkata, 2009.
- 3 · *“Numerical Simulations of Standing and Oscillating Shocks around black holes”* by Kinsuk Giri, A review article which is submitted to Jadavpur University in the purpose of Ph.D course work, October, 2010.

COMPUTER SKILLS

- Operating System :
14 years of experience in *Microsoft Windows family* operating systems
10 years of experience in *Linux* operating system. Comfortable in Shell Scripting.
Most common productivity packages (for Windows family and Linux platforms)
- Programming Language :
GW Basic, Turbo Pascal, FORTRAN, C
Seven years of experience in numerical methods and simulation using *FORTRAN 77/90*.
- Software known; commonly used in scientific researches :
Latex, Mathematica, Vim, Gnuplot, Xmgrace, Supermongo, Surfur, FTOOLS, Python etc
- Working knowledge of the *Internet*

PROFESSIONAL ACTIVITIES

- Editorial/Reviewer Board, **Asian Journal of Advanced Basic Science (AJABS)**
- Editorial/Reviewer Board, **Journal of Biological and Chemical Chronicles (J. Biol. Chem. Chron.)**
- *Successfully Completed English Communication Course at British Council, Kolkata, India*

REFERENCES

- 1 · **Prof. Sandip K. Chakrabarti**
Senior Professor & Head, Dept of Astrophysics & Cosmology,
S.N. Bose National Centre For Basic Sciences,
Block-JD, Sector-III, Salt-Lake , Kolkata-700098, India
email : chakraba@bose.res.in
- 2 · **Prof. Hsiang-Kuang Chang**
Professor, Institute of Astronomy and Department of Physics,
Associate Vice President for Academic Affairs,
National Tsing Hua University,
Hsinchu 30013, Taiwan
email : hkchang@phys.nthu.edu.tw
- 3 · **Prof. A .R. Rao**
Department of Astronomy & Astrophysics,
Tata Institute of Fundamental Research (TIFR),
Homi Bhabha Road, Colaba, Mumbai - 400 005, India
email : arrao@tifr.res.in
- 4 · **Prof. Samarjit Kar**
Associate Professor, Dept. of Mathematics,
National Institute of Technology (NIT), Durgapur,
Mahatma Gandhi Avenue, Durgapur - 713209, India
email : samarjit.kar@maths.nitdgp.ac.in
- 5 · **Prof. Swapan Raha**
Professor & Head, Dept. of Mathematics,
Visva-Bharati Central University,
Santiniketan- 731235, India
email : swapan.raha@visva-bharati.ac.in