Dr. Gourishankar Sahoo
Assistant Professor

Contact Details:	7978421835
Academic Qualification:	Ph. D.
Positions Held:	
Specialisation:	Plasma Physics
Research Interest:	Basic Plasma Physics, Plasma Diagnostics, High Speed Imaging, Dielectric Barrier Discharges, Ultrasonics, Study of Indian Astronomy in Ancient Times
Publications:	1. A. Tripathy, G. Nath, G. Sahoo and R. Paikaray, "Solvent treatment on cloud point for dewaxing in crude oil industries", Journal of Scientific and Industrial Research, 80, 115-121 (2021). 2. G. Sahoo, "On the time measurement units and measuring instruments of Samanta Chandrasekhar, the great naked eye astronomer", Orissa Journal of Physics (Journal of Orissa Physical Society), 27(1), 49-55 (2020). 3. P. Das, R. Paikaray, R. K. Barad, G. Sahoo, S. Samantaray, J. Ghosh, "On the excitation temperature of pulse plasma produced from washer plasma gun in a compact plasma system", Spectroscopy Letters, 51(9), 510-515 (2018). 4. S. Samantaray, R. Paikaray, G. Sahoo, P. Das and J. Ghosh, "Characterization of the Background Plasma in a Compact Plasma System", Res. J. Phys. Science, 3(6), 10-15 (2015). 5. G. Sahoo, R. Paikaray, S. Samantaray, P. Das, J. Ghosh and A. K. Sanyasi, "On the effect of fast neutrals in the process of blob formation in low temperature plasmas", Kathmandu University Journal of Science, Engineering and Technology, 10(II), 50-57 (2014). 6. S. Mohanty, S. P. Das, G. Sahoo, R. Paikaray, P. Das, S. Samantaray, D. S. Patil, "Effect on plasma parameters in a di-electric barrier discharge reactor with volatile organic compounds", Kathmandu University Journal of Science, Engineering and Technology, 10(II), 24-33 (2014).

7. G. Sahoo, R. Paikaray and S. Samantaray, “Imaging of coherent plasma structures, 'blobs', carrying out matter and energy from bulk plasma - a review”, International Journal of Advance Research, 2(11), 438-442 (2014).

8. G. Sahoo, R Paikaray, S Samantaray, P. S. Das, J Ghosh, M B Chowdhuri and A. K. Sanyasi “Base pressure plays an important role for production of plasma blob in argon plasma”, Journal of Physical Science and Application, 4(6), 348-357 (2014).

9. S. Samantaray, R. Paikaray, G. Sahoo, J. Ghosh and A. Sanyasi, “Electromagnet for Plasma Chamber of CPS machine” International Journal of Emerging Technology and Advanced Engineering, 4(2), 162-165 (2014).

10. G. Sahoo, R. Paikaray, S. Samantaray, D. C. Patra, N. Sasini, A. Mishra, J. Ghosh and M. B. Chowdhuri “A Compact Plasma System (CPS) for experimental study”, Applied Mechanics and Materials, 278-280, 90-100 (2013).

11. G. Sahoo, R. Paikaray, S. Samantaray, D.C. Patra, N. Sasini, S. Tripathy, S.R. Dash, A. Sahoo, J. Ghosh and A.K. Sanyasi “A Pulse Forming Network (PFN) for compact plasma system (CPS) at Ravenshaw University, India”, AIP Conf. Proc. 1536,1290-1291(2013).

12. G. Sahoo, R. Paikaray, S. Samantaray, D. C. Patra, J. Ghosh and M. B. Chowdhuri “Spectroscopic measurements of plasma blob produced by washer plasma Gun” Asian Journal of Spectroscopy, Special issue, 231-238 (2012).

13. N. C. Sasini, R. Paikaray, G. Sahoo, D. C. Patra, J. Ghosh and A. K. Sanyasi, “Study of pulsed plasma across a spatial length inside curved chamber, using cylindrical Double Probe”, Indian Journal of Physics, 56(2), 151- 155 (2012).

14. N. Sasini, R. Paikaray, G. Sahoo, D. C. Patra, J. Ghosh and A Sanyasi “Pulsed plasma from a washer stacked plasma gun and its radial velocity inside a curved vacuum chamber” Physics Express, 2-12 (2012).

15. R. Paikaray, B. Mohanty, S. R .Dash, S. Samantaray, G. Sahoo, D. C. Patra, N. Sasini, J. Ghosh, “Variation of drift velocity of Argon plasma blob at different discharging potential and fill pressure”, Orissa Journal of Physics (Journal of Orissa Physical Society) 19(2), 187-192 (2012).

16. N. Sasini, R. Paikaray, G. Sahoo, D. C. Patra, S. Samantaray, J. Ghosh and A. K. Sanyasi, “Debye length of pulsed plasma inside a curved vacuum chamber”, Orissa Journal of Physics (Journal of Orissa Physical Society) 19(1), 105-110 (2012).

17. N. Sasini, R. Paikaray ,G. Sahoo Recombination and

Decay of Plasma Produced by Washer Stacked Plasma Gun inside a Curved Vacuum Chamber, International Journal of Power System Operation and Energy Management (Inter Science), 1(3), 59-62(2012).

18. D. C. Patra, R. Paikaray, S. Samantaray, G. Sahoo, D. Rout, S. Acharya, N. Mohapatra, N. Sasini, J. Ghosh, A. K. Sanyasi, M B Chowdhuri. Measurement of plasma parameter of atmospheric gas blob produced by washer plasma gun, Orissa Journal of Physics (Journal of Orissa Physical Society)19(1), 111-116 (2012).

19. G. Sahoo, R. Paikaray, D. Karan, N. Sasini, S. Samantaray, D. C. Patra, J. Ghosh and A. K. Sanyasi, "On radial density profile of plasma blob injected into a curved vacuum chamber", IEEE XPLORE, 6002608, 6465 – 6467 (2011).

20. N. Sasini, R. Paikaray, L. Dinda, G. Sahoo, J. Ghosh and A. K. Sanyasi. "Density and temperature measurements of pulsed plasma produced inside a curved vacuum chamber", J. Phys.: Conf. Ser. 208 012132, 1-5 (2010).

21. R. Paikaray, D. C.Patra, N. Sasini, B. Mohanty, G. Sahoo, J. Ghosh and A. K.Sanyasi , "Transverse drift velocity of a pulsed-plasma in a curved magnetic field", J. Phys.: Conf. Ser. 208 012049, 1-5 (2010).

22. N. Sasini, R. Paikaray, G. Sahoo, D. C. Patra , J. Ghosh and A. K. Sanyasi, "Dynamics of positive ion in plasma blobs propagating radially inside a curved vacuum chamber" Orissa Journal of Physics (Journal of Orissa Physical Society), 17(2),187-194(2010).

23. G. Sahoo, R. Paikaray, J. Ghosh, D. C. Patra, N. C. Sasini, B. Mohanty and A. Mishra, "Study of fluctuations in a magnetized plasma blob", Orissa Journal of Physics (Journal of Orissa Physical Society), 17(1), 53-58, (2010).

24. D. C. Patra, G. Sahoo, R. Paikaray, N. Sasini, J. Ghosh, Setting up a triangular magnetic well for experimental study, Orissa Journal of Physics (Journal of Orissa Physical Society), 16(2), 295-300 (2009).

Conference Proceedings :

1. P. Das**,** R. Paikaray, **G. Sahoo,** S. Samantaray, J. Ghosh, " Spectroscopic Study of Non-LTE Glow Discharge Plasma ",Proceedings of 5th PSSI-Plasma Scholars Colloquium (PSC-2016), pp. 27-28 (2016). ISBN: 978-81-926579-74.

2. **G. Sahoo,** R. Paikaray, S. Samantaray, D. C. Patra, N. Sasini, J. Ghosh, M. B. Chwdhuri, "Spectroscopic and fast imaging diagnostics study of streamer discharge plasma", Proceedings- RTLP (Recent Trends in LASER and Photonics) pp. 83-88 (2013). ISBN: 13-978-81-926579-0-5.

3. **G. Sahoo**, R. Paikaray, P. S. Das, S. Samnataray, D. C. Patra, N. Sasini, J. Ghosh, R. Ganesh and A. K. Sanyasi, "On the spectroscopic diagnostics of atmospheric

	plasma blob produced from washer plasma gun", Proceedings of Plasma- 2012 (27th PSSI National Symposium on Plasma Sciences & Technology) ISBN: 978-93-82062-82-0, pp. 364-366 (2012).
Research Projects Completed/Ongoing:	Nil
M.Phil. Supervised:	Nil
Ph.D. Supervised:	Nil
Ph.D. Supervising:	Nil
Faculty Development Program Completed:	1. AICTE Training And Learning (ATAL) Academy Online FDP on "Research Methodology" from 7-12-2020 to 11-12-2020 held at at INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, Dharwad. 2. AICTE Training And Learning (ATAL) Academy Online FDP on "Research Methodology" from 1-12-2020 to 5-12-2020 held at INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, Nagpur.
Seminars/Conferences organised:	1. Acted as Co-Convenor in 13th International Conference on Plasma Science and Application(ICPSA-2020) held at Ravenshaw University, Cuttack, Odisha from 26th -23th Dec 2020. 2. Acted as Theme Co-ordinator in Young Scientists Conference (India International Science Festival 2020) held at Physical Research Laboratory, New Delhi from 22nd -24th Dec 2020.
Participation in Seminars/Conferences:	1. "On the fabrication and characterization of two washer guns to study plasma interactions" presented at 13th International Conference on Plasma Science and Application(ICPSA-2020) held at Ravenshaw University, Cuttack, Odisha from 26th -23th Dec 2020. 2. "Organic waste based electro acoustic shielding material for environmental noise reduction" presented at Young Scientists Conference (India International Science Festival 2020) held at Physical Research Laboratory, New Delhi from 22nd -24th Dec 2020. 3. "Generalized Interacting Dark Energy Model and Loop Quantum Cosmology" presented at Young Scientists Conference (India International Science Festival 2020) held at Physical Research Laboratory, New Delhi from 22nd -24th Dec 2020. 4. "On the flat top magnetic profile of Electromagnet in the CPS device" presented at 30th National Conference on Plasma Science and Technology

(PLASMA-2015) organised by Saha Institute of Nuclear Physics, Kolkota from 1-4 Dec, 2015.

5."On the time measuring units and measurement instruments of Samanta" presented at Bharatiya Vigyan
Sammelan (BVS-2015) organised by Vijnana Bharati at Kala Academy, Goa from 6-9 February 2015.

6."On the Effect of Base Pressure on Plasma Containment" presented at 29th National Conference on Plasma Science and Technology and International Conference on Plasma and Nanotechnology (PLASMA-2014) at M. G. University, Kottayam, Kerala from 8-11
December, 2014.

7. "On the role of fast neutrals in the process of blob formation in low temperature plasmas" presented at International Conference on Plasma Science and Application (ICPSA- 2014) organised by Kathmandu University, Dhulikhel, Nepal from 22-24 September, 2014.

8. "A pulse forming network(PFN) for compact plasma system(CPS) at Ravenshaw University, India" presented at International conference on recent trends in applied physics and material science (RAM-2013) organised at Bikaner, India from 01-02 February 2013.

9."Simulation of Blob Transport Phenomena From Bulk Plasma Structure Like Scrape Off Layer(SOL) of TOKAMAK like Machine using the Compact Plasma System (CPS) at Ravenshaw University" presented at International Conference On Complex Processes In Plasmas And Nonlinear Dynamical Systems (ICCPPNDS-2012) organised by Institute for Plasma Research, Bhat, Gandhinagar, Gujarat from 6-9 November 2012.

10. "Simulation of some astrophysical processes in the laboratory using plasma gun" presented at National Institute of Oceanography, Goa from 06-10 December 2010.

11. "Density and magnetic fluctuation studies in magnetized plasma blob projected by a washer stacked plasma gun into a curved vacuum chamber" presented at International Symposium on Waves, Coherent Structures and Turbulence in Plasma (Kaw Fest) organised by Institute for Plasma Research, Bhat, Gandhinagar, Gujarat from 12-15 January 2009.

12. "Base pressure is the determining factor for blob formation" presented at 28th National Symposium on Plasma Science and Technology Plasma -2013 organised by KIIT University, Bhubaneswar from 3-6 December 2013.

13. “Spectroscopic and fast imaging diagnostics study of streamer discharge plasma” presented at National Symposium on Recent Trends in Laser and Photonics RTLP-2013 organised by Ravenshaw University, Cuttack from 09-10 February 2013.

14. “On the spectroscopic diagnostics of atmospheric gas plasma blob” presented at 27th National Symposium on Plasma Science and Technology Plasma – 2012 from 10-13December 2012.

15. “Fast Imaging of Plasma Blob Motion across Non-Uniform Magnetic Field” presented at 26th National Symposium of Plasma Science and Technology, (Plasma-2011) organised by BIT, Mesra, Patna from 20-23 December 2011.

Books/Book Chapter contributed:

1. G. Sahoo et al. Plasma and Fusion Science, From Fundamental Research to Technological Applications, Apple Academic Press, New Jersey, USA, (1/e), (2018) (ISBN: 978-81-926579-2-9).

2. R. Paikaray, S. Das, G. Nath and G. Sahoo, Bijnāna Kathā, (1/e) School of Physical Science, Ravenshaw University, Cuttack, (2014). (ISBN No-978-81-925464-1-4).

3.H. Mishra, G. Sahoo, S. Mishra, Dictionary of Science and technology (English-English-Odia), (4/e) New Age Publications (Distributor: AK Mishra Agencies), Cuttack, (1st Ed. 2010), (ISBN: 978-81-88337-76-7).

Book Translated:

1. G. Sahoo, Bhāratare Vijnāna Ra Ujjwal Paramparā, (Translated work from Hindi to Odia) Original writer Shri. Suresh Soni, Publisher: Jātiya Prakāshan Samiti, Chandi Mandira Mārg, Cuttack, (2007).

Popular Science Articles

1)“Krusna gahwar gaveshana ku Nobel”, The Dharitri, pg 6, 7 Oct 2020.

2) “Nobel Padārtha Vijnāni”, The Dharitri, pg 6, 12 Oct 2019.

3) “Virala Gangājala”, The Dharitri, pg 6, 14 Dec 2018.

4) “LASER prajukti vidyāku āntajrātik swikruti”,The Dharitri, pg 6,6 Oct 2018.

5) “Kirana Gavesak nka Saphalatā ra Kāhāni”, The Dharitri, pg 6, 17 Oct 2014.

6) “Nobel-Chemistry- 2013”, Digbalaya, Magazine of Orissa Physical Society, pg 70-72, Feb 2014.

7) “Vigyāna Pāin Eka Aihātisika Varsa”, The Dharitri, pg 6, 31 Dec 2013.

8) “Bhāratratna Venkata Raman”, The Samāj (Weakly), pg 6- 8, 16-22 Nov 2013.

9) “Higgs Kanikā Ābiskruta”, The Samāj, pg 6, 7 July 2012.

10) “God Pārticles”, Digbalaya, Magazine of Orissa Physical Society, pg 85-90, Feb 2010.

11) “Jahna Re Jala” The Samāj (Weakly), pg 8- 13, 7-13 Nov 2009.

12) “Pruthibi Re Surya”, The Samāj, pg 6, 2 and 3 Feb 2009.

13) “Abhijāna Jahna Māmu”, The Samāj, pg 6, 31 Oct 2008.

14) “Sunya Ru Samagra”, The Samāj, pg 6, 12 Oct 2008.

15) “On The Composition of Physical Entities” Big Bang, P G Bulletin of Department of Physics, Ravenshaw University, 2006.

Articles related to society:

“Nutan Sikhyā Neeti-2020: Eka Vihangāvalokan”, The Dharitri, pg 6, 3 August 2020.

Popular Science Talks:

1. Mahākarsan Taranga, All India Radio, Cuttack, 5.30 PM, DOB 30.5.16.
2. Vikalpa Shakti Ra Utsa; Plasma, All India Radio, Cuttack, 5.30 PM, DOB 22.2.16.
3. Navina Kruti ra Swikruti: Bigyan re Nobel-2014, All India Radio, Cuttack, 5.30 PM, DOB 5.1.15.
4. Bhārata ra Mangala Abhijāna, Juba Vani, All India Radio, Cuttack, 5.30 PM, DOB 6.10.14.
5. Jalabāyu Parivartan, Juba Vani, All India Radio, Cuttack, 5.30 PM, DOB 14.7.14.
6. Birala Padārtha-Upsalite, Juba Vani, All India Radio, Cuttack, 5.30 PM, DOB 14.4.14.
7. National Science Day Lecture at National Institute of Open School (NIOS), Bhubaneswar, 28 Feb 2014.
8. Bhārata ra Garva C V. Raman, Juba Vani, All India Radio, Cuttack, 5.30 PM, DOB 7.1.14.
9. Pruthivi ra Jibana Charita, Juba Vani, All India Radio, Cuttack, 5.30 PM, DOB 17.10.11.
10. God Particle, Juba Vani, All India Radio, Cuttack, 5.30 PM, DOB 3.11.08.

Membership of Learned Societies/ Professional Bodies:

1. Plasma Science Society of India (Life Member)
2. Power Beam Society of India (Life Member)
3. Orissa Physical Society (Patron Member)
4. Odisha Vigyan Academy (Life Member)
5. Bigyān Prachār Samiti (Life Member)
6. Utkal Sāhitya Samāj (Life Member)
1. 7. Vijnana Bharati (Life Member)

Awards & Honours Received:

Others:

1. CPP-IPR workshop on Linear Tokamak Divertor Simulators for PSI studies, (24-26 Nov 2014), CPP-IPR, Guwahati, Assam, India.
2. DST-SERB School on “Tokamaks and Magnetized plasma fusion,” (3-21 Feb, 2013), Institute for Plasma Research, Bhat, Gandhinagar, India.
3. DST-SERC School on “Laser Produced Plasmas: Physics and Application” (9-21 July, 2012). Raja Ramana Centre for Advanced Technology, Indore.

4. DST-SERC School on “Plasma Diagnostics” (20-31 July, 2009). Institute for Plasma Research, Bhat, Gandhinagar, India.