

CURRICULUM VITAE

Name: Dr. Alok Kumar Sahoo

Position: Assistant Professor

Address: Department of Mathematics,
Bhadrak Auto. College, Bhadrak

Contact: aksahoomath@gmail.com

Research Area: Partial Differential Equations,
Calculus of Variations,
Geometric Analysis

Webpage Link: [Home Page](#)

Google Scholar Link: [Profile](#)



Education:

Sl. No	Degree	University/Institution	Discipline	Year of completion
1	Bachelor's degree	Bhadrak Auto. College	Mathematics (Science)	2015
2	Master's degree	Pondicherry University	Mathematics	2017
3	Ph.D.	IIT Hyderabad	Mathematics (PDE)	2023

Ph.D. thesis title: *Singularly perturbed elliptic equations: Existence and qualitative properties of solutions.*

Ph.D. Supervisor: Dr. Bhakti Bhusan Manna

Academic Position:

Sl. No	Position held	Name of the Institute	Joining	Held Up to
1	SRF	IISER Pune	31.10.2022	05.01.2023
2	Postdoc (RA)	IISER Pune	06.01.2023	18.09.2023

3	Assistant Professor	Bhadrak Auto. College	21.09.2023	Continuing...
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Awards/ Achievements:

Sl. No	Award Name	Agency	Year
1	NBHM-Postdoctoral Fellowship	National Board for Higher Mathematics (NBHM)	2023
2	NET & JRF	CSIR	2017
3	Graduate Aptitude Test in Engineering (GATE)	Department of Higher Education, Ministry of Education (MoE), Government of India.	2017
4	UGC-URH Fellowship in Mathematics	UGC	2015

Publications:

- Bhakti B. Manna, B. Ruf, A. K. Sahoo, P. N. Srikanth: **Hopf reduction and orbit concentrating solutions for a class of superlinear elliptic equations**, *J. Funct. Anal.* 282 (2022), no. 12, Paper No. 109459, 32 pp. . [Article](#)
- Bhakti B. Manna , Alok k. Sahoo: **Existence of sign-changing solutions to a Hamiltonian elliptic system in \mathbb{R}^N** , *J. Math. Anal. Appl.* 517 (2023), no. 2, Paper No. 126655, 20 pp. . [Article](#)
- Bhakti B. Manna , Alok k. Sahoo: **Concentration results for a singularly perturbed elliptic system with variable coefficients**, *Discrete Contin. Dyn. Syst.* 43 (2023), no. 8, 2889–2922 [Article](#)
- Mousomi Bhakta, Debdip Ganguly, Diksha Gupta, Alok K. Sahoo: **A global compactness result and multiplicity of solutions for a class of critical exponent problems in the hyperbolic space** , **Communications in Contemporary Mathematics** [arXiv:2308.06710](https://arxiv.org/abs/2308.06710)
- Mousomi Bhakta, Debdip Ganguly, Diksha Gupta, Alok K. Sahoo: **Poincaré-Sobolev equations with the critical exponent and a potential in the hyperbolic space** [arXiv.2410.03164](https://arxiv.org/abs/2410.03164)

Conference Talks:

SI. No	Details
1	<p><i>The 38th Annual Conference of the Ramanujan Mathematical Society, Department of Mathematics ,IIT Guwahati,2023</i> (Invited Speaker) Title: Global compactness result and multiplicity of solutions for a class of critical exponent problem in the hyperbolic space</p>
2	<p><i>School of Basic Science, IIT Bhubaneswar,2023</i> (Research Visit) Title: Hopf Reduction and orbit concentrating solutions for a class of superlinear elliptic equations,</p>
3	<p><i>Mathematics Symposium 2023, IISER Pune,2023</i> (Paper Presentation) Title: Existence of Sign-changing Solutions to a Hamiltonian elliptic System,</p>
4	<p><i>The 37th Annual Conference of the Ramanujan Mathematical Society, Department of Mathematics, SSN College of Engineering, Chennai,2022</i> (Contributed Talk) Title: Hopf Reduction and orbit concentrating solutions for a class of superlinear elliptic equations,</p>
5	<p><i>Recent advances in Mathematics and related areas, Kerala School of Mathematics (KSoM),2022,</i> (Paper presentation) Title: Hopf Reduction and orbit concentrating solutions for a class of superlinear elliptic equations,</p>
6	<p><i>SIAM conference PD22, 2022</i> (Poster presentation), Title: Concentration results for a singularly perturbed elliptic system with variable coefficients,</p>
7	<p><i>International Conference on Dynamical Systems, Control and their Applications, IIT Roorkee, 2022</i> : (Paper presentation) Title: Entire Non-radial Sign Changing Solutions for a Fractional Schrodinger Equation, 2022.</p>
8	<p><i>The fourth BRICS Mathematics conference, IISER TVM, 2021</i> : (Paper presentation) Title: S^1-concentrating solutions for a superlinear elliptic equation in R^3,</p>

Conference / Workshop Attended

1. Summer School in Nonlinear Analysis, Universit della Tuscia, Viterbo (Italy) June 2022.
2. Fractional Derivatives: Theory and Computations with Applications (FDTCA 2021), IITBHU.
3. Geometric Analysis held at Dept. of Mathematics, IIT Bombay, Dec 2019.
4. AIS-Geometric measure theory and PDE, IIT Madras, June 2019.
5. ATMW New Directions in PDE Constrained Optimisation, IIT Bombay, Mar 2017.

Workshop/ Seminar Organizer:

1. Coordinator for ATPM 24, Organised by Department of Mathematics, Bhadrak Auto College during May 09-22, 2024. Alumni of the same department supported the event.
2. Local Coordinator for "Compact course on Algebra" during September 27-29, 2024, organised by Department of Mathematics, Bhadrak Auto. College in association with The Professor R. Balakrishnan Endowment Trust (RBET) and The Indian Mathematics Consortium (TMC).