Curriculum Vitae

Dr. Himadri Halder

Assistant Professor
Department of Mathematics and Computing
Indian Institute of Technology Dhanbad
Dhanbad, PIN-826004, Jharkhand (State), India.
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Academics

`Postdoctoral Fellow (NBHM)`
Indian Institute of Science, Bangalore, India
Research Areas : Complex Analysis, Functional Analysis,
02nd *February 2026* 24th *April 2026*
Mentor: Prof. Apoorva Khare

`Visiting Scientist`
Indian Statistical Institute, Bangalore, India
Research Areas : Complex Analysis, Functional Analysis,
28th *October 2025 to* 31st *January 2026*
Mentor: Prof. B. V. Rajarama Bhat

`Senior Project Associate`
Indian Institute of Technology Bombay, Powai, India
Research Areas : Complex Analysis, Operator Theory,
28th *April 2025 to* 16th *October 2025*
Mentor: Prof. Sourav Pal

`Institute Postdoctoral Fellow`
Indian Institute of Technology Bombay, Powai, India
Research Areas : Complex Analysis, Operator Theory,
22nd *February 2023 to* 31st *March, 2025*
Mentor: Prof. Sourav Pal

`Visiting Researcher`
Indian Institute of Science Education and Research Kolkata, India
Research Area : Complex Analysis
5th *January 2023 to* 15th *February 2023,*
Host: Prof. Sushil Gorai

`Ph.D. in Mathematics`
Indian Institute of Technology Bhubaneswar, Khurda, India
Thesis Title : A study of Bohr phenomenon for complex-valued and operator-valued functions,
2^{nd} *January 2019 to* 26^{th} *October 2022,*
Thesis Advisor: Prof. Vasudeva Rao Allu

`M.Sc. in Mathematics`
Indian Institute of Technology Bombay, Mumbai, India *July, 2018*

`Bachelor of Science (Hons.) in Mathematics`
Ramakrishna Mission Residential College, Narendrapur affiliated to the University of Calcutta, West Bengal, India *May, 2016*

Research Interests

Complex Analysis, Functional Analysis, Operator Theory.

Personal Information

(i) Date of birth: 02-09-1995

(iii) Nationality: Indian

(iv) Marital status: Single

Research Experience

Teaching Experience: I have served as a Teaching Assistant (TA) for the following courses at IIT Bombay:

1. MA 106 – Linear Algebra (Spring 2023)
2. MA 108 – Differential Equations (Spring 2023)
3. MA 110 – Linear Algebra and Differential Equations (Spring 2024, Spring 2025)
4. MA 105 – Calculus I (Autumn 2023, Autumn 2024)
5. MA 111 – Calculus II (Autumn 2023, Autumn 2024).

Post Doctoral Experience:

1. **Institute Postdoctoral Fellow** at the Department of Mathematics of **IIT Bombay**, Powai, Mumbai, PIN-400076, Maharashtra, India from 22–02–2023 to 31–03-2025.
2. **Senior Project Associate** at the Department of Mathematics of **IIT Bombay**, Powai, Mumbai, PIN-400076, Maharashtra, India from 28–04–2025 to 16–10-2025.
3. **Visiting Scientist** position at the Stat-Math Unit of **ISI Bangalore** under the J. C. Bose Fellowship of Professor B. V. Rajarama Bhat from 28th October 2025 to 31st January 2026.

4. **NBHM Postdoctoral Fellow** at the Department of Mathematics of **IISc** Bangalore, PIN-560012, Karnataka, India from 02–02–2026 to 24–04-2026.

Short-Term Visiting Experience:

1. Department of Mathematics of Indian Institute of Science Education and Research Kolkata (IISER Kolkata) from 5th January to 15th February 2023 (Host: Prof. Sushil Gorai)

Fellowships and Achievements

1. Awarded the **Post-Doctoral Fellowship** by the **National Board for Higher Mathematics** (**NBHM**) in the June 2025 selection cycle (results announced on 29th October 2025).

2. Received the **Subhash Bhatt Award** (jointly with Prof. Vasudeva Rao Allu) for the year 2025 from the **Indian Mathematical Society** during their 91st Annual Conference meeting held at the Department of Mathematics, Lucknow University, Lucknow, Uttar Pradesh.

3. Awarded **Visiting Scientist** position at the Stat-Math Unit of **ISI Bangalore** under the J. C. Bose Fellowship of Professor B. V. Rajarama Bhat from 28th October 2025 to 31st January 2026.

4. Awarded **Senior Project Associate** position at the Department of Mathematics of **IIT Bombay** from 28th April 2025 to 16th October 2025.

5. Awarded **Institute Postdoctoral Fellowship** at the Department of Mathematics of **IIT Bombay**, Powai, Mumbai, PIN-400076, Maharashtra, India from 22–02–2023 to 31–03-2025.

6. Qualified for **Junior Research Fellowship** (JRF) by Council of Scientific and Industrial Research (CSIR) through Joint CSIR–UGC National Eligibility Test (NET) in December 2017, June 2018, and June 2019.

7. Qualified for **Graduate Aptitude Test in Engineering** (GATE), Mathematical Science, conducted by IITs and IISc in 2018.

8. Qualified for **Joint Admission Test** for M.Sc. (JAM) 2016 conducted by IISc and IITs.

Publications

1. Vasudevarao Allu, Himadri Halder and Subhadip Pal, Multidimensional Bohr radii for holomorphic functions with values in complex Banach spaces, *Complex Analysis and Operator Theory* **20** (2026), Article No. 97, 17 pp.
DOI: https://doi.org/10.1007/s11785-026-01952-2

2. Molla Basir Ahamed, Vasudevarao Allu and Himadri Halder, Bohr inequalities for the class of unimodular bounded functions on shifted disks, *Bulletin des Sciences Mathématiques* **199** (2025), 103577.

3. Vasudevarao Allu, Himadri Halder and Subhadip Pal, Arithmetic Bohr radius for the Minkowski space, *Forum Mathematicum* **37** (2025), 987–995.

4. Vasudevarao Allu and Himadri Halder, Bohr phenomenon for harmonic Bloch functions, *Analysis Mathematica* **51** (2025), 35–62.

5. Molla Basir Ahamed, Vasudevarao Allu and Himadri Halder, Asymptotic behaviour of Bohr's Radii for Polynomials on simply connected domains, *C. R. Math. Acad. Sci. Paris* **363** (2025), 1047–1058.

6. Vasudevarao Allu and Himadri Halder, Bohr radius for Banach spaces on simply connected domains, *Proceedings of the Edinburgh Mathematical Society* **67** (2024), 113–141. DOI: https://doi.org/10.1017/S0013091523000688

7. Vasudevarao Allu and Himadri Halder, Landau's theorem for harmonic Bloch functions on simply connected domains, *Complex Variables and Elliptic Equations* **70** (2025), 213–227. DOI: https://doi.org/10.1080/17476933.2023.2298834

8. Vasudevarao Allu and Himadri Halder, Bohr operator on operator-valued poly-analytic functions on simply connected domains, *Canadian Mathematical Bulletin* **66**(4), 1411–1422 (2023). DOI: https://doi.org/10.4153/S0008439523000541

9. Molla Basir Ahamed, Vasudevarao Allu and Himadri Halder, Improved Bohr inequalities for certain class of harmonic univalent functions, *Complex Variables and Elliptic Equations* **68** (2023), 267–290.

10. Vasudevarao Allu, Himadri Halder and Subhadip Pal, Bohr and Rogosinski inequalities for operator valued holomorphic functions, *Bulletin des Sciences Mathématiques* **182** (2023), 103214.

11. Vasudevarao Allu and Himadri Halder, The Bohr inequality for certain harmonic mappings, *Indagationes Mathematicae* **33** (2022), 581–597.

12. Vasudevarao Allu and Himadri Halder, Operator valued analogues of multidimensional Bohr's inequality, *Canadian Mathematical Bulletin* **65** (2022), 1020–1035.

13. Vasudevarao Allu and Himadri Halder, Bohr phenomenon for certain close-to-convex analytic functions, *Comput. Methods Funct. Theory* **22** (2022), 491–517.

14. Molla Basir Ahamed, Vasudevarao Allu and Himadri Halder, The Bohr phenomenon for analytic functions on shifted disks, *Annales Fennici Mathematici* **47** (2022), 103-120.

15. Vasudevarao Allu and Himadri Halder, Bohr phenomenon for certain subclasses of harmonic mappings, *Bulletin des Sciences Mathématiques* **173**, December 2021, 103053, DOI: https://doi.org/10.1016/j.bulsci.2021.103053

16. Molla Basir Ahamed, Vasudevarao Allu and Himadri Halder, Bohr radius for certain classes of close-to-convex harmonic mappings, *Analysis and Mathematical Physics* **11** (2021), no. 3, Paper No.111, 30 pp.

17. Vasudevarao Allu and Himadri Halder, Bohr radius for certain classes of starlike and convex univalent functions, *J. Math. Anal. Appl.* **493**(2021), 124519.

Preprints

1. Himadri Halder, Vector valued pluriharmonic functions within the framework of local Banach space theory and their applications, preprint.
2. Himadri Halder, Arithmetic Bohr radius and local Banach space theory, https://arxiv.org/abs/2512.19411
3. Himadri Halder, Local Banach space theoretic approach to Bohr's theorem for vector valued holomorphic and pluriharmonic functions, https://arxiv.org/abs/2512.09091

Conference Proceedings

1. Molla Basir Ahamed, Vasudevarao Allu and Himadri Halder, On the Bohr phenomenon, Current research in Mathematical and Computer Sciences-III, Publisher UWM, Olsztyn (2022), 35–59.

Research Visit(s)

1. Visiting Scientist at the Stat-Math Unit of ISI Bangalore from 28th October 2025 to 31st January 2026.
2. Senior Project Associate at the Department of Mathematics of IIT Bombay, Powai, Mumbai, PIN-400076, Maharashtra, India from 28–04–2025 to 16–10-2025.
3. Institute Postdoctoral Fellow at the Department of Mathematics of IIT Bombay, Powai, Mumbai, PIN-400076, Maharashtra, India from 22–02–2023 to 31–03-2025.
4. Department of Mathematics of Indian Institute of Science Education and Research Kolkata (IISER Kolkata) from 5th January to 15th February 2023 (Host: Prof. Sushil Gorai)

Invited talks/Conferences/Seminars/Workshops

1. Delivered a talk entitled "Bohr zone for domains in $\mathbb{C}^n$" at the Analysis Seminar in the Department of Mathematics of Indian Institute of Technology Bombay on 10^{th} February, 2025.
2. Delivered a talk entitled "A new approach to Bohr's power series theorem for balanced domains in $\mathbb{C}^n$" at the "`International Conference on Special functions, Analytic functions, Metrics and quasiconformalitY (ICSAMY 2024)`", organized by the Department of Mathematics of Indian Institute of Technology Indore during December 17-20, 2024.
3. Delivered a talk entitled "Bohr's theorem for the polydisc and the symmetrized polydisc" at the Analysis Seminar in the Department of Mathematics of Indian Institute of Technology Bombay on 30^{th} January, 2024.
4. Attended a workshop entitled "`Interactions in Several Complex Variables` (Workshop & Conference)", organized by Indian Institute of Science Education and Research Pune during December 11–15, 2023.

5. Attended a workshop "International Workshop on Geometric Function Theory (IWGFT 2023)", organized by the Department of Mathematics, IIT Madras during August 18–20, 2023.

6. Attended "37th Annual Conference of Ramanujan Mathematical Society" during 06 - 08, December 2022.

References

1. Prof. Vasudeva Rao Allu
   (Ph.D. Supervisor)
   Discipline of Mathematics,
   School of Basic Sciences
   Indian Institute of Technology Bhubaneswar
   Argul, Bhubaneswar, PIN-752050, Odisha (State), India
   Email: avrao@iitbbs.ac.in

2. Prof. Sourav Pal (Postdoc mentor)
   Department of Mathematics,
   Indian Institute of Technology Bombay, India
   Powai, Mumbai, PIN-400076, Maharashtra (State), India
   Email: sourav@math.iitb.ac.in, souravpal@iitb.ac.in

3. Prof. Antti Rasila
   Department of Mathematics and Computer Science,
   Guangdong Technion Israel Institute of Technology, China
   241 Daxue Road, Jinping District, Shantou, Guangdong Province, China
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