Curriculam Vitae

Personal information

Name : Devabrat Mahanta

Date of Birth : 29 October 1994

Nationality : Indian

Languages Known : Assamese, Hindi and English

Permanent Address : Marowa, Nalbari 781348, Assam

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Present Affiliation

February 2024-present Assistant Professor
Department of Physics
Pragjyotish College

Work experience

- Worked as an assistant professor at the department of Physics, Abhayapuri College from 3rd December, 2021 to 19th February 2024.

Education

Class 10th (2010)	School :	Milan High School Arikuchi, Assam, India
	Board :	SEBA
	Percentage :	89.5 %
Class 12th (2012)	School :	Dr. Sarvepalli Radhakrishnan Academy, Nalbari, Assam, India
	Board :	AHSEC
	Percentage :	87.4 %
B.Sc. (2015)	College :	Nalbari College
	University :	Gauhati University
	CGPA :	9.2
M.Sc. (2017)	University :	Gauhati University
	CGPA :	8.85 (**Rank: Second Position**)

Ph.D. (2023)

University / Institute: Indian Institute of Technology Guwahati

Thesis title: Aspects of Low Scale Leptogenesis and Connection to Dark Matter

Supervisor: Dr. Debasish Borah

Competitive Examinations

Joint Entrance Screening Test (JEST 2015)

Graduate Aptitude Test in Engineering (GATE 2017)

National Eligibility Test (NET 2018)

BARC OCES Examination (2017)

Internships/Projects

- "A Project Work on Chaos" under the supervision of Prof. Madhurjya Prashad Bora, Gauhati University (DST INSPIRE project) in 2015.
- "Large Scale Structure Formation in the Universe" under the supervision of Dr. Sanjeev Kalita, Gauhati University (M.Sc thesis project) in 2017.

Awards/Scholarships

- Recieved DST INSPIRE scholarship from 2012 to 2017.

Research interest

- Leptogenesis, dark-matter and neutrino mass models
- Inflationary Cosmology
- Primordial black holes
- Axion Cosmology

List of publications

SL No.	Name	Authors	Journal	ISSN	Year of Publication	Impact Factor
1	*Fermion Dark Matter with N_2 Leptogenesis in Minimal Scotogenic Model*	Devabrat Mahanta and Debasish Borah	JCAP	1475-7516	2019	6.4
2	*TeV Scale Leptogenesis with Dark Matter in*	Devabrat Mahanta and Debasish	JCAP	1475-7516	2020	6.4

	Non-standard Cosmology	Borah				
3	*Observable Gravitational Wave in Minimal Scotogenic Model*	Debasish Borah, Arnab Dasgupta, Kohei Fujikura, Sin K. Kang and Devabrat Mahanta	JCAP	1475-7516	2020	6.4
4	*TeV Scale Resonant Leptogenesis with* $L_\mu - L_\tau$ *Gauge Symmetry in Light of the Muon* $g-2$	Debasish Borah, Arnab Dasgupta and Devabrat Mahanta	Phys.Rev. D	247000 10	2021	5.407
5	*Low Scale Leptogenesis and Dark Matter in the Presence of Primordial Black Holes*	Suruj Jyoti Das, Debasish Borah and Devabrat Mahanta	JCAP	1475-7516	2021	6.4
6	*Dark Sector Assisted Low Scale Leptogenesis from Three Body Decay*	Debasish Borah, Devabrat Mahanta and Arnab Dasgupta	Phys. Rev.D	247000 10	2022	5.407
7	*Low Scale Dirac Leptogenesis and Dark Matter with Observable* ΔN_{eff}	Debasish Borah and Devabrat Mahanta	*Eur.Phys.J. C*	1286-0042	2022	4.994
8	*WIMPy Leptogenesis in Non-standard Cosmology*	Devabrat Mahanta and Debasish Borah	JCAP	1475-7516	2023	6.4
9	*Low Scale Leptogenesis From Three-Body Decay*	Devabrat Mahanta, Debasish Borah and Arnab Dasgupta	Springer Proceeding Physics	0930-8989	2023	

10	*Low Scale Leptogenesis in Singlet-Triplet Scotogenic Model*	Labh Singh, Devabrat Mahanta and Surender Verma	JCAP	1475-7516	2024	6.4

Conference/Seminars

- "Anomalies 2019", Indian Institute of Technology Hyderabad, Hyderabad, India.
- "XVI Workshop on High Energy Physics Phenomenology: WHEPP2019", Indian Institute of Technology Guwahati, Guwahati, India.
- "IITG-Tokyotech-2020", Indian Institute of Technology Guwahati and Tokyotech, Japan.
- "Cosmology in Colombia 2020 ", Colombia University, Colombia.
- "Physics of the early Universe 2020", ICTS, TIFR
- "XXIV DAE-BRNS symposiuam on High Enegry Physics 2020", NISER, Jatni, Odisha.
- "International Webinar Series on Introduction to Cosmology and Recent Developements", 2020, Vellore Institute of Technology, Chennai, India.
- "XXV DAE-BRNS symposium on High Energy Physics 2022", IISER Mohali, Mohali, India.
- "International Conference on Frontiers in Pure and Applied Physics 2024", USTM, Meghalaya.

Workshops and Schools

- "Astronomy and Astrophysics Summar chool 2016", Cotton University in collaboration with IUCAA, Guwahati, India.

- “National Workshop on Gravitational Wave Astronomy 2017”, Dibrugarh University in collaboration with IUCAA, Dibrugarh, India.

- “SERB Preparatory school on Theoretical High Energy Physics 2018”, Hyderabad University.

- “Pedagogic Workshop on Astronomy, Astrophysics and Cosmology 2024”, IUCAA & Gauhati University.

Invited talks

- Invited talk on Dark Matter at Birjhora Mahavidyala, Bongaigaon, India.

- Invited talk on the importance of research in natural sciences at Nalbari College, Nalbari, India.

- “Effects of Non-Standard Cosmology on Matter Antimatter Asymmetry and Dark Matter”, invited talk at the Department of Physics and Astronomical Sciences, Central University of Himachal Pradesh.