

# Dr. Sujay Kr. Biswas

M.Sc (Jadavpur University)

Ph.D (Jadavpur University)

Assistant Professor

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## *CONTACT ADDRESS*

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## *AREA OF SPECIALIZATION*

### **Applied Mathematics:**

Mathematical Physics; Differential Geometry; Differential Equations and Dynamical Systems; General Relativity Theory; Astrophysics; Cosmology.

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## *RESEARCH INTEREST*

### **Area:**

Cosmology; Dark Energy; Interacting Dark Energy;

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*PROFESSIONAL EXPERIENCE*

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**12-02-2021 –PRESENT:**                      **ASSISTANT PROFESSOR**  
Department of Mathematics, University of North  
Bengal, Dist.-Darjeeling, West Bengal, Pin-734013,  
India.

**18-02-2015 to 11-02-2021:**                      **ASSISTANT PROFESSOR**  
Department of Mathematics, Ramakrishna Mission  
Vivekananda Centenary College, Rahara, Kolkata-  
700118, West Bengal, India.

**03-01-2022-present**                                      **GUEST FACULTY**  
Department of Mathematics  
Darjeeling Hills University  
Jogihat, Mangpu, Darjeeling-734313.

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*TEACHING EXPERIENCE*

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**Taught UG -Courses:**                                      February 2015 to February 2021.  
Mathematics:

**Taught PG -Courses:**                                      August 2018 to till date  
Mathematics:

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*RESEARCH GUIDANCE*

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**Ph.D Students:**                                      **On going:**    Three (03)  
**Awarded:**                                      Nil

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## PUBLICATIONS

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### **Published Papers:**

1. Goutam Mandal, **Sujay Kr. Biswas**, “Dynamical stability of an interacting quintessence with varying-mass dark matter particles in Lyra manifold”, *International Journal of Modern Physics D*, 2250059 (2022). DOI:[10.1142/S0218271822500596](https://doi.org/10.1142/S0218271822500596)
2. Goutam Mandal, **Sujay Kr. Biswas**, Subhajit Saha and Abdulla Al Mamon, “Dynamical system analysis of logotropic dark fluid with a power in the rest-mass energy density”, *Physics of the Dark Universe*, 35 (2022) 100970. DOI:[10.1016/j.dark.2022.100970](https://doi.org/10.1016/j.dark.2022.100970)
3. **Sujay Kr. Biswas** and Atreyee Biswas, “Phase Space Analysis and Thermodynamics of Interacting Umami Chaplygin Gas in FRW Universe”, *European Physical Journal C*, **81** (2021), 356. DOI: [10.1140/epjc/s10052-021-09131-7](https://doi.org/10.1140/epjc/s10052-021-09131-7)
4. **Sujay Kr. Biswas** and Subenoy Chakraborty, “Interacting dark energy model in the brane scenario: A dynamical system analysis”, *International Journal of Geometric Methods in Modern Physics*, **16** (2019) No. 08, 1950115. DOI: [10.1142/S0219887819501159](https://doi.org/10.1142/S0219887819501159)
5. **Sujay Kr. Biswas**, Wompherdeiki Khylllep, Jibitesh Dutta and Subenoy Chakraborty, “Dynamical analysis of an interacting dark energy model in the framework of particle creation mechanism”, *Physical Review D*, **95** (2017) 103009. DOI:[10.1103/PhysRevD.95.103009](https://doi.org/10.1103/PhysRevD.95.103009)
6. **Sujay Kr. Biswas** and Subenoy Chakraborty, “Interacting dark energy in f(T) cosmology: A dynamical system analysis”, *International Journal of Modern Physics D*, **24** (2015) No. 07, 1550046. DOI: [10.1142/S0218271815500467](https://doi.org/10.1142/S0218271815500467)
7. **Sujay Kr. Biswas** and Subenoy Chakraborty, “Dynamical systems analysis of an interacting dark energy model in the brane scenario”, *General Relativity and Gravitation*, **47** (2015) 22. DOI: [10.1007/s10714-015-1866-8](https://doi.org/10.1007/s10714-015-1866-8)

### **Published Book Chapter:**

1. Agnidipto Bhattacharya, Sujay Kr. Biswas, “Dynamical system analysis of an interacting phantom model”, *New Researches in Science, Humanities and Social Sciences*, EBH Publishers (India) (2022), ISBN: 978 93 90434 26 8

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## FOR MORE DETAILS

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**inSpire hep:** <https://inspirehep.net/literature?q=a%20S.K.Biswas.3>

**Researchgate:** <https://www.researchgate.net/profile/Sujay-Biswas-3>

**Google scholar:** <https://scholar.google.com/citations?user=cOOiZV0AAAAJ&hl=en>

**My personal webpage:** <https://sites.google.com/view/sujaykrbiswas>