

## Curriculum Vitae

**Dr. Nilima Das**



### Present Position:

Assistant Professor (Mathematics),  
Department of Applied Science and Humanity,  
NIFFT Ranchi, Hatia

### Personal Details

Nationality-Indian,  
Place of Birth- Alinan, W.B.  
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### EDUCATION

December- 2013 – July- 2019     **Ph.D. in Mathematics.**  
Indian Institute of Technology Kharagpur, Kharagpur, India.  
Hamburg University of Technology, Institute of Solids Process Engineering and Particle Technology, Denickestr. 15, 21073 Hamburg, Germany. (one year)  
Topic: Integro-Differential Equation  
Advisor: Dr. rer. nat. Jitendra Kumar (Department of Mathematics).

July 2011 - June 2013     **Master of Science in Mathematics. (91.10%)**  
Jadavpur University, Kolkata.

- July 2008 – June 2011      **Bachelor of Science in Mathematics Honors, Physics and Chemistry in Pass.**  
(Honors percentage: **82.92 %**)  
Jadavpur University, Kolkata.
- July 2006 – June 2008      **Higher Secondary in Bengali, English, Physics, Chemistry, Mathematics and Biology (Best of five).**  
(Aggregate percentage: **80.4 %**)  
School- Krishnaganj Krishi-Shilpa Vidyalaya , Hogla, Purba Medinipur, W.B.  
Affiliation- West Bengal Council of Higher Secondary Examination.
- 2006                              **Secondary (Madhyamik) Examination in Bengali, English, Physical Sc., Life Sc., Mathematics, History, Geography, Physical and Work education (Additional).**  
(Aggregate percentage: **86.37 %**)  
School- Alinan Sahid Matangini Bhaban Balika Vidyalaya, Alinan, Purba Medinipur, W.B.  
Affiliation- West Bengal Board of Secondary Examination.

## **RESEARCH AREA**

- Particle technology
- Existence and uniqueness of solutions of integro-partial differential equations
- Numerical analysis

## **TEACHING EXPERIENCE**

- 2015                              2 semesters of Mathematics II (B.Tech.) tutorial classes at Indian Institute of Technology Kharagpur (Spring semesters).
- 2016                              2 semesters of Mathematics I (B.Tech.) tutorial classes at Indian Institute of Technology Kharagpur (Autumn semesters).
- 15.04.2019–26.11.2019      B.Sc. Mathematics at NMIMS, Deemed to be University.
- 28.11.2019 – 30.10.2023      B.Sc. Mathematics at Gour Mohan Sachin Mandal Mahavidyalaya, affiliated to Calcutta University.

## **ACADEMIC ACHIEVEMENTS**

2017-2018	German Academic Exchange Service (DAAD) Scholarship, Research Grants-Bi-nationally Supervised Doctoral Degrees, 2017/18(57299293)
2014	CSIR-National Eligibility Test ( <b>NET–June, 2014</b> )
2013	Graduate Aptitude Test in Engineering ( <b>GATE-2011</b> )
2011	Joint Admission Test for M.Sc. ( <b>JAM-2009</b> )

## RESEARCH COLLABORATIVE WORKS

2016	With Prof. Dr. Abdul-Majid Wazwaz, Department of Mathematics, Saint Xavier University, Chicago, IL 60655, USA.
2017	With Prof. Dr. Stefan Heinrich, Institute of Solids Process Engineering and Particle Technology, Hamburg University of Technology, Denickestr. 15, 21073 Hamburg, Germany.
2017	With Prof. Dr. Maksym Dosta, Institute of Solids Process Engineering and Particle Technology, Hamburg University of Technology, Denickestr. 15, 21073 Hamburg, Germany.

## JOURNAL PUBLICATION

### Published Article

1. An algorithm based on the variational iteration technique for the Bratu-type and the Lane-Emden problems. *Nilima Das, Randhir Singh, Abdul-Majid Wazwaz, Jitendra Kumar. Journal of Mathematical Chemistry. (SCI indexed), Springer. Volume 54, pp-527-551,2016. Impact factor -1.810.*
2. The optimal modified variational iteration method for the Lane-Emden equations with Neumann and Robin boundary conditions. *Randhir Singh, Nilima Das, Jitendra Kumar. The European Physical Journal Plus. (SCI indexed),132,6 (2017): 251.Impact factor -3.4.*
3. An application of semigroup theory to the pure fragmentation equation. *Nilima Das, Jitraj Saha, Jitendra Kumar. The Journal of Analysis, (SCOPUS indexed) , DOI 10.1007/s41478-017-0045-6,2017.*
4. Numerical solutions for multidimensional fragmentation problems using finite volume methods. *Jitraj Saha, Nilima Das, Jitendra Kumar, Andreas Buck, Kinetic & Related Models, (SCIE indexed), 12(1),79-103,2018.Imapct factor-1.212.*

5. Application of Transformation Matrices to the Solution of Population Balance Equations. **Vasyl Skorych, Nilima Das, Maksym Dosta , Jitendra Kumar and Stefan Heinrich. Processes, (SCIE indexed), 7(8)2019: 535.ISSN 2227-9717, .Impact factor – 1.963**
6. An application of semigroup theory to the coagulation-fragmentation models. Arijit Das, **Nilima Das**, Jitraj Saha, Turkish Journal of Mathematics, (SCIE indexed), 2021, 45(5), pp. 2282–2294. Impact factor 1.

#### **WORKSHOP/CONFERENCE/SEMINARS ATTENDED**

1. National program on differential equations: theory, computation & applications (NPDE-TCA). *Sponsored by DST*. Indian Institute of Science Education and Research (IISER) Thiruvananthapuram. May 26<sup>th</sup> - June 13<sup>th</sup>, 2014.
2. International conference on Geometric function theory and its applications (ICGFTA-2014), Indian Institute of Technology Kharagpur. December 18-21, 2014.
3. Research Scholars Day. Indian Institute of Technology Kharagpur. March 13-14, 2015.
4. International conference on mathematical analysis and applications (ICMAA 2016), Department of mathematics, Indian Institute of Technology Roorkee, India. November 28-December .

Date: 10/11/2023

Place: Tamluk

(**Nilima Das**)