

# RESUME

**Dr. Nihar Sarkar, M.Sc.(Applied Math.), Ph.D.**



## ❖ Personal Details:

Sex- Male  
Nationality: Indian.

## Address:

Banipur P. G. B. T. Road, P. O.- Banipur,  
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## ❖ Current Position:

Assistant Professor, Department of Mathematics, City College (Affiliated to Calcutta University), 102/1 Raja Rammohan Sarani, Kolkata-700009 w.e.f. **11.07.2017**.

## ❖ Previous working experience:

| Sl. No. | Post                           | College, University and Organisation  | Department  | Duration                 |
|---------|--------------------------------|---------------------------------------|-------------|--------------------------|
| 1       | Assistant Teacher              | Kaijuri High School (H.S.)            | Mathematics | 21.03.2006 – 11.10.2007  |
| 2       | Assistant Teacher              | Purba Banbania Bhavabati Vidyamandir  | Mathematics | 12.10.2007 – 31.01.2016  |
| 3       | Assistant Professor (W.B.E.S.) | Cooch Behar Govt. Engineering College | Mathematics | 01.02.2016 - 09.08.2016  |
| 4       | Assistant Professor (W.B.E.S.) | Govt. General Degree College, Mejia   | Mathematics | 10.08.2016 – 10..07.2017 |

## ❖ Educational qualifications(Brief):

| Course                                                                                                     | University                                             |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| B.Sc. in Mathematics, (HONS.), 2003.                                                                       | Santipur College (Affiliated to University of Kalyani) |
| M.Sc.in Applied Mathematics (Special Papers: Mathematical Biology & Biomechanics), 2005.                   | University of Kalyani                                  |
| Ph.D., Thesis Topic- <i>“Some Problems On Wave Propagation In Generalised Coupled Thermoelastic Media”</i> | Calcutta University                                    |

### ❖ Educational Qualifications (Details):

| Examination       | Name of Degree                                    | Subject(s)                                                                        | Overall Percentage | Year | University/Institute                            |
|-------------------|---------------------------------------------------|-----------------------------------------------------------------------------------|--------------------|------|-------------------------------------------------|
| Secondary         | West Bengal Board Of Secondary Education          | Bengali, English, Mathematics, Physical Science, Life Science, History, Geography | 73.125             | 1997 | Dakshinpara Radhasundari Palchoudhury Vidyapith |
| Sr. Secondary     | West Bengal Council Of Higher Secondary Education | Bengali, English, Mathematics, Physics, Chemistry, Biology                        | 67.10              | 1999 | SAKTINAGAR HIGH SCHOOL                          |
| Bachelor's Degree | B.Sc. (HONS)                                      | MATHEMATICS(HONS), PHYSICS(GEN),CHEMISTRY (GEN)                                   | 62.33              | 2003 | UNIVERSITY OF KALYANI                           |
| Master's Degree   | M. Sc.                                            | APPLIED MATHEMATICS, SPECIAL PAPERS: MATHEMATICAL BIOLOGY & BIOMECHANICS          | 70.50              | 2005 | UNIVERSITY OF KALYANI                           |
| Bachelor's Degree | B.Ed.                                             | DEIC, PLIC, EDMC, MTMM(METHOD),PHEM(METHOD), MEVE, TCPR, PAAT, SACP               | 66.20              | 2012 | WEST BENGAL STATE UNIVERSITY                    |
| NET               | UGC-CSIR                                          | Subject : Mathematical Sciences                                                   | 45.00              | 2014 | Subject: Mathematical Sciences                  |

### ❖ Area of Expertise and Research Interest:

**Expertise:** Algebra, Calculus, Mechanics, Geometry

**Research Interest:** Continuum Mechanics, Fluid Mechanics.

### ❖ Research Publications:

#### List of Paper(s) Published:

1. "Transient Responses of a 3D Temperature Rate-Dependent Semi-Infinite Thermoelastic Medium with Variable Material Properties", Mechanics of Solids (Springer-Nature, **SCI**), 60, 278-294, 2025.  
<https://doi.org/10.1134/S0025654424606207>
2. "Reflection of thermoelastic waves from the isothermal boundary of a solid half-space under memory-dependent heat transfer", Waves in Random and Complex Media (Taylor and Francis, England, **SCI**), 31(4), 731-748, 2021.  
<https://doi.org/10.1080/17455030.2019.1623433>
3. "Reflection of thermoelastic plane waves at a stress-free insulated solid boundary with memory-dependent derivative", Indian Journal of Physics (Springer, **SCI**)., 95, 1203-1211, 2021. <http://dx.doi.org/10.1007/s12648-020-01788-2>
4. "Waves in nonlocal thermoelastic solids of type II", Journal of Thermal Stresses (Taylor and Francis, USA, **SCI**), 42 (9), 1153-1170, 2019.  
<https://doi.org/10.1080/01495739.2019.1618760>

5. "Memory response in plane wave reflection in generalized magneto-thermoelasticity, *Journal of Electromagnetic Waves and Applications*", (Taylor and Francis, England, **SCI**) 10, 1354-1374, 2019.  
<https://doi.org/10.1080/09205071.2019.1608318>
6. "Waves in magneto-thermoelastic solids under modified Green-Lindsay model", *Journal of Thermal Stresses* (Taylor and Francis, USA, **SCI**), 43 (5), 594-611, 2020.  
<https://doi.org/10.1080/01495739.2020.1712286>
7. "Modified Green-Lindsay model on the reflection and propagation of thermoelastic plane waves at an isothermal stress-free surface", *Indian Journal of Physics* [Springer, IACS, India, **SCI**], DOI: 10.1007/s12648-019-01566-9, 2019.  
<https://doi.org/10.1007/s12648-019-01566-9>
8. "Waves in nonlocal thermoelastic solids of type III", *ZAMM-Zeitschrift für Angewandte Mathematik und Mechanik* [Wiley, Germany, **SCI**], 2020.  
<https://doi.org/10.1002/zamm.201900074>
9. "Waves in dual-phase-lag thermoelastic materials with voids based on Eringen's nonlocal elasticity", *Journal of Thermal Stresses*, [Taylor & Francis, United States, **SCI**], 42 (9) 1153-1170, 2019. <https://doi.org/10.1080/01495739.2019.1591249>
10. "Reflection of Thermoelastic Waves From the Insulated Surface of a Solid Half-Space With Time-Delay", *Journal of Heat Transfer-Transactions of the ASME* [The American Society of Mechanical Engineers, USA, **SCI**], 142, 092-101, 2020.  
<https://doi.org/10.1115/1.4046924>

### **Communicated**

1. **Transient Responses of a 3D Temperature Rate-Dependent Semi-Infinite Thermoelastic Medium with Variable Material Properties**, 2025.

### **❖ List of Participation in Seminar, Conference and Workshop:**

1. **March 11, 2025:** Presented a paper entitled, "Propagation of Plane Harmonic Waves in a Thermally Conducting Magneto-Elastic Medium under the Modified Green-Lindsay Models" in the *National Seminar on Recent Trends in Applied Mathematics and Computing - 2025 (RTAMC-2025)*, organized by the Department of Applied Mathematics, University of Calcutta, 92, A.P.C Road, Kolkata 700009 during March 11-12, 2025.
2. **March 23, 2023:** Presented a paper entitled, "Memory response in reflection of plane wave at a stress-free thermally insulated solid boundary" in the *National Seminar on Applied Mathematics in Science and Technology (AMST)*, organized by the Department of Applied Mathematics, University of Calcutta, 92, A.P.C Road, Kolkata 700009 during March 21-23, 2023.
3. **November 17, 2021:** Presented a paper entitled, "Reflection of plane waves at a stress-free thermally insulated half-space with memory-dependent derivative" in the *International Conference on the Numerical and Analytical Techniques in Differential Equations ICNATDE-2021*, organized by the Department of Mathematics, Ramanujan

School of Mathematical Sciences, Pondicherry University, PUDUCHERRY – 605014 during November 16-18, 2021.

4. **November 09, 2021:** Presented a paper entitled, “PHASE VELOCITIES IN THE MAGNETO-THERMOELASTIC PLANE HARMONIC WAVES UNDER MGL MODEL” in the *International Webinar On Foundations For Contemporary Mathematical Research*, organized by the Department of Mathematics, Manipur University Canchipur, Imphal, Manipur during November 08-10, 2021.
5. **October 28, 2021:** Presented a paper entitled, “On phase speeds of magneto-thermoelastic plane waves under MGL model” in the *27th International Conference of International Academy of Physical Sciences on Fuzzy and Computational Mathematics*, organized by the Department of Mathematics, National Institute of Technology Agartala, Tripura, India, In Association with International Academy of Physical Sciences Prayagraj, India during October 26-28, 2021.
6. **March 29, 2021:** Presented a paper entitled, “Plane harmonic waves in nonlocal thermoelastic medium” in the *National Webinar on "Recent Advances in Applied Mathematics: Theory and Computation (RAAMTC21)"*, organized by Department of Applied Mathematics, University of Calcutta, 92, A.P.C Road, Kolkata 700009 during March 27-29, 2021.
7. **September 18, 2020:** Presented a paper entitled, “The propagation of harmonic plane waves in a nonlocal thermoelastic solid medium” in the *One Day International Webinar on Mathematical Modeling and its Application*, organized by Department of Mathematics, Govt. General Degree College Muragachha (Affiliated to the University of Kalyani) on 19.09.2020.
8. **June 09, 2018:** Presented a paper entitled, “Weighted convergence in probability” in the One-Day National Conference *Distance Education and its Obscurities: Addressing the 'Inaccessibility' Conundrum in Mathematics and other Disciplines*, organized by NETAJI SUBHAS OPEN UNIVERSITY, Salt Lake City, Kolkata-700064 on 09.06.2018.

### ❖ Technical, Workshop & Academic Training :

1. Acted as an **Invited External Recourse Person** for Five Days' Workshop for **Module Development for Mathematics, Science, Language & Social Science for Bihar State** at *RIE-NCERT, Bhubaneswar* during 16.12.2024 to 20.12.2024.
2. Acted as an **Invited Speaker** at the Workshop on “**Preparation and Submission of PBAS of Teachers**” on 28.01.2025 Organised by *IQAC, City College*.
3. Participated at Refresher Course in Mathematics being conducted by UGC-HRDC, North Bengal University, Darjeeling-734013 on and from 01.08.2019 to 14.08.2019.
4. Participated at *5<sup>th</sup> FACULTY INDUCTION PROGRAMME (FIP-NBU-05)(Orientation PROGRAMME)* at UGC-HRDC, North Bengal University, Darjeeling-734013, from August 23, 2021- September 22, 2021.
5. Participated at SHORT TERM COURSE ON *MOOCS, E-content development and Open Educational Resources* at UGC-HRDC, North Bengal University, Darjeeling-734013 from 01.10.2021 to 09.10.2021.
6. Participated at IAE - National level workshop for Higher Education Institutions (HEIs) & Health Science Institutions (HSIs) - NIRF India Rankings 2023 Scheduled on 21st &

22nd December 2022 Organised by COLLEGIATE EDUCATION & TECHNICAL EDUCATION DEPARTMENT, GOVT. OF TELENGANA.

7. Participated at 6-Days Training Program on **Indian Knowledge System** at *UGC-HRDC*, Benaras Hindu University from 28.08.2023 to 02.09.2023.
8. Participated as *an Invited member on the One Day Workshop of Implementation of NEP-2020 in UG Mathematics at NSOU* on 22.08.2024.

#### ❖ Participation in Seminar/Workshop/Etc. as Resource Person:

1. Acted as Resource Person in the **PGMT** Personal Contact Programme (PCP) in **Post-Graduate Mathematics Part-I** in Paper-III B, Subject: **PDE** at Women's Christian Girls College Study Centre of **Netaji Subhas Open University** on Sundays only from 05.06.2022 to 10.07.2022.
2. Acted as a Resource Person in the **PGMT** Personal Contact Programme (PCP) in **Post-Graduate Mathematics Part-I** in Paper-III B, Subject: **PDE** at Women's Christian Girls College Study Centre of **Netaji Subhas Open University** on Sundays only from 02.07.2023 to 06.08.2023.
3. Acted as a **Resource Person** in the **PGMT** Personal Contact Programme (PCP) in **Post-Graduate Mathematics Part-I** in Paper-IV A, Subject: **Numerical Analysis** at Women's Christian Girls College Study Centre of **Netaji Subhas Open University** on Sundays only from 13.08.2023 to 17.06.2023.
4. Acted as a **Resource Person** in the **PGMT** Personal Contact Programme (PCP) in **Post-Graduate Mathematics Part-I** in Paper-III B, Subject: **PDE** at Women's Christian Girls College Study Centre of **Netaji Subhas Open University** on Sundays only from 28.07.2024 to 01.09.2024.
5. Acted as a **Resource Person** in the **PGMT** Personal Contact Programme (PCP) in **Post-Graduate Mathematics Part-I** in Paper-IV A, Subject: **Numerical Analysis** at Women's Christian Girls College Study Centre of **Netaji Subhas Open University** on Sundays only from 08.09.2024 to 20.10.2024.
6. Acted as a **Resource Person** in the **PGMT** 2<sup>nd</sup> Personal Contact Programme (PCP) in **Post-Graduate Mathematics Part-II** in Paper-VII A, Subject: **Differential Equations and Integral Transformations** at Women's Christian Girls College Study Centre of **Netaji Subhas Open University** on Sundays only from 01.12.2024 to 12.01.2025.
7. Acted as an **Invited External Recourse Person** for Five Days' Workshop for **Module Development for Mathematics, Science, Language & Social Science for Bihar State** at *RIE-NCERT, Bhubaneswar* during 16.12.2024 to 20.12.2024.
8. Acted as an **Invited Speaker** at the Workshop on **"Preparation and Submission of PBAS of Teachers"** on 28.01.2025 Organised by *IQAC, City College*.
9. Acted as a **Resource Person** in the **PGMT** Personal Contact Programme (PCP) in **Post-Graduate Mathematics Part-II** for Paper-X B, Subject: **Mechanics of Solids** at Women's Christian Girls College Study Centre of **Netaji Subhas Open University** on Sundays only from 11.05.2025 to 15.06.2025.

### ❖ Workshops/Events Organized:

1. Acted as **Organising Secretary cum Convener of the Webinar on “Administrative Affairs thrusting upon Promotion of College Teachers/Librarians under CAS”** on 12.07.2020 as Secretary of the Teachers' Council, City College.

### ❖ Additional Activities (Administrative):

1. Acted as **Secretary (Elected)** of the **Teachers' Council, City College** from 16.01.2020 to 03.12.2021.
2. Acted as a **Member of IQAC**, City College from 10.01.2020 to 03.12.2021 and from 28.09.2024 to till date.
3. Acted as Member of **Governing Body of City College** as a **Teachers' Representative (Elected)** from 23.12.2021 to till date.
4. Acted as **Convener of Academic Subcommittee** of City College from 10.01.2022 to 10.12.2022 and as a member from 10.12.2022 to till date.
5. Acted as the Convener of **Finance Subcommittee** of City College from 24.12.2022 to till date and as member from 10.01.2022 to 10.12.2022.
6. Acted as the **Co-ordinator of 23<sup>rd</sup> SET** Examination held on 09.01.2022 at City College venue conducted by West Bengal College Service Commission vide WBCSC letter No. 084/SET-/OIC-Mtg/11-2021 dated 25.11.2021.
7. Acted as the **Co-ordinator of 24<sup>th</sup> SET** Examination held on 08.01.2023 at City College venue conducted by West Bengal College Service Commission vide WBCSC letter No. 037/SET-/OIC-Mtg/11-2022 dated 21.11.2022.
8. Acted as the **Co-ordinator of 25<sup>th</sup> SET** Examination held on 17.12.2023 at City College venue conducted by West Bengal College Service Commission vide WBCSC letter No.- 037/SET-/OIC-Mtg/11-2023 dated 17.11.2023.
9. Acted as the **Co-ordinator of 26<sup>th</sup> SET** Examination held on 15.12.2024 at City College venue conducted by West Bengal College Service Commission vide WBCSC letter No.- 030/SET-/OIC-Mtg/11-2024 dated 14.11.2024.
10. Performed as the **Observer for TET-2022** (for class I to V, Primary) held on 11.12.2022 at Barasat Girls High School (venue code: D1009015) vide Memo. No.- 2062/WBBPE/2022 dated 06.12.2022.
11. Performed as the **Observer for Teacher Eligibility Test-2023 (TET-2023)** (Primary) held on 24.12.2023 at Nabapally Boys High School H.S. (venue code: D1009539) vide Memo. No.- 2342(773)/WBBPE/2023/13T-08/2023 dated 16.12.2023.
12. Performed as the **Observer for Teacher in the D.EL.ED. Part-II, 2021-2023** Theoretical Examination held on 17.01.2024, 18.01.2024 and 19.01.2024 at Jadavpur Vidyapith High School (venue code: PT-II/231201) vide Memo. No.- 22(132)/WBBPE/D.El.Ed./2024 dated 16.01.2024.
13. Acted as an **Expert Member of Interview Board** for conducting Viva-Voce/Interview and Aptitude Test at 'APC Bhavan', Salt Lake, for Recruitment to the post of **Assistant Teacher at Primary Schools** held on 23.02.2023, 24.02.2023, 27.02.2023,

28.02.2023 & 01.03.2023 vide Memo. No.- 449(150)/WBBPE/2023 dated 22.03.2023.

❖ **Experience as Head-Examiner/Paper Setter:**

1. Acted as **Head Examiner** of Mathematics Paper-MTMG SEC-A1 C-PROGRAMMING LANGUAGE of B.A./B.Sc. Sem-III GENERAL Examination 2022 (under CBCS) (Vide memo no. 18/TH/MTMG/SEC-A1/HE/0005, dated 16.01.2023).
2. Acted as **Head Examiner** of Mathematics Paper-MTMG SEC-A1 C-PROGRAMMING LANGUAGE of B.A./B.Sc. Sem-III GENERAL Examination 2023 (under CBCS) (Vide memo no. 18/TH/MTMG/SEC-A1/HE/0002, dated 06.02.2024).
3. Acted as **Paper Setter** of Mathematics Paper-MTMA DSE A2.3 FLUID STATICS & ELEMENTARY FLUID DYNAMICS of B.A./B.Sc. Sem-VI HONOURS Examination 2023 (under CBCS) (Vide memo no. 18/TH/MTMA/DSE-A2.3/S/0002, dated 02.06.2023).

❖ **Experience as Examiner:**

1. Acted as **Examiner** of Mathematics Paper-MTMA CC-3 REAL ANALYSIS C-PROGRAMMING LANGUAGE of B.A./B.Sc. Sem-II HONOURS Examination 2023 (under CBCS) (Vide memo no. 18/TH/MTMA/CC-3/EX/0005, dated 28.08.2023).
2. Acted as **External Examiner** of Mathematics Paper-MTMA CC-14(PR) NUMERICAL METHODS of B.A./B.Sc. Sem-VI HONOURS Examination 2023 (under CBCS) (Vide memo no. 18/PRAC/MTMA/CC-14/EX(E)/0005, dated 08.06.2023) at BANGABASI COLLEGE(142).
3. Acted as **Examiner** of Mathematics Paper-MTMA CC-6 RING THEORY & LINEAR ALGEBRA-1 of B.A./B.Sc. Sem-III HONOURS Examination 2023 (under CBCS) (Vide memo no. 18/TH/MTMA/CC-6/EX/0010, dated 21.02.2024).
4. Acted as **External Examiner** of Mathematics Paper-MTMA CC-14(PR) NUMERICAL METHODS of B.A./B.Sc. Sem-VI HONOURS Examination 2023 (under CBCS) (Vide memo no. 18/PRAC/MTMA/CC-14/EX(E)/0019, dated 06.06.2023) at BANGABASI COLLEGE(142).
5. Acted as **Examiner** of Mathematics Paper-MTMA DSE A2.3 FLUID STATICS & ELEMENTARY FLUID DYNAMICS of B.A./B.Sc. Sem-VI HONOURS Examination 2023 (under CBCS) (Vide memo no. 18/TH/MTMA/DSE-A2.3/EX/0002, dated 26.06.2023).
6. Acted as **Examiner** of Mathematics Paper-MTMA CC-6 RING THEORY & LINEAR ALGEBRA-1 of B.A./B.Sc. Sem-III HONOURS Examination 2022 (under CBCS) (Vide memo no. 18/TH/MTMA/CC-6/EX/0085, dated 02.02.2023).
7. Acted as **Examiner** of Mathematics Paper-MTMA CC-6 RING THEORY OF REAL FUNCTIONS of B.A./B.Sc. Sem-III HONOURS Examination 2022 (under CBCS) (Vide memo no. 18/TH/MTMA/CC-5/EX/0114, dated 16.02.2023).
8. Acted as **Examiner** of EMT Paper-II of Mathematics of Netaji Subhas Open University in respect of P.G. Term End Exam June-2017.
9. Acted as **Examiner** of PGMAT Paper-1B of Mathematics of Netaji Subhas Open University in respect of P.G. Term End Exam June-2018.
10. Acted as **Examiner** of PGMAT Paper-3A & 3B of Mathematics of Netaji Subhas Open University in respect of P.G. Term End Exam June-2020, 2021, 2022, 2023, 2024.
11. Acted as **Examiner** of PGMAT Paper-7A of Mathematics of Netaji Subhas Open University in respect of P.G. Term End Exam 2022, 2023.
12. Acted as Examiner in Mathematics of Jagadish Bose National Science Talent Search (JBNSTS) Examination 2024.