CURRICULUM VITAE

1. Full name of the faculty member: Soumen De

2. Specialization: Applied Mathematics

3. Address:

(a) Official: Department of Applied Mathematics

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(c) Date of Birth: 25th November 1981

Place of Birth: Baligeria, Jhargram, West Medinapore,

West Bengal, Pin-721125, India.

4. Academic Qualifications

Examination / Degree	Board / Council / University / other examining body	Year of passing	Division / Class	Subjects / Discipline
B.Sc. (HONS)	VIDYASAGAR UNIVERSITY	2002	1st Class 1st	Mathematics(Hons), Physics, Computer Science
M.Sc in Applied Mathematics	UNIVERSITY OF CALCUTTA	2004	ANN APPLIED VALUE	Applied Mathematics Special Paper: Fluid Mechanics



Degree	Title of Research	University/Institute	Degree obtained Year
Applied	WATER WAVE SCATTERING	INSTITUTE, KOLKATA.	DEGREE OBTAINED NOVEMBER 2009 FROM UNIVERSITY OF CALCUTTA

5. Academic Positions held/holding:

Name of the	Post	Duration	
Employer	held		
		From	То
Indian Statistical Institute, Kolkata	Junior Research Fellow	01.09.2004	31.08.2006
Indian Statistical Institute, Kolkata	Senior Research Fellow	01.09.2006	11.04.2007
DUMDUM MOTIJHEEL COLLEGE	ASSISTANT PROFESSOR (Stage-1)	12.04.2007	11.11.2008
UNIVERSITY OF CALCUTTA	ASSISTANT PROFESSOR (Stage-1)	12.11.2008	11.04.2011
UNIVERSITY OF CALCUTTA	ASSISTANT PROFESSOR (Stage-2)	12.04.2011	11.04.2016
UNIVERSITY OF CALCUTTA	ASSISTANT PROFESSOR (Stage-3)	12.04.2016	11.04.2019
UNIVERSITY OF CALCUTTA	ASSOCIATE PROFESSOR	12.04.2019	11.04.2022
UNIVERSITY OF CALCUTTA	PROFESSOR (due)	12.04.2022	Continue

Honour & Award:

- Teachers Associateship for Research Excellence (TARE) fellowship, SERB, Department of Science and Technology, Government of India, 2022-2025.
- NET (National Eligibility Test), December 2003(CSIR).
- Selected for SPM fellowship test in the National Eligibility Test (CSIR)
 MATHEMATICAL SCIENCES, 2003.
- Junior Research Fellow, (2004). Indian Statistical Institute, Senior Research Fellow, (2006), Indian Statistical Institute, Kolkata.
- University Gold Medal for Rank-1 in M.Sc. (Applied Mathematics) University of Calcutta, 2004.
- University Gold Medal for Rank-1 in B.Sc. (Mathematics (Hons.)) Vidyasagar University, 2002.
- Gold Medal from Vidyasagar Vidyapith, Paschim Medinapore, West Bengal for Rank-1 in B.Sc. (Mathematics (Hons.)), 2002.

• National Scholarship from Government of India, Ministry of HRD (Department of Education), 2002-2004.

6. Research interests:

- CONTINUUM MECHANICS
- FLUID MECHANICS
- WATER WAVES
- COPUTATIONAL FLUID DYNAMICS
- INTEGRAL EQUATIONS
- Integral transforms
- Partial Differential Equations
- Machine learning

7. Foreign Assignments:

Sl. No.	University, Country	Period of Visit	Duration of Visit	Purpose	Sponsor
1.	National Technical University of Athens. Greece, Europe	15-21 April, 2011	One Week	26th International Workshop on Water Waves and Floating Bodies (IWWWFB), organized by National Technical University of Athens, Greece	Travel Fellowship, DST, Government of India (File no.: SR/ITS/0122/2011- 2012)
2.	University of Zagreb, Croatia, Europe	14-20 September, 2015	One Week	7th International Conference on Hydroelasticity in Marine Technology (HYEL), organized by University of Zagreb, Croatia	CICS travel fellowship (File no: DO\Lr.\TF- III\2015-2016) and UGC travel fellowship(No. UGC/566/XII-th Plan Travel)
3.	University of Split. Croatia, Europe	22-30 September, 2018	One Week	23RD SYMPOSIUM ON THE THEORY AND PRACTICE OF SHIPBUILDING, ORGANIZED BY UNIVERSITY OF SPLIT, CROATIA	Travel Fellowship, SERB, DST, Government of India (File No: ITS/2018/004038)
4.	The University of Newcastle, Australia	05-11 April, 2019	One Week	34th International Workshop on Water Waves and Floating Bodies (IWWWFB), organized By Newcastle University, Australia	University of Newcastle University of Calcutta, SERB
5	Qatar University, Doha, Qatar	04-10 February 2023	One Week	15 th International Conference on Vibration Problems (ICOVP-2023), organized by Qatar University, Doha, Qatar	Qatar University, University of Calcutta, SERB
6.	Aalto University, Espoo, Helsinki, Finland	27 August-03 September 2023	One Week	The 12th International Workshop on Ship and Marine Hydrodynamics (IWSH 2023)	Aalto University, University of Calcutta & SERB
7.	American Society of Mechanical Engineers, Singapore Expo Singapore	08-15 June, 2024	One Week	The ASME 43rd International Conference on Ocean, Offshore & Arctic Engineering (OMAE2024)	University of Calcutta, & SERB
8.	Kasetsart University, Sriracha campus, Pattaya, Thailand	25 February – 01 March, 2025	One Week	The 3 rd International Conference in South East Asia on the Future of Maritime Technology & Use of the Sea 2025	University of Calcutta (DPO/94/Travel Grant)

8. Research guidance:

Total Number Ph.D Student	25
Number of Ph.D awarded	16
Number of Ph.D thesis submitted	00
Number of Ph.D registered	07
Number of Ph.D enrolled	02

Sl. No.	Name of the Student	Title of Thesis	Year of award of Degree, University	Present Position
1.	Rajdeep Maiti (CSIR Fellow) (Co-Supervisor)	Water Wave Scattering In Presence of Surface Discontinuity, Porosity And Bottom Undulations	1st March, 2017 University of Calcutta	Assistant Professor, Dept. of Mathematics, City College of Commerce and Business Administration, Kolkata, Govt. of West Bengal, India
2.	Satyasaran Changdar (Supervisor)	Some Problems On The Nonlinear Blood Flow Through Stenosed Arteries	5th December, 2018 University of Calcutta	Postdoctoral Research Fellow, University of Copenhagen, Denmark
3.	Ranita Roy (Supervisor)	Water Wave Scattering by Obstacles of Different Geometrical Configurations	18 th January, 2019 University of Calcutta	Assistant Professor, Dept. of Mathematics, Serampore College, West Bengal, Govt. of West Bengal, India
4.	Nityananda Thakur (Joint-Supervisor)	Effect Of Elastic Plate (Ice-Cover) On Water Wave Problems Created By Floating And Submerged Bodies	25 th February, 2019 University of Calcutta	Assistant Professor, Dept. of Mathematics, Surendranath Evening College, Kolkata, Govt. of West Bengal, India
5.	Sandip Paul (Supervisor)	On Water Wave Scattering By Obstacles	29 th March, 2019 University of Calcutta	Associate Professor, Dept. of Mathematics, Dr. B. C. Roy Engineering College, Durgapur, West Bengal, India
6.	Avipsita Chatterjee (CPEPA-UGC project Fellow) (Supervisor)	Numerical Solution Of Some Classes Of Differential Equations	18th December, 2019 University of Calcutta	Assistant Professor, Dept. of Information Technology IEM, Kolkata, India
7.	Anjan Sasmal (Supervisor)	Some Problems On Water Waves Scattering By Barrier and Bottom Undulation	23 rd December, 2020 University of Calcutta	Assistant Teacher, West Bengal School Service Commission, Govt. of West Bengal, India
8.	Bablu Chandra Das (UGC Fellow) (Supervisor)	On Water Wave Scattering and Related Mathematical Methods	5th February, 2021 University of Calcutta	Assistant Professor, Dept. of Mathematics, Nabadwip Vidyasagar College, West Bengal, Govt. of West Bengal, India
9.	Subhabrata Mondal (CSIR Fellow) (Supervisor)	Numerical and Analytical Solutions of Some Singular Integral Equations	9 th March, 2021 University of Calcutta	Assistant Professor and Head, Dept. of Mathematics and Physics, Swami Vivekananda University, Barrackpore, West Bengal, India
10.	Swagata Ray (CSIR Fellow) (Supervisor)	Some problems In The Linearised Theory Of Water Waves	3rd August , 2022 University of Calcutta	Assistant Professor, Dept. of Mathematics, Bengal Institute of Technology, Kolkata, India
11.	Nihar Sarkar (Supervisor)	Some Problems On Wave Propagation In Generalized Coupled Thermoelastic Media	5th April, 2023, University of Calcutta	Assistant Professor, Dept. of Mathematics, City College, Kolkata, Govt. of West Bengal, India

12.	Arijit Das (UGC Fellow) (Supervisor)	On Some Water Wave Propagation Problem	11th April, 2023, University of Calcutta	Assistant Professor, Dept. of Mathematics, Swami Vivekananda University, Barrackpore, West Bengal, India
13.	Bivas Bhaumik (UGC Fellow) (Supervisor)	Some problems on nanofluids and applications.	18th August, 2023, University of Calcutta	Assistant Professor, Dept. of Mathematics, National Institute of Technology Rourkela, Odisha, India, Govt. of India
14	Biman Sarkar (WBDST Project Fellow) (Supervisor)	Water Wave Interaction With Floating And Submerged Structures	12th December, 2023, University of Calcutta	Postdoctoral Research Fellow in Centre of Excellence for Ocean Engineering, National Taiwan Ocean University, Taiwan
15.	Jyotirmoy Mouley (UGC Fellow) (Supervisor)	Numerical solution of some classes of integral equations using wavelets	19th April, 2024, University of Calcutta	PGT (Mathematics), PM Shri Kenddriya Vidyalaya No. 1 (AFS), Kalaikunda, Ministry of Education, Govt. of India
16.	Narayan Das (Joint Supervisor)	Some Dynamic Problem in Generalized Thermoelasticity in Presence of Nonlocal Elasticity	15th April, 2024 University of Calcutta	Assistant Professor, Dept. of Mathematics, Government General Degree College, Datan- II, West Bengal, Govt. of West Bengal, India
17.	Selina Hossain (UGC Fellow) (Supervisor)	Studies On The Class Of Water Wave Generation Problems	Ph.D onging (Thesis Pre submission)	UGC Research Scholar, University of Calcutta
18.	Susmita Saha (CSIR Fellow) (Supervisor)	Machine Learning Based Predictive Analysis In Some Areas Of Costal And Ocean Engineering	Ph.D onging	CSIR Research Scholar, University of Calcutta
19.	Soumini Dolui (CSIR Fellow) (Supervisor)	Mathematical Modelling Of Bio Fluid Flow In Presence Of Nanoparticles	Ph.D onging	CSIR Research Scholar, University of Calcutta
20.	Subrata Gorai (SVMCM Fellow) (Supervisor)	Studies On Various Instabilities Produced In Falling Liquid Films	Ph.D onging (Thesis Pre submission)	Research Scholar, University of Calcutta
21.	Anuradha Biswas (ISI Fellow) (Joint Supervisor)	Water Wave Interaction With Submerged Bodies Of Various Geometrical Configuration	Ph.D onging	JRF Research Fellow Indian Statistical Institute, Kolkata
22.	Priya Sharma (SVMCM Fellow) (Supervisor)	Studies On A Class Of Submerged And Floating Breakwaters	Ph.D onging	Research Scholar, University of Calcutta
23.	Koushik Nandi (Supervisor)	Mathematical Studies On Some Water Wave Scattering and Generation Problems	Ph.D onging	Research Scholar, University of Calcutta

9. Research Projects:

Sl. No.	Title	Agency	Period	Grant/Amount Mobilized(Rs. in lakhs)
1.	Mathematical study of water wave scattering and radiation problems (TAR/2022/000107)	Science and Engineering Research Board for funding under Teachers Associateship for Research Excellence (TARE), Government of India	03 years (12 October 2022-11 October 2025)	18.70Lakhs

2.	Interaction of Water Waves with Floating and Submerged Bodies (EMR/2016/005315)	Science and Engineering Research Board, DST, Government of India	03 years (5th October 2017-4th October 2020)	3.30 Lakhs
3.	Some radiation and scattering problems in the theory of water waves and associated mathematical technique (Memo No . 14(Sanc.)/ST/P/S&T/16G-3812017 dated: 11/06/2018) (Memo No . 1623(Sanc.)/STBT-11012(26)/7/2019-ST SEC dated: 02/01/2020) (Memo No . 1240(Sanc.)/STBT-11012(26)/7/2019-ST SEC dated: 28/02/2022)	Higher Education, Science & Technology and Bio-Technology, Government of West Bengal	03 years (June 2018-May 2021)	7.37 Lakhs
4.	Electro-physiological and Neuro-imaging Studies Including Mathematical Modeling (Sanction No. F.No.8-2/2008 (NS/PE)) Formulation of Mathematical Models on Different Psychological and Biological Phenomena (Soumen De) https://www.caluniv.ac.in/academic/CPEPA.html	UGC Scheme of Centre with potential for excellence in Particular Area (CPEPA), Government of India	04 years (Jan 2014- Dec 2018)	615 Rs. In Lakhs. Per Scientist 68.33 Lakhs

10. List of publications:

Total number publications	140
Number of SCI Journal publications	91
Number of SCOPUS publications	28
Number of Refereed Journal , having ISSN no.	11
Number of Books	2
Number of Conference Proceedings , having ISBN no.	8

My list of publications can also be found at

https://www.researchgate.net/profile/Soumen_De5 https://scholar.google.co.in/citations?user=Zwli7oUAAAAJ&hl=en https://orcid.org/0000-0001-8988-3679 https://www.webofscience.com/wos/author/record/2075035 https://www.scopus.com/authid/detail.uri?authorId=57207376337

a) Books:

 B.N. Mandal and Soumen De, 2016, Water Waves Scattering, CRC Press, New York, USA. Print ISBN: 978-1-4987-0552-3, eBook ISBN: 978-1-4987-0553-0.

DOI: https://doi.org/10.1201/b18501

Susmita Sarkar, Uma Basu and Soumen De, 2015, Applied Mathematics, Springer Proceedings in Mathematics & Statistics, ISBN: 978-81-322-2546-1.
 DOI: https://doi.org/10.1007/978-81-322-2547-8

b) Journals:

- Soumen De, Rupanwita Gayen, B.N.Mandal, (2005) Water wave scattering by two partially immersed nearly vertical barriers, Wave Motion [Selection of the content of the content
- 2. B.N.Mandal and Soumen De, (2006) Water wave scattering by submerged nearly vertical barriers, The ANZIAM Journal (CAMBRIDGE UNIVERSITY PRESS) 48,107-118. [SCI, IF-0.554]

 DOI: https://doi.org/10.1017/S1446181100003448
- 3. B.N.Mandal and **Soumen De, (2007)** Water wave scattering by bottom undulations in the presence of a thin submerged vertical plate, *International Journal of Applied Mathematics and Engineering Sciences (Serials Publications Pvt. Ltd.).* **1,** 193-205. **[ISSN: 0973-5275].** https://www.researchgate.net/publication/266573703 Water wave scattering by
- 4. B.N.Mandal and Soumen De, (2008) Water wave scattering by small bottom undulations in the presence of surface discontinuity, Geophysical Astrophysical Fluid Mechanics (Taylor & Francis an informa business), 103, 19-30. [SCI, IF-1.533]
 DOI: https://doi.org/10.1080/03091920802390073
- Soumen De and B.N. Mandal, A. Chakraborti, (2009) Water wave scattering by two partially immersed plane vertical barriers Abel integral equations approach, *Journal of Engineering Mathematics* (Springer),65, 75-87. [SCI, IF-1.146]
 DOI: https://doi.org/10.1007/s10665-009-9265-3
- 6. Soumen De, B.N. Mandal, A. Chakraborti, (2010) Use of Abel integral equations in water wave scattering by two surface-piercing barriers, *Wave Motion* (2012), 47,279-288. [SCI, IF-1.576] DOI: https://doi.org/10.1016/j.wavemoti.2009.12.002
- 7. **Soumen De** and B.N. Mandal, **(2012)** Water wave scattering by two vertical barriers with submerged gaps at the same level, *Journal of the Tripura Mathematical Society*, **13**, 154-162.**[ISSN: 0972-1320]** https://www.researchgate.net/publication/352354348 Water wave scattering by
- 8. Anjan Sasmal and **Soumen De**, **(2012)** Oblique water wave scattering by bottom undulations in the presence of thin submerged vertical barrier, *International Journal of Engineering Research and Development*, **3(3)**, 50-57. **[ISSN:2278-067X]**
- Uma Basu, R Maiti and Soumen De, (2012) Water wave scattering by a dock in presence of bottom undulation, *American Journal of Fluid Dynamics*, (Scientific & Academic Publishing) 2(4), 55-60.
 DOI: https://doi.org/10.5923/j.aifd.20120204.04
- **10.** Uma Basu, R Maiti and **Soumen De**, **(2012)** Water wave scattering in presence of surface discontinuity over an uneven porous bottom, *International Journal of Engineering Research and Development*, **3**, 64-73. **[ISSN:2278-067X]**
- 11. Soumen De, B.N. Mandal and A. Chakrabarti, (2013) Water wave scattering by two thin vertical barriers with apertures, *International Journal of Applied Mathematics and Engineering Sciences* (Serials Publications Pvt. Ltd.)7(2), 161-175. [ISSN: 0973-5275] https://www.researchgate.net/publication/334479725 WATER WAVE SCATTERING BY
- **12.** Satarupa Das, Soma Das, Satyasaran Changdar, **Sounen De**, **(2014)** Analysis of blood flow through multi-irregular shape stenosed artery, *International Journal of Pharmacy and Biological Sciences*, **4(2)**, 244-252. **[ISSN:-2230-7605].** https://www.ijpbs.com/ijpbsadmin/upload/ijpbs_5b4b622fb180c.pdf

13. Sandip Paul and Soumen De, (2014) Wave scattering by porous bottom undulation in a two layered Channel, *Journal of Marine Science and Applications* (Springer), 13(4), 355-361 [SCOPUS, IF-1.8]

DOI: https://doi.org/10.1007/s11804-014-1276-4

14. Satyasaran Changdar and **Soumen De, (2015)** Numerical Simulation of Nonlinear Pulsatile Newtonian Blood Flow through a Multiple Stenosed Artery, *International Scholarly Research Notices (Hindawi ①)*, **2015**, 1-10.

DOI: https://doi.org/10.1155/2015/628605

15. Satyasaran Changdar, **Soumen De, (2016)** Analysis of non-linear pulsatile blood flow in artery through a generalized multiple stenosis. *Arab Journal of Mathematics (Springer)*, **5**:51-61 **[SCOPUS]**

DOI: https://doi.org/10.1007/s40065-015-0138-5

- **16.** Satyasaran Changdar, **Soumen De, (2017)** Transport of spherical nanoparticles suspended in a blood flowing through stenos artery under the influence of Brownian motion. *Journal of Nanofluids (American Scientific Publishers*), **6(1)**: 87-96. **[SCOPUS, IF-1.17] DOI:** https://doi.org/10.1166/jon.2017.1291
- 17. Sandip Paul and Soumen De, (2017) Wave Scattering by Uneven Porous Bottom in a Three Layered Channel, *Journal of Marine Science and Technology* (Springer), 22: 533–545. [SCI, IF-1.845] DOI: https://doi.org/10.1007/s00773-016-0430-x
- 18. Satyasaran Changdar, Soumen De (2017) Analytical solution of mathematical model of MHD blood nanofluid flowing through an inclined multiple stenosed artery. *Journal of Nanofluids (American Scientific Publishers)*, 6(6): 1198–1205. [SCOPUS, IF-1.17]
 DOI: https://doi.org/10.1166/jon.2017.1393
- **19.** Swagata Ray, **Soumen De** and B.N. Mandal, **(2017)** Note on Water Wave Scattering by a Step, *Pacific Iournal of Applied Mathematics (Nova Science Publishers)*, **9(3)**, 221-230 **[ISSN: 1941-3963]**.
- 20. Sandip Paul and Soumen De, (2018) Effect of vertical porous barrier on progressive waves in a two layered fluid, *Ocean Engineering* (156:153-166. [SCI, IF-2.730] DOI: https://doi.org/10.1016/j.oceaneng.2018.02.036
- 21. Satyasaran Changdar and Soumen De, (2018) Investigation of Nanoparticle as a Drug Carrier Suspended in a Blood Flowing Through an Inclined Multiple Stenosed Artery, BioNanoScience (

 Springer), 8(1): 166-178. [SCOPUS, IF-3.0]

 DOI: https://doi.org/10.1007/s12668-017-0446-7
- 22. B.C. Das, Soumen De, B.N. Mandal, (2018) Oblique scattering by thin vertical barriers in deep water: Solution by multi-term Galerkin technique using simple polynomials as basis, *Journal of Marine Science and Technology* (Springer), 23 (4): 915-925. [SCI, IF-1.845] DOI: https://doi.org/10.1007/s00773-017-0520-4
- 23. R Roy, Soumen De and B.N. Mandal, (2018) Water wave scattering by two surface-piercing and one submerged thin vertical barriers, *Archive of Applied Mechanics* (Springer), 88(9): 1477-1489. [SCI, IF-1.578]

DOI: https://doi.org/10.1007/s00419-018-1382-x

24. Satyasaran Changdar, Amit Kumar Mandal, and Soumen De, (2018) Analytical Investigation of Non-Spherical Nanoparticle as a Drug Agent Suspended in a Magnetohydrodynamic Blood Nanofluid Flowing Through an Irregular Shape Stenosed Artery. *Journal of Nanofluids (American Scientific Publishers*), 7(6): 1187-1194. [SCOPUS, IF-1.17]
DOI: https://doi.org/10.1166/jon.2018.1526

25. Satyasaran Changdar and Soumen De, (2019) Analytical Investigation of Nanoparticle as a Drug Carrier Suspended in a MHD Blood Flowing Through an Irregular Shape Stenosed Artery, *Iranian Journal of Science and Technology, Transaction A, Science* (Springer), 43, 1259-1272 [SCI, IF-0.875]

DOI: https://doi.org/10.1007/s40995-018-0601-1

26. Anjan Sasmal, Sandip Paul and **Soumen De**, **(2019)** The influence of surface tension on oblique wave scattering by a rectangular trench, *Journal of Applied Fluid Mechanics (Isfahan University of Technology)*. **12(1)**, 233-241. **[SCI, IF-0.918]**

DOI: https://doi.org/10.29252/jafm.75.253.28900

- 27. R Roy, Soumen De and B.N. Mandal, (2019) Water wave scattering by multiple thin vertical barriers, *Applied Mathematics and Computation* (2019) 355, 458-481. [SCI, IF-3.472]. DOI: https://doi.org/10.1016/j.amc.2019.03.004
- 28. Nihar Sarkar, Soumen De and Nantu Sarkar, (2019) Memory response in plane wave reflection in generalized magneto-thermoelasticity, Journal of Electromagnetic Waves and Applications (
 Taylor & Francis an informa business), 33(10), 1354-1374. [SCI, IF-1.351]

 DOI: https://doi.org/10.1080/09205071.2019.1608318
- 29. Nihar Sarkar, **Soumen De** and Nantu Sarkar, **(2019)** Waves in nonlocal thermoelastic solids of type II, *Journal of Thermal Stresses* (Taylor & Francis), **42(9)**, 1153-1170. [SCI, IF-2.943]. **DOI:** https://doi.org/10.1080/01495739.2019.1618760
- **30.** Avipsita Chatterjee, **Soumen De** and B.N. Mandal, **(2019)** Numerical solution of Fractional-Order integro-differential equations with nonlocal boundary conditions using Bernstein polynomial, *Bulletin of the Calcutta Mathematical Society*, **111(3)**, 211-224. **[ISSN:0008-0659]**
- 31. R Roy, Soumen De and B.N. Mandal, (2019) Water wave scattering by three thin vertical barriers arranged asymmetrically in deep water, *Fluid Dynamics Research* (*Institute of Physics*(IOP) */Publishing), 51,045508:1-23. [SCI, IF-0.993] DOI: https://doi.org/10.1088/1873-7005/ab2d4d
- 32. Anjan Sasmal and Soumen De, (2019) Oblique water wave diffraction by two vertical porous barriers with nonidentical submerged gaps, *Meccanica* (Springer), 54(10), 1525-1544. [SCI, IF-2.316]

DOI: https://doi.org/10.1007/s11012-019-01031-1

33. Anjan Sasmal, Sandip Paul and **Soumen De**, **(2019)** The effect of porosity on oblique wave diffraction by two unequal vertical porous barriers, *Journal of Marine Science and Applications* (Springer), **18(4)**, 417-432, **[SCOPUS, IF-1.8**].

DOI: https://doi.org/10.1007/s11804-019-00107-4

- **34.** Sandip Paul, Anjan Sasmal and **Soumen De, (2019)** Interaction of oblique waves with an ice sheet over an asymmetric trench, *Ocean Engineering (Interaction of State of*
- **35.** Swagata Ray, **Soumen De** and B.N. Mandal, **(2019)** Water wave scattering by an infinite in the presence of an ice-cover, *International Journal of Applied Mechanics and Engineering (Sciendo)*, **24(4)**, 157-168. **[SCOPUS, IF-0.42**]

DOI: https://doi.org/10.2478/ijame-2019-0055

36. B.C. Das, Soumen De, B.N. Mandal, (2019) Wave propagation through a gap in a thin vertical wall in deep water, CUBO, A Mathematical Journal (Universidad de La Frontera, Temuco, Chile), 21(3), 93-105.[SCOPUS, IF-0.6]

DOI: http://dx.doi.org/10.4067/S0719-06462019000300093

37. Nihar Sarkar, Soumen De and Nantu Sarkar, (2020) Modified Green–Lindsay model on the reflection and propagation of thermoelastic plane waves at an isothermal stress-free surface, *Indian Journal of Physics* (Springer), 94(8),1215-1225. [SCI, I.F.-1.947]

DOI: https://doi.org/10.1007/s12648-019-01566-9

38. Narayan Das, Soumen De, Nantu Sarkar, (2020) Reflection of plane waves in generalized thermoelasticity of type III with nonlocal effect, *Mathematical Methods in the Applied Sciences (*▶WILEY , 43(3), 1313-1336 [SCI, IF-2.321].

DOI: https://doi.org/10.1002/mma.5947

39. Sandip Paul, Anjan Sasmal and Soumen De, (2020) Oblique Wave Scattering by a Symmetric Trench Submerged Beneath an Ice-cover, Journal of Waterway, Port, Coastal, and Ocean Engineering (American Society of Civil Engineers- ASCE),146(1), 04019030(1-8).[SCI, I.F-2.208].
DOI: https://doi.org/10.1061/(ASCE)WW.1943-5460.0000538

40. Nihar Sarkar and Soumen De (2020) Waves in magneto-thermoelastic solids under modified Green–Lindsay model, Journal of Thermal Stresses (Taylor & Francis an informa business), 43(5), 594-611, [SCI, I.F.-3.28].

DOI: https://doi.org/10.1080/01495739.2020.1712286

41. Swagata Ray, **Soumen De** and B.N. Mandal, **(2020)** Water wave scattering by a bottom standing thick rectangular barrier in the presence of an ice-cover, *Journal of Applied Mechanics and Technical Physics* (Springer), **63(3)**, 400-408. **[SCI, IF- 0.649] DOI:** https://doi.org/10.1134/S0021894420030116

- **42.** Nihar Sarkar, **Soumen De**, Narayan Das and Nantu Sarkar **(2020)** Reflection of thermoelastic waves from the insulated surface of a solid half-space with time-delay, *Journal of Heat Transfer (American Society of Mechanical Engineers-* ***\ME ***), **142(9)**, 092101(1-9). **[SCI, IF-2.021] DOI:** https://doi.org/10.1115/1.4046924
- **43.** B.C. Das, **Soumen De** and B.N. Mandal, **(2020)** Oblique water waves scattering by a thick barrier with rectangular cross section in deep water, *Journal of Engineering Mathematics* (Springer),**122**, 81-99. [SCI, IF-1.509] **DOI:** https://doi.org/10.1007/s10665-020-10049-4

44. Nihar Sarkar, Mitali Bachher, Narayan Das, **Soumen De**, Nantu Sarkar, **(2020)** Waves in nonlocal thermoelastic solids of type III, *ZAMM Journal of applied mathematics and mechanics: Zeitschrift für angewandte Mathematik and Mechanik* (**WILEY***), **100(4)**, e201900074 [SCI, IF-1.603]. **DOI:** https://doi.org/10.1002/zamm.201900074

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12. Uma Basu, Sandip Paul and Soumen De, (2021) Interface wave diffraction by a permeable thin barrier, Proceedings of 14th International Conference on Vibration Problems, Crete, Greece (ICOVP 2019). Series: Lecture Notes in Mechanical Engineering, (Publisher: Springer), 59-69. ISBN: 978-981-15-8049-9. [SCOPUS]

DOI: https://doi.org/10.1007/978-981-15-8049-9_4

- 13. Biman Sarkar and Soumen De, (2022) Dissipation of wave energy by thin multiple partially immersed vertical porous walls in water of uniform finite depth, Mathematics and Computing, Proceedings of 8th International Conference on Mathematics and Computing ICMC 2022. Mathematics and Computing, Springer Proceedings in Mathematics & Statistics (publisher: Springer), 415, 497-508. ISBN:978-981-19-9306-0 [SCOPUS]
 DOI: https://doi.org/10.1007/978-981-19-9307-7_40
- 14. Susmita Saha, Satyasaran Changdar and Soumen De, (2022) Machine Learning Models for the Estimation of the Stability Number of Rubble-Mound Breakwaters & Feature Analysis, Proceedings of 9th Hydroelasticity in marine technology (HYEL 2023), Rome, Italy, July 10th-13th (publisher: CNR-INM Institute of Marine Engineering, National Research Council of Italy), 155-164.ISBN: 978-88-7617-054-6 (Hardcover), ISBN: 978-88-7617-055-3 (e-book). https://www.researchgate.net/publication/370659645_Machine_Learning_Models
- 15. Selina Hossain, Arijit Das and Soumen De, (2022) Effects of Flexible Bottom on Generation of Surface Waves by A Moving Oscillatory Disturbance, Proceedings of 9th Hydroelasticity in marine technology (HYEL 2023) Rome, Italy, July 10th-13th. (publisher: CNR-INM Institute of Marine Engineering, National Research Council of Italy),347-357. ISBN: 978-88-7617-054-6 (Hardcover), ISBN: 978-88-7617-055-3 (e-book). https://www.researchgate.net/publication/370659364_Effects_of_Flexible
- 16. Susmita Saha and Soumen De, (2023) Damage level estimation of rubble-mound breakwaters using deep artificial neural network, Proceedings of 9th International Conference on Mathematics and Computing ICMC 2023. Lecture notes in Networks and Systems (publisher: Springer), 697 57-68. ISBN: 978-981-99-3080-7 [SCOPUS]
 DOI: https://doi.org/10.1007/978-981-99-3080-7 5
- 17. Anjan Sasmal and Soumen De, (2023) Hydroelastic analysis of wave diffraction by multiple flexible porous plates, *Proceedings of 12th International Workshop on Ship and Marine Hydrodynamics* (IWSH 2023), *IOP Science conference series on Materials Science and Engineering*, 1288, 012010 (ISSN: 17578981) [SCOPUS].

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- 18. Sandip Paul, Nantu Sarkar and Soumen De, (2024) Propagation of acoustic gravity waves in a finite depth water over a magnetoelastic half space, Proceedings of 15th International Conference on Vibration Problems (ICOVP-2023), Lecture Notes in Mechanical Engineering, (publisher: Springer). 1-9.ISBN: 978-981-99-5921-1 (Hardcover), ISBN: 978-981-99-5922-8 (e-book) [SCOPUS]
 - **DOI:** https://doi.org/10.1007/978-981-99-5922-8_1
- 19. Priya Sharma, Biman Sarkar and Soumen De, (2024) Analysis of oblique wave scattering by a thick bottom-standing barrier placed in between a pair of thin partially immersed barriers, Proceedings of 10th International Conference on Mathematics and Computing: ICMC 2024, Volume 1, Lecture notes in Networks and Systems (publisher: Springer) 964,1-14, ISBN: 978-981-97-2066-8. [SCOPUS] DOI: https://doi.org/10.1007/978-981-97-2066-8_1
- 20. Priya Sharma, Soumen De and Rupanwita Gayen (2024) Study on Wave Scattering by Inverse T-Type Bottom-Standing Breakwater, Proceedings of the ASME 2024 43rd International Conference on Offshore Mechanics and Arctic Engineering (OMAE), Volume 5A: Ocean Engineering, Paper No: OMAE2024-125111, V05AT06A016; 11 pages. ISBN: 978-0-7918-8782-0. [SCOPUS] DOI: https://doi.org/10.1115/OMAE2024-125111
- 21. Biman Sarkar and Soumen De (2024) An Efficient Integral Equation Approach to Study Wave Interaction by a Bottom-Mounted Rectangular Barrier in Presence of a Pair of Partially Immersed Thin Vertical Barriers, Book Chapter, Methods of Mathematical Modeling: Advances and Applications (Publisher: Elsevier). ISBN: 978-0-4431-3317-6 (Article In Press) [SCOPUS].
- 22. Anuradha Biswas, Arijit Das and Soumen De, (2025) Wave structure interaction problem on an immersed prolate spheroid in the presence of surface tension, *Proceedings of 11th International Conference on Mathematics and Computing*: ICMC 2025, Volume 1, *Lecture notes in Networks and Systems (publisher: Springer)* (Accepted). [SCOPUS]

11. List of past/present research collaborators:

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- 37) Ms Nabanita Sadhukhan, Dept. of Applied Mathematics, CU
- 38) Mr. Biplab Mal, UGC research fellow, Dept. of Applied Mathematics, CU.

12. Reviewer of journal papers:

- 1) Wave Motion
- 2) Ocean Engineering
- 3) Physics of Fluids
- 4) Journal of Engineering Mathematics
- 5) Zeitschrift für Angewandte Mathematik und Mechanik
- 6) Journal of Marine Science and Application
- 7) Indian Journal of Physics
- 8) Mechanics Based Design of Structures and Machines, An International Journal
- 9) Waves in Random and Complex Media
- 10) Geomechanics and Engineering, An International Journal
- 11) Journal of Ocean Engineering and Science
- 12) International Journal of Mathematics and Mathematical Sciences
- 13) Journal of Engineering Mechanics
- 14) Complexity
- 15) Ships and Offshore Structures
- 16) IEEE Access
- 17) Frontiers in Anesthesiology
- 18) Physics of Fluids
- 19) International Journal of Mechanical Sciences
- 20) Geosciences, MDPI
- 21) Journal of Marine Science and Engineering
- 22) Calcutta Mathematical Society
- 23) MDPI Fractal Fract

- 24) Pramana Journal of Physics
- 25) Experimental Techniques
- 26) Heat Transfer
- 27) Journal of Applied Mathematics and Computational Mechanics
- 28) National Academy Science Letters
- 29) Physica
- 30) Archive of applied mechanics
- 31) Mathematics, MDPI
- 32) Heat Transfer Asian Research
- 33) FRACTAL AND FRACTIONAL, MDPI
- 34) JOURNAL OF THERMAL STRESSES
- 35) NUMERICAL HEAT TRANSFER PART A-APPLICATIONS
- 36) NUMERICAL HEAT TRANSFER PART B-FUNDAMENTALS
- *37)* PROCEEDINGS OF THE ROYAL SOCIETY A-MATHEMATICAL PHYSICAL AND ENGINEERING SCIENCES
- 38) Engineering
- 39) International Journal of Numerical Methods for Heat and Fluid Flow
- 40) International Journal of Applied Mechanics
- 41) International Journal of Ambient Energy
- 42) Electromagnetic Biology and Medicine
- 43) National Academy Science Letters
- 44) Cogent Engineering (Open Research)
- 45) Proceedings of the National Academy of Sciences, India Section A: Physical Sciences
- 46) Journal of Offshore Mechanics and Arctic Engineering
- 47) The European Physical Journal E

13. Training courses/ workshop/Refresher Course attended

Sl. No.	Program	Duration	Organized by
1.	Orientation Programme	Three Weeks	UGC-Academic Staff College, Calcutta
			University, Kolkata, India
2	Refresher Course	Three Weeks	UGC-Academic Staff College, Calcutta
			University, Kolkata, India
3	Refresher Course	Three Weeks	UGC-Academic Staff College, Jadavpur
			University, Kolkata, India
4	International Workshop on Recent	One Week	Department of Mathematics, IIT, Guwahati
	Advances in Computational Fluid		
	Dynamics		
5	First National Workshop on Techniques in	Two Weeks	Department of Applied Mathematics,
	Applied Mathematics		University of Calcutta
6	Second National Workshop on Techniques	One Weeks	Department of Applied Mathematics,
	in Applied Mathematics		University of Calcutta
7	Third National Workshop on Techniques in	One Weeks	Department of Applied Mathematics,
	Applied Mathematics		University of Calcutta
8	Winter School on Recent Trends in	One Week	Department of Applied Mathematics,
	Mathematical Methods		University of Calcutta
9	Workshop on "Nonlinear Differential Equations:	One Week	Department of Applied Mathematics,
	Dynamics of Complex Systems".		University of Calcutta(NPDE – TCA
			Program of Mathematics, IIT, Mumbai)
- 10	Ol		1 1 2 1 2 1 2 1 2 1 2 1
10	Short term course in DIGITAL INDIA	One Week	UGC-Academic Staff College, Calcutta
			University, Kolkata, India

14. Details of invited lectures / papers presented in Conferences / Seminars, etc. (by self or by co-authors)

Sl.No.	Title of the paper	Title of Conference/Seminar	Organized by	
1	A simple method to solve the	International Conference on	Physics and Applied Mathematics	International
	problem of water wave scattering by	Application of Fluid	Unit, Indian Statistical Institute,	
	two submerged plane vertical	Mechanics in Industry and	Calcutta	
	barriers.	Environment, 2006		

2	Transmission of water waves through apertures in a pair of thin vertical	International Workshop on Water Waves and Floating	Athens, Greece.	International
3	barriers Water wave scattering by two vertical barriers	Bodies, 2011 International conference on Frontiers in Fluid Mechanics,		International
4	Water wave scattering by two vertical barriers submerged gaps at the same level	National conference on mathematical analysis and its applications, 2011	Tripura University	National
5	Water wave scattering by two nearly vertical barriers	National conference on Mathematical analysis and Applications b	1	National
6	Water wave scattering by bottom undulations in the presence of a submerged vertical plate	National conference on mathematics and applications -Recent Trends		National
7	Water wave scattering by two partially immersed vertical barriers	National symposium on mathematics and its applications	Department of Mathematics, University of Burdwan	National
8	Water wave scattering by two submerged equal vertical plates	National conference on Frontiers in Applied Mathematics, 2012	M.E.S College, Bangalore	National
9.	Scattering of waves by a Dock in Presence of Bottom Undulation			National
10.	Scattering of Water Wave by Porous Bed Topography in an Ice Cover Ocean	Emerging Trends in Applied Mathematics: Dedicated to the memory of Sir Asutosh Mookerjee and Contribution of S.N.Bose, M.N.Saha and N.R.Sen.	Department of Applied Mathematics, University of Calcutta	International
11.	Numerical Simulation of Nonlinear Newtonian Blood Flow Through a Stenosed Artery	5 th International Conference on Fluid Mechanics and Fluid Power, 2014	Department of Mechanical Engineering, IIT Kanpur	International
12	Scattering of surface wave by a thin vertical plate submerged in a two layered fluid	3rd ICAFD-2016	ISM Dhanbad	International
13	Water wave scattering by Porous Barriers	National Conference on Advances in Mathematical Sciences, 2016	Department of Mathematics, Gauhati University	National
14	Water wave scattering by two vertical non identical submerged plates	National Seminar on Advances in Mathematical Sciences, NSAMS-2018	Department of Mathematics, Gauhati University	National
15	Wave Scattering by a Submerged Plate in a Two Layer Fluid of Finite Depth	International Conference on Frontiers in Industrial and Applied Mathematics	National Institute of Technology, Hamirpur	International
16	The effect of surface tension on water wave scattering by rectangular trench	International Conference on Mathematical Modelling, Applied Analysis and Computation- 2018	JECRC University, Jaipur	International
17	Scattering of Water Waves by a Rectangular Submarine Trench in an Ice-Covered Ocean	23rd Symposium on Theory and Practice of Shipbuilding SORTA 2018, Croatia	University of Split Chair of Naval Architecture, FESB, Croatia	International
18	Water wave scattering by asymmetric trench beneath ice cover	International Workshop on Water Waves and Floating Bodies, 2019	University of Newcastle, Australia	International
19	Interaction of Ocean waves with floating and submerged bodies	Mathematical Modeling and its Application, 2020	Department of Mathematics, GOVT. GENERAL DEGREE COLLEGE, MURAGACHHA	National
20	Water Waves Scattering by a Rectangular Submarine Trench in an Ice-Cover Ocean	6 th National Seminar on Recent Trends in Applied Sciences and Humanities 2019	DIATM, Durgapur	National
22	Interaction of Ocean waves with floating and submerged bodies	"Science and Technology: Rural development" in the technical session of "Mathematical, Statistical	Indian Science Congress Association (Kolkata Chapter) & Surendranath College, Kolkata	National

		and Computational Sciences" 2020		
23	Dissipation of wave energy by thin multiple partially immersed vertical porous walls in water of uniform finite depth	8th International Conference on Mathematics and Computing ICMC 2022	Department of Mathematics School of Advanced Sciences Vellore Institute of Technology, Vellore, Tamil Nadu	International
24.	Waves interactions with floating and submerged bodies	Mathematical Equations and Graphs to Combat Natural Challenges, 2022	Department of mathematics, Swami Vivekananda University, Barrackpore, Kolkata	National
25.	Machine Learning Models for the Estimation of the Stability Number of Rubble-Mound Breakwaters and Feature Analysis	9th International Conference on Hydroelasticity in Marine Technology, HYEL22, 10- 13 July 2022, Rome, Italy.	The Institute of Marine Engineering (Istituto di Ingegneria del Mare, INM) Rome, Italy	International
26	Effects of Flexible Bottom on Generation of Surface Waves by An Oscillatory Disturbance	9th International Conference on Hydroelasticity in Marine Technology, HYEL22, 10- 13 July 2022, Rome, Italy.	The Institute of Marine Engineering (Istituto di Ingegneria del Mare, INM) Rome, Italy	International
27	Damage Level Estimation of Rubble- Mound Breakwaters Using Deep Artificial Neural Network	9th International Conference on Mathematics and Computing, ICMC 2023, January 6-8, 2023	Birla Institute of Technology and Science, Pilani, GOA, INDIA.	International
28	Propagation of acoustic gravity waves in a finite depth water over a magnetoelastic half space	15th International Conference on Vibration Problems (ICOVP-2023), 05-09 February 2023	Qatar University in Doha, Qatar	International
29	Interaction of Ocean Waves with Floating and Submerged Bodies	State level Seminar, 28th April, 2023	Nabagram Hiralal Paul College, West Bengal	National
30	An integral equation method for oblique wave interaction by two thin vertical barriers over an asymmetric trench.	International Workshop on Mathematical and Computational Methods in Science and Engineering" during 02-13 June 2023	Indian Institute of Technology Ropar, Panjab	International
31	Hydroelastic analysis of wave diffraction by multiple flexible porous plates	The 12th International Workshop on Ship and Marine Hydrodynamics (IWSH 2023) August 28- September 1, 2023	Aalto University, Finland	International
32	Study on Wave Scattering by Inverse T-Type Bottom-Standing Breakwater	The 43 rd International Conference on Offshore Mechanics and Arctic Engineering – OMAE 2024, June 9 - 14, 2024	Singapore Expo, Singapore	International
33	Interaction of Ocean waves with floating and submerged breakwater	Recent Development of Mathematical sciences on biological and dynamical systems with fuzzy and fractional environments, June, 19–29, 2024	Department of Mathematics, Mahadevananda Mahavidyalaya	National
34	Hydroelastic analysis of wave scattering by multiple bottom standing flexible permeable barriers in uniform finite depth	The ninth International Conference on Ships and Offshore Structures (ICSOS), 8-12 September 2024	Department of Ocean Engineering, The Indian Institute of Technology Madras	International
35	Water wave scattering by Submerged And Floating Breakwaters	2nd International Conference on Exploring Advances in Mathematical Sciences, December 19-20, 2024	University of Gour Banga, India	International

15. Association with Academic Bodies

- External member of Board of studies, Department of Mathematics, University of Gour Banga, West Bengal
- b. External member of Board of studies, Department of Mathematics, Swami Vivekananda University, Barrackpore, West Bengal
- c. External member of Board of studies, Department of Mathematics, Midnapore College (Autonomous), West Bengal
- d. External member of Board of studies, Department of Mathematics, Centurion University, Odisha

e. Member of the Governing Body, Shirakole Mahavidyalaya affiliated to the University of Calcutta.

Signature of the faculty member

(SOUMEN DE)