CURRICULUM VITAE

Name: Dr. Snehasis Kundu

Father's Name: Mr. Soumen Kumar Kundu

Present Position: Assistant Professor, Dept. of Mathematics

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Present Address: Flat no. 106, Phase-II, Platina Dream City, Adityapur, Jamshedpur, 831014.

EDUCATIONAL QUALIFICATION:

S. No.	Degree	Board/University	Year	Percentage
1.	Ph.D	IIT Kharagpur	2015	NA
2.	M.Sc	IIT Kharagpur	2010	89.2
3.	B.Sc	University of Calcutta	2008	85

Ph. D Thesis Topic: Theoretical Study on Velocity and Suspension Concentration in Turbulent Flow. (Supervisor: Dr. Koeli Ghoshal, Associate Professor, IIT Kharagpur.)

M. Sc. Thesis Topic: Electrophoretic motion of a positively charged spherical particle.

RESEARCH INTERESTS:
1. **Mathematical modeling of Open-Channel Hydraulics and**
2. **Sediment transport**
3. **Fluid Mechanics**
4. **Fractional Diffusion equation**
5. **Entropy based modeling of open channels**

RESEARCH AWARDS/FELLOWSHIPS RECEIVED:

1. Awarded "**Outstanding Scientists in Mathematics**" from Venus International Foundation (Regd. Trust u/s 3 of India Trust Act. 1882, ISO 9001: 2008 certified), 2019.

2. '**Early Career Research Award'** from DST-SERB, 2017

3. **'Young Scientists Award'** from Venus International Foundation (Regd. Trust u/s 3 of India Trust Act. 1882, ISO 9001: 2008 certified), 2016.

4. **'Institute Silver Medal'** from IIT-Kharagpur, for *first class first position* in M.Sc. in Mathematics at IIT Kharagpur, 2010.

5. Awarded CSIR-NET Junior Research Fellowship/Lectureship (Government of India), 2010.

RESEARCH PUBLICATIONS (With Full Details):

INTERNATIONAL REFREED SCI/SCIE JOURNALS: 18

INTERNATIONAL REFREED SCOPUS/OTHERS JOURNALS: 4

NATIONAL CONFERENCES: 3

INTERNATIONAL CONFERENCES: 1

RESEARCH PROJECTS/Consultancy Projects: 2

Title: Theoretical investigation on non-local transport of particles in sediment-laden turbulent flows using fractional diffusion equations**.**
Sponsored by: DST, SERB.
PI: Snehasis Kundu.

Title: Theoretical investigations on secondary currents and its effects on two-dimensional distribution of suspended sediment particles in wide open channel turbulent flows.
Sponsored by: DST, SERB.
PI: Snehasis Kundu.

CONFERENCE/WORKSHOP ORGANIZED: 0

Ph. D. Supervised (With Full Details): 3 (on going)

Details of Publications:

Published/Accepted papers in SCI indexed Journals:

1. Snehasis Kundu, (2019) "Modeling stratified suspension concentration distribution in turbulent flow using fractional advection-diffusion equation" *Environmental Fluid Mechanics,* Vol. XX, No. X, pp. 1-17, **doi**: https://doi.org/10.1007/s10652-019-09679-9 (**SCI indexed**, **2017 Impact Factor – 1.846**) (Springer).

2. **Snehasis Kundu**, (2019) "Analytical Solutions of One-Dimensional Space Fractional Advection-Diffusion Equation for Sediment Suspension using Homotopy Analysis Method" *Journal of Engineering Mechanics ACSE*, Vol. 145, No. 7, pp. 1-18 (**SCI indexed, 2017 Impact Factor – 1.799**) (accepted paper)

3. Manotosh Kumbhakar, **Snehasis Kundu** and Koeli Ghosha, (2018) "An explicit analytical expression for bed-load layer thickness based on maximum entropy principle" *Physics Letter A*, Vol. 382, No. 34, pp. 2297-2304, DOI: https://doi.org/10.1016/j.physleta.2018.05.045 (Elsevier, **SCI indexed, 2017 Impact Factor – 1.863**)

4. **Snehasis Kundu** (2018), "Suspension concentration distribution in turbulent flows: An analytical study using fractional advection-diffusion equation" *Physica A: Statistical Mechanics and its Applications,* Vol. 506, pp. 135-155, DOI: https://doi.org/10.1016/j.physa.2018.04.009 (Elsevier, **SCI indexed, 2017 Impact Factor – 2.132**)

5. **Snehasis Kundu,** (2018), "Two parameter Mittag-Leffler solution of space fractional advection-diffusion equation for sediment suspension in turbulent flows" *Journal of Environmental Engineering, American Society of Civil Engineers,* Vol. 144, No. 8, pp. – 06018005-1-10, DOI: 10.1061/(ASCE)EE.1943-7870.0001416. (**SCI indexed, 2016 Impact Factor – 1.541**)

6. **Snehasis Kundu,** Manotosh Kumbhakar and Koeli Ghoshal, (2018) "Reinvestigation on mixing length in an open channel turbulent flow" *Acta Geophysica,* Vol. 66, Issue - 1, pp. 93-107, DOI: https://doi.org/10.1007/s11600-017-0109-7 (Springer, **SCIE indexed, 2016 Impact Factor – 0.968**) (Accepted Article).

7. **Snehasis Kundu**, (2018), "Derivation of different suspension equations in sediment-laden flow from Shannon entropy" *Stochastic Environmental Research and Risk Assessment,* Vol. 32, No. 2, pp. 563-576, DOI: 10.1007/s00477-017-1455-3 (Springer, **SCI indexed, 2017 Impact Factor – 2.668**).

8. **Snehasis Kundu**, (2017), "Derivation of Hunt equation for suspension distribution using Shannon entropy" *Physica A: Statistical Mechanics and its Applications,* Vol. 488, pp. 96-111, DOI: http://dx.doi.org/10.1016/j.physa.2017.07.007 (Elsevier, **SCI indexed, 2017 Impact Factor – 2.132**)

9. Manotosh Kumbhakar, **Snehasis Kundu** and Koeli Ghoshal, (2017), "Hindered settling velocity in particle-fluid mixture: A theoretical study using entropy concept" *Journal of Hydraulic Engineering, American Society of Civil Engineers*, Vol. 143, No. 11, DOI: 10.1061/(ASCE)HY.1943-7900.0001376. (**SCI indexed, 2016 Impact Factor – 2.183**)

10. **Snehasis Kundu**, (2017) "Prediction of velocity-dip-position over entire cross section of open-channel flows using entropy theory" *Environmental Earth Science*, Vol. 76, No. 10, DOI: 10.1007/s12665-017-6695-5 (**SCI indexed, 2016 Impact Factor – 1.569**)

11. **Snehasis Kundu**, (2017). "Prediction of velocity-dip-position at the central section of open channels using entropy theory" *Journal of Applied Fluid Mechanics*, Vol. 10, No. 1, pp. 221-229, DOI: 10.18869/acadpub.jafm.73.238.26403 (**SCI indexed, 2015 Impact Factor – 0.888**).

12. **Snehasis Kundu** and Koeli Ghoshal, (2017) "A Mathematical model for type II profile of concentration distribution in turbulent flows," *Environmental Fluid Mechanics,* Vol. 17, No. 3, pp. 449-472, **doi**: 10.1007/s10652-016-9498-4 (**SCI indexed**, **2017 Impact Factor – 1.846**) (Springer).

13. **Snehasis Kundu** and Koeli Ghoshal, (2019). "An entropy based model for velocity-dip-position," *Journal of Environmental Informatics,* Vol. 33, No. 2, pp. 113-128 *DOI:* 10.3808/jei.201600344 *(accepted paper).* (**SCI indexed, 2018 Impact Factor – 4.521**)

14. Manotosh Kumbhakar, **Snehasis Kundu**, Koeli Ghoshal and V. P. Singh, (2016). "Entropy-Based Modeling of Velocity Lag in Sediment-Laden Open Channel Turbulent Flow" *Entropy (MDPI),* Vol. 18, No. 9, Article no. 318, pp. 1-18 (**SCI indexed, 2016 Impact Factor – 1.821**).*paid journal*

15. **Snehasis Kundu**, (2016) "Effect of lateral bed roughness variation on particle suspension in open channels" *Environmental Earth Science*, Vol. 75, pp. DOI: 10.1007/s12665-016-5418-7 (**SCI indexed, 2016 Impact Factor – 1.569**)

16. **Snehasis Kundu** and Koeli Ghoshal, (2014) "Effects of secondary current and stratification on suspension concentration in an open channel flow," *Environmental Fluid Mechanics,* Vol. 14, No. 6, pp. 1357-1380, **doi**: 10.1007/s10652-014-9341-8 (**SCI indexed**, **2017 Impact Factor – 1.846**) (Springer).

17. **Snehasis Kundu** and Koeli Ghoshal, (2014) "Explicit formulation for suspended concentration distribution with near-bed particle deficiency," *Powder Technology*, Vol. 253, pp. 429-437**, doi**: http://dx.doi.org/10.1016/j.powtec.2013.11.032 (**SCI indexed**, **2016 Impact Factor – 2.942**) (Elsevier).

18. **Snehasis Kundu** and Koeli Ghoshal, (2013) "An explicit model for concentration distribution using biquadratic-log-wake law in a sediment laden open channel flow*," Journal of Applied Fluid Mechanics*, Vol. 6, No. 3, pp. 339-350, 2013 (**SCI indexed, 2015 Impact factor – 0.888**).

Published/Accepted papers in SCOPUS/other indexed Journals:

1. **Snehasis Kundu,** (2017 accepted), "Asymptotic model of velocity dip position in open channels" *Applied Water Science*, Vol. 7, No. 8, pp. 4415-4426, DOI: 10.1007/s13201-017-0587-4 (**Other indexed**) (Accepted Article).

2. **Snehasis Kundu** and Koeli Ghoshal, (2014) "Concentration distribution in an open channel flow by observational approach," *Journal of Hydraulic Engineering(ISH),* Vol. 20, No. 1, pp. 75-89**, doi**: http://dx.doi.org/10.1080/09715010.2013.843278 (Taylor and Francis) (**SCOPUS indexed)**.

3. Koeli Ghoshal and **Snehasis Kundu**, (2013) "Influence of secondary current on vertical concentration distribution in an open channel flow," *Journal of Hydraulic Engineering(ISH)*, Vol. 19, No. 2, pp. 88-96, **doi**: 10.1080/09715010.2013.787714 (Taylor and Francis) (**SCOPUS indexed)**.

4. **Snehasis Kundu** and Koeli Ghoshal, (2012) "An analytical model for velocity distribution and dip-phenomenon in uniform open channel flows," *International Journal of Fluid Mechanics Research,* Vol. 39, No. 5, pp. 381-395 (Begell House) (**SCOPUS indexed)**.

National Conference Publications:
1. **Snehasis Kundu** and Koeli Ghoshal, (2011) "Velocity distribution with dip-phenomenon in sediment-laden flow," In proceedings of National conference on Hydraulics and Water Resources, HYDRO- 2011, SVNIT Surat, pp. 787-794.
2. Koeli Ghoshal and **Snehasis Kundu**, (2012) "Effect of Secondary Currents on Concentration distribution in Open Channel Flows," In proceedings of National conference on Hydraulics and Water Resources, HYDRO- 2012, IIT BOMBAY, pp. 385-394.
3. **Snehasis Kundu** and Koeli Ghoshal, (2012) "Application of Beta, gamm and Psi functions in sediment transport," In proceedings of *International conference on Mathematics, Statistics and Computer Engineering* (ICMSCE - 2012) held in Vijayawada by IMRF during 13th -14th September 2012.

International Conference Publications:

1. **Snehasis Kundu** and Koeli Ghoshal, (2012) "Velocity distribution in open channels: combination of Log-law and Parabolic-Law," *World Academy of Science, Engineering and Technology*, Vol. 68, pp. 2151-2158, International Conference on Fluids Engineering, Paris, August 22-23, 2012.

MEMBER OF EDITORIAL BOARD OF THE JOURNALS:

(1) Mechanical Engineering Research (published by Canadian Center of Science and Education, ISSN 1927-0607 (Print) ISSN 1927-0615 (Online))

TEACHING EXPERIENCE:

Position Held	Institution	From	To	Nature of Job
Assistant Professor	NIST, Berhampur, Odisha	01-09-2014	23-06-2016	Teaching
Assistant Professor	IIIT Bhubaneswar	01-07-2016	25-05-2018	Teaching and Research
Assistant Professor	NIT Jamshedpur	04-06-2018	Till date	Teaching and Research

AWARDS, HONOURS & RECOGNITIONS:

- *1st Class Second* in B.Sc. in Mathematics (Hons.) from Calcutta University, 2005-08.
- *1st Class First* in M.Sc. in Mathematics from IIT Kharagpur, 2008-10.
- Awarded CSIR-NET Junior Research Fellowship/Lectureship (Government of India), 2010.
- *Ajit Kumar Dev Memorial Medel,* Ramakrishna Mission Vidyamandira, Belur Math, Howrah, 2008.
- *Institute Silver Medal,* Department of Mathematics, IIT-Kharagpur, 2010.
- Awarded for *best oral presentation* at *Research Scholar day* held in Department of Mathematics, IIT Kharagpur during 21-22 February, 2014.

REVIEWER OF INTERNATIONAL JOURNALS AND BOOKS:

(1) KSCE Journal of Civil Engineering (Published by Elsevier), ISSN: 1226-7988 (print version) ISSN: 1976-3808 (electronic version)
(2) Nuclear Engineering and Technology (Published by Elsevier), ISSN: 1738-5733.
(3) Journal of Hydro Environment Research (Published by Elsevier), ISSN: 1570-6443.
(4) Journal of Hydraulic Engineering, American Society of Civil Engineers, ISSN: 0733-9429 e-ISSN: 1943-7900.
(5) Journal of Hydrologic Engineering, American Society of Civil Engineers, ISSN: 1084-0699.
(6) Environmental Fluid Mechanics, Springer, ISSN: 1567-7419
(7) Water Resources Research, American Geophysical Research, Wiley, ISSN: - 1944-7973

MEMBER OF PROFESSIONAL ACADEMIC BODIES: Life Member (L-1470) -Indian Society for Hydraulics.

INVITED TALKS/SEMINARS GIVEN: N0

Any Other Information: