

1. Name of the Faculty: Tanmoy Pal

Designation: Assistant Professor

Specialization: Fluid Dynamics

Research Interest: Stability Analysis, Nonlinear Dynamics, Mathematical Modelling, Applied and Computational Mathematics, Nonlinear Analysis, Nonlinear Physics

2. Publication Details:

Journal

- i) PAL T, DHAR AK. NONLINEAR SELF-MODULATION OF GRAVITY-CAPILLARY WAVES ON SHEAR CURRENTS IN FINITE DEPTH. The ANZIAM Journal. 2023;65(3):248-272. doi:10.1017/S1446181123000196
- ii) Pal, T., Dhar, A.K. Weakly nonlinear modulation of interfacial gravity-capillary waves. Ocean Dynamics 74, 133–147 (2024). <https://doi.org/10.1007/s10236-023-01594-4>
- iii) Tanmoy Pal, Asoke Kumar Dhar; Current modified higher-order Schrödinger equation of broader bandwidth capillary-gravity waves. Physics of Fluids 1 December 2023; 35 (12): 127104. <https://doi.org/10.1063/5.0175023>
- iv) Pal, T., Dhar, A.K. Stability analysis of finite amplitude interfacial waves in a two-layer fluid in the presence of depth uniform current. Ocean Dynamics 72, 241–257 (2022). <https://doi.org/10.1007/s10236-022-01503-1>
- v) Pal, T., Dhar, A.K. Linear-shear-current modified nonlinear Schrödinger equation for gravity-capillary waves on deep water. Meccanica 59, 743–759 (2024). <https://doi.org/10.1007/s11012-024-01800-7>

Book Chapter

- i) Manna, S., Pal, T., Dhar, A.K. (2023). Instability and Evolution of Nonlinearly Interacting Capillary Gravity Waves Over Finite Depth. In: Chenchouni, H., et al. Recent Research on Hydrogeology, Geoecology and Atmospheric Sciences. MedGU 2021. Advances in Science, Technology & Innovation. Springer, Cham. https://doi.org/10.1007/978-3-031-43169-2_62
- ii) Pal, T., Dhar, A.K. (2024). Stability Analysis from Fourth-Order Nonlinear Multiphase Deep Water Wavetrains. In: Singh, K.M., Dutta, S., Subudhi, S., Singh, N.K. (eds) Fluid Mechanics and Fluid Power, Volume 5. FMFP 2022. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-99-6074-3_44