June 14, 2021

Publication List of
Vishal Vasan

Refereed Publications

22. V. Vasan, Manisha and D. Auroux. *Ocean-depth measurement using shallow-water wave models* (2021) *Accepted in Studies in Applied Mathematics*.

21. S. Krishnan, S. Bharadwaj and V. Vasan. *Impact of freely falling liquid containers and subsequent jetting* (2021) *Submitted to Experiments in Fluids*.

20. R. Nimiwal, U. Satpathi, V. Vasan and M. Kulkarni. *Soliton-like behaviour in non-integrable systems* arXiv:2101.01651 (2021).

19. A. Sharma, A. Mitra, R. Govindarajan and V. Vasan. *Spatio-temporal relationships between rainfall and convective clouds during Indian monsoon through a discrete lens*. International Journal of Climatology (2020) **41** 1351–1368.

18. S. Swarup, V. Vasan and M. Kulkarni. *Provable bounds for the Korteweg-de Vries reduction in multi-component Nonlinear Schrödinger Equation*. Journal of Physics A: Mathematical and Theoretical (2020) **53** 135206.

17. D. Smith, T. Trogdon and V. Vasan. *Linear dispersive shocks* arXiv:1908.08716 (2019).

16. S. Ganga Prasath, V. Vasan and R. Govindarajan. *Accurate solution method for the Maxey-Riley equation, and the effects of Basset history*. Journal of Fluid Mechanics (2019) **468** 428–460.

15. A. Mitra, A. Apte, R. Govindarajan, V. Vasan, S. Vadlamani. *Spatio-temporal patterns of the Indian Monsoon rainfall.* Accepted in Dynamics and Statistics of the Climate System (2018) **3**.

14. A. Mitra, A. Apte, R. Govindarajan, V. Vasan, S. Vadlamani. *A discrete view of the Indian Monsoon to identify spatial patterns of rainfall.* Accepted in Dynamics and Statistics of the Climate System (2018) **3**.

13. B. Deconinck, Q. Guo, E. Shlizerman and V. Vasan. *Fokas's Unified Transform Method for linear systems*. Quarterly of Applied Mathematics (2018) **76** 463–488.

12. V. Vasan, K. L. Oliveras, D. Henderson and B. Deconinck. *A method to recover water-wave profiles from pressure measurements*. Wave Motion (2017) **75** 25–35.

11. V. Vasan and K. L. Oliveras. *Water-wave profiles from pressure measurements: Extensions*. Applied Mathematics Letters (2017) **68** 175–180.

10. J. Wilkening and V. Vasan. *Comparison of five popular methods of computing the Dirichlet–Neumann operator for the water-wave problem*. Contemporary Mathematics (2015) **635** 175–210.

9. K. L. Oliveras and V. Vasan. *Relationships between the pressure and the free surface independent of the wave speed*. Contemporary Mathematics (2015) bf 635 157–173.

8. B. Deconinck, T. Trogdon and V. Vasan. *The method of Fokas for solving linear partial differential equations*. SIAM Review (2014) **56** 159–186.

7. V. Vasan and K. L. Oliveras. *Pressure beneath a traveling wave with constant vorticity*. Disc. & Cont. Dyn. Sys. Ser. A (2014) **34** 3219–3239.
6. V. Vasan and B. Deconinck. *The Bernoulli boundary condition for traveling water waves*. Appl. Math. Letters (2013) **26** 515–519.
5. K. L. Oliveras and V. Vasan. *A new equation describing traveling water-waves*. J. Fluid Mech. (2013) **717**, 514–522.
4. V. Vasan and B. Deconinck. *The inverse water wave problem of bathymetry detection*. J. Fluid Mech. (2013) **714**, 562–590.
3. V. Vasan and B. Deconinck. *Well-posedness of boundary-value problems for the linear Benjamin-Bona-Mahony equation*. Disc. & Cont. Dyn. Sys. Ser. A (2013) **33**, 3171–3188.
2. B. Deconinck, K. L. Oliveras and V. Vasan. *Relating the bottom pressure and surface elevation in the water wave problem*. J. Non. Math. Phys. (2012) **19**, Suppl. 1 1240014.
1. K. L. Oliveras, V. Vasan, B. Deconinck and D. Henderson. *Recovering the water-wave surface from pressure measurements*. SIAM J. Appl. Math. (2012) **72**, 897–918.

Peer reviewed conference proceedings

4. A. Mitra, A. Apte, R. Govindarajan, V. Vasan, S. Vadlamani (2017). *Finding active and break spells in the Indian Monsoon by Markov Random Fields.* 7^{th} International Workshop on Climate Informatics, National Center for Atmospheric Research, Boulder Colorado USA
3. A. Mitra, A. Apte, R. Govindarajan, V. Vasan, S. Vadlamani (2017). *Tracking the propagation of planetary scale cloud zones over Indian Ocean and South Asia with Markov Random Fields.* 7^{th} International Workshop on Climate Informatics, National Center for Atmospheric Research, Boulder Colorado USA
2. B. Deconinck, D. Henderson, K. L. Oliveras and V. Vasan (2011). *Recovering the water-wave surface from pressure measurements.* Proceedings of 10^{th} International Conference on Mathematical and Numerical Aspects of Waves - WAVES 2011. 4 pages
1. J. Riley and V. Vasan (2009). *Spectral energy transfer in strongly stratified flows.* Proceedings of EUROMECH Colloquium 512: Small Scale Turbulence and Related Gradient Structures, 94 – 96.