

- **refereed journal articles:**

1. * H. Punzmann, N. Francois, H. Xia, G. Falkovich and M. Shats, *Generation and reversal of surface flows by propagating waves*, **Nature Physics** 10, 658-663 (2014)
2. M. Hanifpour, N. Francois, S.M. Vaez-Alaei, T. Senden and M. Saadatfar, *Mechanical characterization of partially crystallised sphere packings*, **Physical Review Letters** 113, 148001 (2014)
3. * H. Xu, A. Pumir, G. Falkovich, E. Bodenschatz, M. Shats, H. Xia, N. Francois and G. Boffetta, *Flight-crash events in Turbulence*, **Proceedings of the National Academy of Sciences**, 111, (2014).
4. * N. Francois, H. Xia, H. Punzmann, S. Ramsden and M. Shats, *Three-dimensional fluid motion in Faraday waves: creation of vorticity and generation of two-dimensional turbulence*, **Physical Review X** 4, 021021 (2014)
5. * H. Xia, N. Francois, H. Punzmann, and M. Shats, *Taylor particle dispersion during transition to fully developed two-dimensional turbulence*, **Physical Review Letters**, 112, 104501 (2014)
6. N. Francois , T. Arnoux, L. Garcia, S.T. Hyde, V. Robins, M. Saadatfar, M. Saba and T.J. Senden , *Experimental investigation of the mechanical stiffness of periodic framework-patterned elastomers*, **Phil. Trans. of The Royal Society A** , A 372, (2014)
7. N. Francois, M. Saadatfar , R. Cruikshank and A. Sheppard, *Geometrical frustration in amorphous and partially crystallised packings of spheres*, **Physical Review Letters** 111, 148001 (2013)
8. * H. Xia, N. Francois, H. Punzmann, and M. Shats, *Lagrangian scale of particle dispersion in turbulence*, **Nature Communications** 4:2013, doi: 10.1038/ncomms3013 (2013)
9. * N. Francois, H. Xia, H. Punzmann, and M. Shats, *Inverse energy cascade and emergence of large coherent vortices in turbulence driven by Faraday waves*, **Physical Review Letters** 110, 194501 (2013)
10. * N. Francois, Y. Amarouchene, B. Lounis and H. Kellay, *Polymer conformations and hysteretic stresses in non stationary flows of polymers*, **Europhysics Letter**, 86, 3 (2009)
11. * N. Francois, D. Lasne, Y. Amarouchene, B. Lounis and H. Kellay, *Drag enhancement with polymers*, **Physical Review Letters** 100, 018302 (2008)

- **refereed conference papers:**

12. A. Sheppard et al.
Techniques in helical scanning, dynamic imaging and image segmentation for improved quantitative analysis with X-ray micro-CT
Nucl. Inst. And Meth. In Physics Research section B, vol. 324, pp. 49-56 (2014)
13. * N. Francois, H. Xia, M. Shats,
Faraday surface ripple forced 2D Turbulence,
Proceedings of the 14th European Turbulence Conference, 1-4 September, Lyon, France (2013).
14. * M. Shats, H. Xia, N. Francois, H. Punzmann ,
Turbulent coherent structures driven in parametrically excited surface ripples,
Proceedings of the 14th European Turbulence Conference, 1-4 September, Lyon, France (2013).
15. * H. Xia, N. Francois, H. Punzmann H., M. Shats,
Experimental observation of a single Lagrangian scale of particle dispersion in developed two-dimensional turbulence,
Proceedings of the 14th European Turbulence Conference, 1-4 September, Lyon, France (2013).
16. N. Francois, M. Saadatfar, M. Hanifpour, R. Cruikshank, A. Sheppard
Crystallisation in a granular material
Powder and Grains 2013, AIP conference Proceedings, vol. 1542, pp. 369-372 (2013)
17. M. Saadatfar, N. Francois, A. Arad, M. Madadi, A. Sheppard, T. Senden, M. Knackstedt
Grain-based characterisation and acoustic wave propagation in a sand packing subject to triaxial compression
Powder and Grains 2013, AIP conference Proceedings, vol. 1542, pp. 571-574 (2013)
18. M. Hanifpour, N. Francois, M. Vaez-Allaei, M. Saadatfar,
DEM simulation of experimental dense granular packing
Powder and Grains 2013, AIP conference Proceedings, vol. 1542, pp. 337-340 (2013)
19. M. Feali, W. Pinczewski, Y. Cinar, C.Arns, J-Y. Arns, N.Francois, M. Turner, T. Senden, M. Knackstedt
Qualitative and quantitative Analyses of the Three-Phase Distribution of oil, Water and Gas in Beintheimer Sandstone by use of Micro-CT imaging
SPE Res. Eval. And Eng. 15(06), pp706-711 (2012)
20. M. Saadatfar, N. Francois, A. Arad et al.,
3D mapping of deformation in an unconsolidated sand: a Micro mechanical study,
SEG Tech. Prog. Expanded. Abstract. 2012, 1 (2012).
21. J. Qajar, N. Francois, C.Arns
Micro-tomographic characterization of dissolution-induced local porosity changes including fines migration in carbonate rock,
SPE EOR, Muscat Oman, pp. 117-134. (2012)