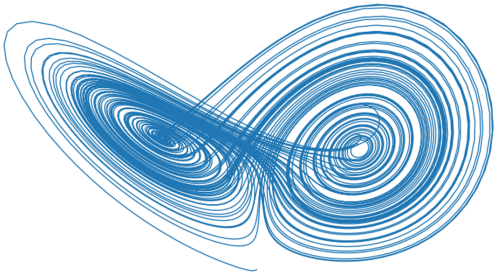
Workshop on Data-Driven ROMs & Data Assimilation

Reduced-order modelling (ROM) and data assimilation are becoming central tools for the analysis, prediction and control of complex fluid flows and other high-dimensional dynamical systems arising in engineering and the physical sciences. By combining physics-based models with experimental or observational data, these approaches aim to extract low-dimensional representations of complex phenomena while retaining predictive capability and physical interpretability. In fluid mechanics, recent advances in machine learning, sparse identification, operator learning and uncertainty quantification are opening new opportunities for flow prediction, reduced-order control, turbulence modelling and digital-twin technologies. This small workshop will provide an informal forum for discussing current research activities and potential collaborations in data-driven ROMs and data assimilation, with a primary focus on fluid mechanics while also considering applications in climate science, biomedical systems and industrial processes.



Confirmed Speakers

- Andrea Novoa, Imperial College London
- Zhong-Nan Wang, University of Birmingham
- Luca Magri, Imperial College London
- Antonio Colanera, Scuola Internazionale Superiore di Studi Avanzati (SISSA), Italy
- Miguel Pèrez-Cuadrado, City St-George's University of London
- Giorgio Maria Cavallazzi, City St-George's University of London

If you wish to contribute or attend, please contact alfredo.pinelli.1@citystgeorges.ac.uk. If you would like to give a short presentation, please let me know before Monday, May 11, 5 pm.

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Tait Building
Room C103
May 13 2026
9:00--12:00 AM