



Workshop on Topological Data Analysis in Material Science and Engineering

The University of Strathclyde and Durham University are running a one-day strategic workshop on Topological Data Analysis in Material Science and Engineering.

Topological Data Analysis (TDA) uses techniques from algebraic topology to analyse datasets that are often incomplete, high-dimensional and noisy. TDA provides researchers with a framework to analyse data in a manner that is not sensitive to a particular metric while providing dimension reduction and robustness to noise.

For those working in Material Science, TDA provides a novel language that can easily describe the complex morphologies that are often seen in nano-materials, colloids, foams and alloys: morphologies that are not easily described by more conventional methods such as fractal dimensions. TDA also provides a mechanism to quantify different morphologies that can be caused by material ageing and the different conditions that exist during sample preparation.

Aim of the workshop:

To provide a platform that will enable those working in Material Science and TDA to develop new collaborative relationships and discuss research questions and project ideas. It is hoped that these discussions will lead to at least one significant research proposal.

Workshop details:

The workshop will consist of two plenary sessions on TDA and its applications, a project discussion and networking session and a closing panel session. Plenary sessions will include talks by Paul Clegg (Edinburgh), Heather Harrington (Oxford), Sam Chong (Liverpool), Myfanwy Evans (TU-Berlin) and Vanessa Robins (ANU, Australia).

Date:

This free workshop will take place on **14th March 2016** in the City Observatory, Technology and Innovation Centre, University of Strathclyde, Glasgow.

To enable the effective exchange of ideas and opinions we are limited to **50** places.

Further information and registration:

For more information or to register for the workshop please visit our website <https://www.eventbrite.co.uk/e/topological-data-analysis-tickets-20946289917>

