

Workshop on

# Turbulent Flow and Mixing in Porous Media



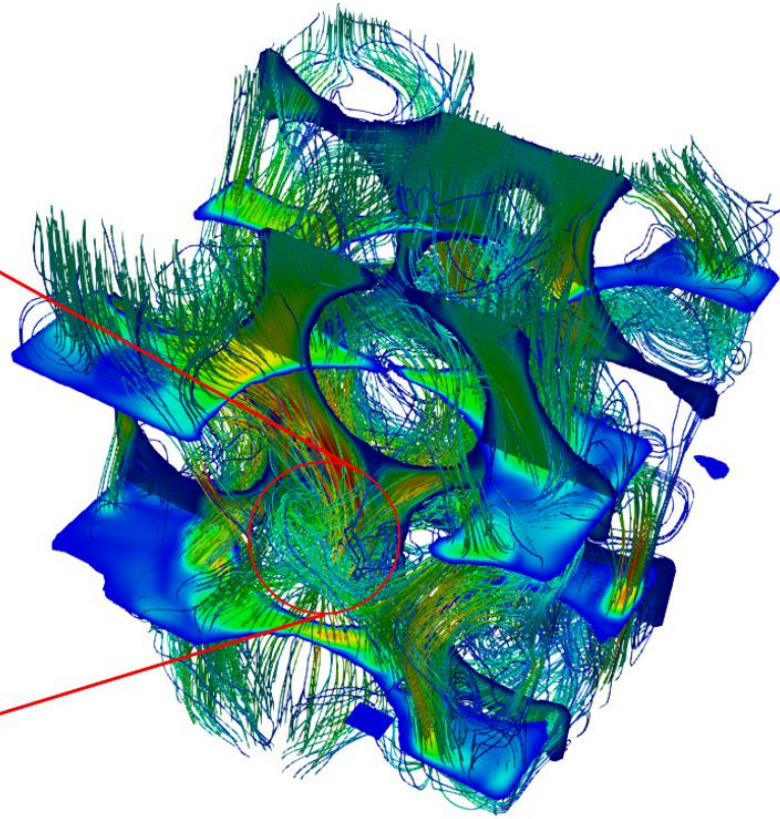
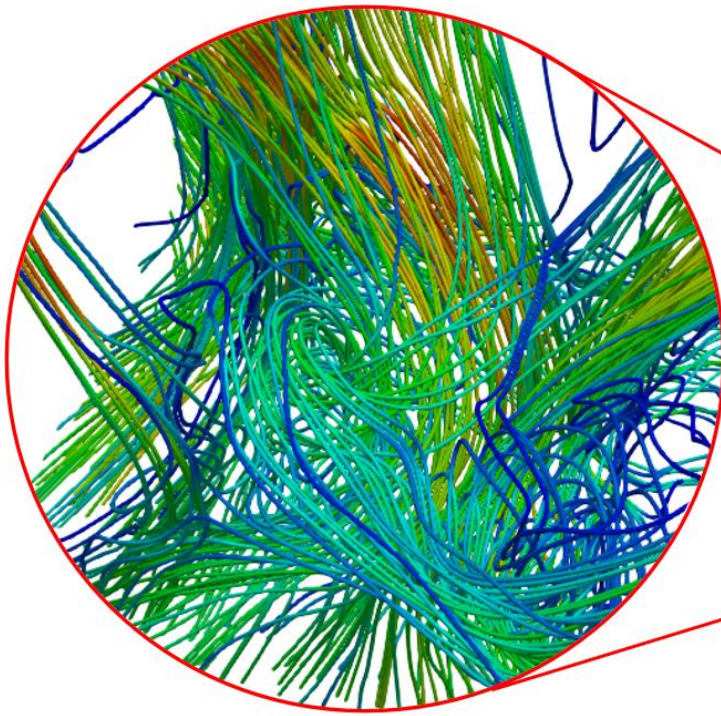
14 October 2022



Space 30, Scarman Conference  
Centre, University of Warwick  
<https://cutt.ly/LVH95Om>



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Turbulent flows occur in a variety of natural systems such as river sediments, in which turbulence controls heat and mass exchange processes. In engineered systems, turbulent flow is sometimes designed to improve the heat and mass transfer processes within the porous media. Thus, fundamental understanding of turbulent mixing in porous media is imperative and still an open problem.

The main objective of this one-day workshop is to bring scientists together from a range of backgrounds, to discuss the state of the art within the research framework of turbulent flow and mixing in porous media, and its present and future applications.

## Organiser

**Dr. Mohaddeseh Mousavi Nezhad**  
University of Warwick, UK



**PMPM Research Group**  
<https://pmpmrg.com/>

October 14<sup>th</sup>

Time	Event
9.30 – 9.50	<b>Registration, Tea &amp; Coffee</b>
9.50 – 10.00	<b>Welcome (Dr. Mohaddeseh Mousavi Nezhad)</b>
10.00 – 10.30	<b>Dr. Mohaddeseh Mousavi Nezhad</b> , University of Warwick, UK <i>"State of the art in turbulent mixing in porous media"</i>
10.30 – 11.00	<b>Prof. Marijke Huysmans</b> , Vrije University Brussel, Belgium <i>"Characterization of spatially variable riverbed hydraulic conductivity for a better assessment of river-aquifer interactions"</i>
11.00 – 11.30	<b>Student session (1)</b>
11.30 – 11.45	<b>Coffee break</b>
11.45 – 12.15	<b>Prof. John Bridgeman</b> , University of Liverpool, UK <i>"A Lattice-Boltzmann model for simulating bedform-induced hyporheic exchange"</i>
12.15 – 12.45	<b>Dr. Ricardo Garcia-Mayoral</b> , University of Cambridge, UK <i>"Turbulent flows over permeable substrates"</i>
12.45 – 13.45	<b>Lunch break</b>
13:45 – 14:30	<b>Prof. Rainer Helmig</b> , University of Stuttgart, Germany <i>"Porous Media Free-Flow Coupling Model Concept: from pore to REV scale and back"</i>
14.30 – 15.00	<b>Dr. Giovanni Porta</b> , Polytechnic University of Milan, Italy <i>(Lagrangian modelling and upscaling of transport and mixing in porous media)</i>
15.00 – 15.30	<b>Student session (2)</b>
15.30 – 16.00	<b>Coffee break</b>
16.00 – 16.30	<b>Prof. Matthew McGilvray</b> , University of Oxford, UK <i>(Research on transpiration cooling for hypersonic vehicles)</i>
16.30 – 17.00	<b>Dr. Tim Schöne</b> , Tauw GmbH, Germany <i>"Persistent pollutants in river sediments and floodplains – challenges and practical experiences"</i>
17.00 – 17.30	<b>Dr. Mehrdad Vasheghani Farahani</b> , University of Warwick, UK <i>"Pore-scale Insights into the Effect of Flow Regime and Pore Structure on the Flow Signatures in Porous Media"</i>
17.30 – 17.40	<b>Closing remarks</b>

## Registration

Click [here](#) to register to the workshop. For further information, contact Dr. Mohaddeseh Mousavi Nezhad at [m.mousavi-nezhad@warwick.ac.uk](mailto:m.mousavi-nezhad@warwick.ac.uk).

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