

Bridging PDE and Geometric Flows

LMS-HIMR Research School

Cardiff University
22-26 July 2024

Organisers: Ms Prachi Sahjwani (Cardiff University, UK) and
Prof Julian Scheuer (Goethe-Universität Frankfurt, Germany)

Course outline

The field of geometric flows is an active research area in the intersection of partial differential equations (PDE) and differential geometry. Most prominent are the mean curvature flow and the Ricci flow, which was the key to the so far only solution of a Millennium problem listed by the Clay institute, the so-called Poincaré conjecture. These geometric flows are complicated systems of PDE. This LMS Research School focuses on the interplay of PDE and geometric flows, a connection which is rarely properly credited in other treatments of geometric flows.

The three main lecture course topics are:

- *Curvature Flows* (**Prof Alessandra Pluda**, University of Pisa)
- *Fully Nonlinear PDE* (**Dr Ben Lambert**, University of Leeds)
- *Applications to Convex Geometry* (**Prof Mohammad N Ivaki**, TU Vienna)

These lecture courses will be supplemented by tutorial sessions.

For further information please visit: <https://jsscheuer.github.io/PDE-Flows-School-2024/>

Applications: Applications should be submitted to scheuer@math.uni-frankfurt.de, detailed instructions at <https://jsscheuer.github.io/PDE-Flows-School-2024/>

The closing date for applications is **07/04/2024**. Numbers will be limited and those interested are advised to make an early application.

Fees

All research students will be charged a registration fee of **£150**. **There will be no charge for subsistence costs.**

All early career researchers will be charged a registration fee of **£250**. **There will be no charge for subsistence costs.**

All other participants (e.g. those working in industry) will be charged a registration fee of £250 plus the full subsistence costs (£450) **£700** in total.

All participants are expected to pay their own travel costs. Upon participant selection, there will be an option to apply for financial aid towards the registration fee and/or travel costs.

Fees are not payable until a place on the course is offered but will be due by 21/06/2024.

LMS-HIMR Research Schools aim to provide training for young researchers in core areas of mathematics. Students and post-docs can meet a number of leading experts in the topic as well as other young researchers working in related areas.

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