

NEWSLETTER

of the Work Group Mathematical Fluid Mechanics

Newsletter no. 15 (2025)

Wasilij Barsukow in London

Wasilij Barsukow has a permanent CNRS (*Centre National de Recherche*) position as a research scientist in Bordeaux, France. Usually he is based in Bordeaux. Now he has been reassigned for one year to *Imperial College* in London. He will stay there until August 2026. Such a stay promises to be fruitful for Wasilij's research.



Imperial College (foreground) is located in London near the Royal Albert Hall (the round building in the background)

Trip to Bordeaux

Wasilij Barsukow will interrupt his stay in London and return to Bordeaux for the week Nov. 2 - 8. We will visit him there using a grant for scientific exchange obtained from BayFrance, a Barvarian-French grant agency. Our collaboration on the multi-dim. numerical Active Flux method will be further strengthened. The persons traveling from Würzburg will be Lisa Lechner, the master student Simon Krotsch and myself.

Lena Baumann submitted her PhD thesis

Lena Baumann has submitted her PhD thesis "On the dynamical low-rank numerical method for kinetic equations - Stability analysis and application to inverse problems".

For her thesis Lena worked on the numerics for kinetic equations. She refined the dynamical low rank method for her problems. This then led to her being able to numerically solve inverse problems for kinetic equations efficiently. Her thesis is more than the concatenation of her four papers and two conference proceedings (see here) she produced during here PhD. Not only has the work in her papers been streamlined but it all fits together seamlessly in the thesis.

If all goes well, she will defend her thesis before Christmas.

Congratulations, Lena!



Lena Baumann





Zeynab Saki

Zeynab Saki will join our group as a new PhD student

Zeynab Saki is a mathematics student from Iran. She will join our group in December 2025 and work towards her PhD.

Despite the restrictive political atmosphere in Iran, the training in the schools there is quite good. Still, in order to broaden one's scientific horizon, the best students go abroad for their PhD. This is what brought Zeynab to Europe.

Megala Anandan will come for a visit

Megala Anandan is a post-doc at Mainz university, studying numerics of conservation laws. She will come to visit us in Würzburg and will give a lecture on Nov. 27, 2025.



Megala Anandan

Upcoming scientific conferences

Click on the links and check where you might want to participate.

- Oct. 23 - 24, 2025: [Women in PDEs](#) in Karlsruhe, organized among others by Marlis Hochbruck
- Oct. 27 - 31, 2025: Numerical Methods for the Kinetic Equations of Plasma Physics (NumKin 2025), organized by Eric Sonnendrücker in Garching (near Munich)
- November 17 - 20, 2025: [SIAM Conference on Analysis of Partial Differential Equations](#) (PD25), Pittsburgh, Pennsylvania, USA
- December 6 - 8, 2025: Workshop on Active Flux, in Shenzhen, China, organized by Rémi Abgrall and Alexander Kurganov
- March 23 - 27, **2026**: [Hyperbolic problems - a comprehensive approach](#), in Würzburg, Germany, organized by Wasilij Barsukow, Simon Markfelder, Marlies Pirner, Fritz Röpke, Emil Wiedemann
- March 25 - 27, 2026: [5th European Conference on Non-Equilibrium Gas Flows](#) (NEGF26), in Toulouse, France, organized by Stéphane Colin among others
- March 30 - April 4, 2026: International Conference on high-order nonlinear numerical methods for evolutionary PDE (HONOM) in Trento, Italy, organized among others by Michael Dumbser
- May 25 - 29, 2026: [20th International Conference on Hyperbolic Problems \(HYP2026\)](#): Theory, Numerics and Applications, in Stuttgart, Germany organized by Maja Lukacova und Christian Rhode
- Sept. 7 - 11, 2026: [12th International Conference on Numerical Methods for Multi-Material Fluid Flow](#) (MultiMat 2026) at Biarritz, France, organized by Raphael Loubère and others
- mid June **2027**: Numerical Methods for Hyperbolic Problems (NumHyp 2027), in Verona 2027 organized by Elena Gaburro
- late June/early July 2027: International Conference on Spectral and High-Order Methods (ICOSAHOM 2027), in Milan organized Marco Verani among others

Webinar organized by the journal Computation

One of the journals by the publisher MDPI ([Multidisciplinary Digital Publishing Institute](#)) is called [Computation](#). On behalf of this journal the publisher organizes small webinars. These are a short series of 25 minute talks on a particular subject. The next webinar, called 'Genuinely multi-dimensional numerical scheme for conservation laws' will be held on Tuesday, Oct. 28, 2025 from 3 - 4:30 pm CET. The speakers are Wasilij Barsukow, Junming Duan, myself.



computation