NEWSLETTER

of the Work Group Mathematical Fluid Mechanics

Newsletter no. 2 (2025)

News about upcoming conferences:

Claude Bardos conference

Claude Bardos

Claude Bardos has contributed in a significant way to the theory of Boltzmann equation, e.g in making progress on solving Hilbert's 6th problem.

For his 85th birthday there will be a conference near Paris April 7 - 11, organized among others by Francois Golse, *see here.*

Yearly meeting of the Hyperbolic Priority Research Programme

The German Science Foundation (DFG) funds a network of researchers working on hyperbolic conservation laws, *see here*.

The next yearly meeting of this network will take place March 10 - 11 in Darmstadt. *Lisa Lechner* will give a talk there, describing the work of *our project* within this network, which is the Active Flux numerical method.

HYP2026 in Stuttgart

Every two years the "*International Conference on Hyperbolic Problems: Theory, Numerics and Applications*" takes place. The next one will take place in Stuttgart, Germany **25. - 29. Mai 2026**. It will be organized by Maria Lukacova and Christian Rhode.

Newsletter no. 2 (2025) (two pages)

Kathrin Hellmuth will be a postdoc at Caltech

Kathrin Hellmuth will soon submit her PhD thesis. Afterwards she will begin a post-doc position in May 2025 at Caltech in the USA, a top academic institution. Congratulations, Kathrin, this is a great achievement.

For now this position will be for one year. She has applied for funding from various sources to be able to extend her stay at Caltech until August 2027, in which case she would spend total of 2 years and 4 months at Caltech.

At Caltech her post-doc advisor and one of her scientific collaborators will be *Franca Hoffmann*. Franca is about 10 years older than Kathrin. She works on analysis of partial differential equations and also on data analysis and mathematical approaches to machine learning. Her research will be a great compliment to Kathrin's work.
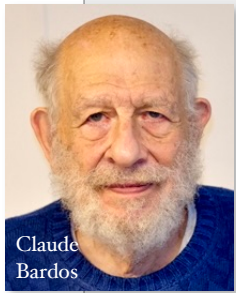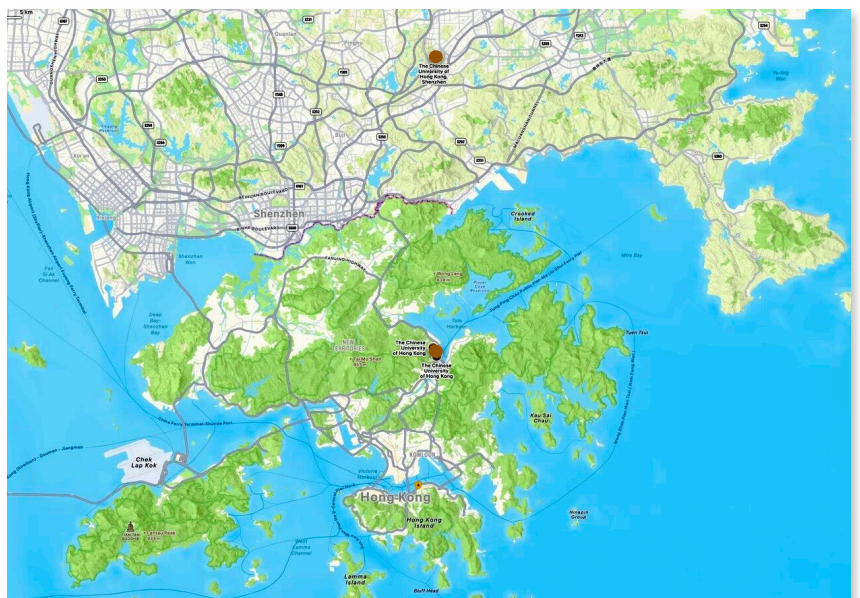

Franca Hoffmann

Junming Duan to be an assistant professor

Junming Duan is further along in his academic career compared to Kathrin. Presently he is beginning his 4th post-doc year with us as a Humboldt fellow. Next he has been awarded an assistant professorship at the *Chinese University of Hong Kong in Shenzhen*. The position is a tenure track position. He will begin there in January of 2026. Congratulations, Junming, it must be a relief to finally have some certainty in your academic career.

On this map one sees the Hong Kong islands and peninsulas below (green) with the main campus of the Chinese University of Hong Kong marked in brown. Above (in mainland China) one sees the Shenzhen campus.

News about upcoming visitors:

Gudrun Grünwald will visit us

Gudrun Grünwald

Gudrun Grünwald studied theoretical physics. She now is a PhD student with *Rainer Grauer* in computational physics.
She will visit us February. 26 - 27 and give a lecture in our seminar, *see here*.

Mengni Li plans to visit us in May

Mengni Li obtained her PhD in 2022 from Tsinghua University, Beijing, China. Her topic is inverse scattering theory in magnetohydrodynamics. For her papers *see here*. She now is a lecturer at Southeast University in Nanjing, China.
Mengni plans to visit us in May for a few weeks. Logistically this is no easy feat. She has now obtained permission from her university for this visit. Next she applied a visa for Germany. Hopefully she will receive this in time for her planned visit.

Helmut Pabel passed away

Helmut Pabel

Helmut Pabel was a retired professor in our math department. On Jan. 20, 2025 he passed away at the age of 77. *Here* you can find an obituary.
I remember him always being a kind and helpful person. His engagement for our department can be gauged by having his name affixed to our large lecture hall, the Helmut-Pabel-Hörsaal.

Upcoming scientific conferences

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

- March 3 - 7, **2025**: *SIAM Conference on Computational Science and Engineering (CSE25)*, in Fort Worth, Texas, USA

- March 11- 13, 2025: *Synergies of Machine Learning and Numerics*, in Osaka, Japan, organized among others by Leon Bungert

- March 10 - 11, 2025: *Annual Meeting of the DFG Priority program on Hyperbolic equations*, in Darmstadt, organized by Jan Giesselmann and Martin Oberlack

- April 7 - 11, 2025: *Kinetic equations and turbulence* (Bardos' 85th birthday conference) in Gif-sur-Yvette (France, near Paris), organized among others by François Golse

- June 9 - 13, 2025: *Numerical methods for hyperbolic problems 2025* (NumHyp25), in Darmstadt, organized by Jan Giesselmann and others

- June 24 - 27, 2025: *30th Biennial Conference in Numerical Analysis* in Glasgow, organized by persons from the University of Strathclyde, Glasgow

- July 13 - 18, 2025: *International Conference on Spectral and High-Order Methods* (ICOSAHOM), in Montreal, Canada

- Sept. 1 - 5, 2025, *European Conference on Numerical Mathematics and Advanced Applications* (ENUMATH 2025) in Heidelberg, organized by Barbara Wohlmuth among others

- Sept. 14 - 20, 2025: *Hirschegg Workshop*, in the Kleinwalsertal, Austria, organized by Ferdinand Thein and Gerald Warnecke

- Sept. 24 - 26, 2025: Workshop on Hyperbolic Problems, in Nürnberg, organized by Emil Wiedemann and others

- November 17–20 , 2025: *SIAM Conference on Analysis of Partial Differential Equations* (PD25), Pittsburgh, Pennsylvania, USA

- sometime in **2026**: Finite Volume and Complex Applications 11, in Münster, Germany

- 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

The Helmut-Pabel-Hörsaal of our mathematics department