

# NEWSLETTER

## of the Work Group Mathematical Fluid Mechanics

### 5th newsletter

#### News on papers submitted

For these two papers, that had been submitted to a journal earlier, referee reports arrived last week, and the editor of the journal asked for [revisions](#):

- Berberich, J.; Käppeli, R.; Chandrashekar, P.; Klingenberg, C.: "High order discretely well-balanced methods for arbitrary hydrostatic atmospheres", submitted (2020) [view PDF](#)

- Emako; Kanbar, F.; Klingenberg, C.; Tang, M. "The stationary preserving property of some asymptotic schemes for kinetic equations", submitted (2020) [view PDF](#)

This paper was [submitted](#) to a journal last week:

- Hellmuth, K.; Klingenberg, C.: "Computing Black Scholes with uncertain volatility - a Bi-Fidelity approach, submitted (2020) [view PDF](#)



#### Nominated for a prize:

- Master thesis by **Kathrin Hellmuth**
- Bachelor thesis by **Moritz Beck**



The [Vogel Foundation](#) has announced a prize for a special thesis (Bachelor oder Master) in the field of artificial intelligence, machine learning and big data. This prize will be awarded by the [Center for Artificial Intelligence in Data Science Würzburg](#). Our mathematics department is part of the center.

Both the master thesis by Kathrin Hellmuth ([Computing the Black Scholes equation with uncertain volatility using the stochastic Galerkin method and a Bi-Fidelity approach](#)) and the Bachelor thesis by Moritz Beck ([Machine Learning For Audio Classification](#)) have been **nominated** by the mathematics department for this prize.

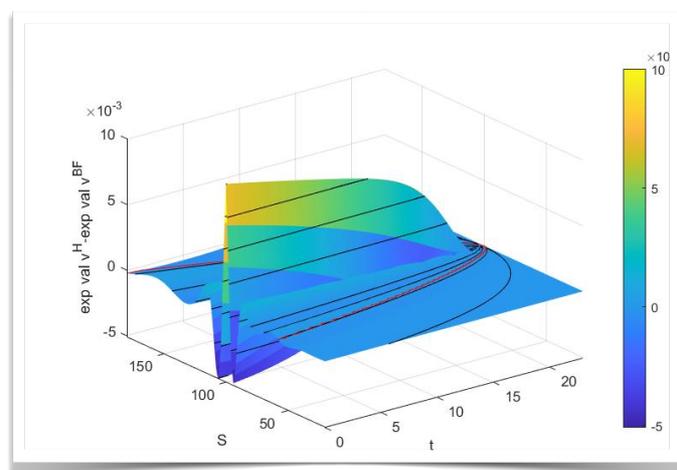


Figure from the Master thesis of Kathrin Hellmuth: the absolute difference of the expected values of two numerical solutions of a stochastic PDE, one obtained by a fine mesh, the other obtained by a much more efficient machine learning approach.