Curriculum Vitae

Dr. Wasilij Barsukow

Institut de Mathématiques		Date of birth	15/10/1990
Université de Bordeaux		Citizenship	German
351 cours de la Libération		Email	wasilij.barsukow@math.u-bordeaux.fr
33405 Talence, France		Website	https://www.math.u-bordeaux.fr/~wbarsukow

Professional Experience

since 2022	Researcher (CR CNRS) at the Institute for Mathematics, University of Bordeaux, France (UMR 5251)
2021–2022	Postdoctoral researcher at the Max Planck Institute for Plasma Physics in Garching, Germany; Host: Prof. Dr. Eric Sonnendrücker
2019–2021	DFG Research fellow at the University of Zurich, Switzerland Host: Prof. Dr. Rémi Abgrall
2018–2019	DAAD PRIME Postdoctoral fellow jointly at the University of Zurich and at the University of Würzburg

Academic Background

2014–2018	Doctoral studies in Mathematics at the University of Würzburg, Germany: *Low Mach number finite volume methods for the acoustic and Euler equations* Advisor: Prof. Dr. Christian Klingenberg
2013–2014	Master's thesis at the Max Planck Institute for Astrophysics in Garching: *Yin-Yang grid in Numerical Relativity* Advisor: Prof. Dr. Ewald Müller
2012–2014	Master studies in Physics at the University of Heidelberg, Germany
2011–2012	Erasmus year at the Université Paris-Sud XI, France, Bachelor's thesis: *Photosphere and internal shocks in relativistic gamma-ray burst outflows* Advisor: Prof. Dr. Frédéric Daigne
2009–2012	Undergraduate studies in Physics at the University of Münster, Germany

Research articles

8. *Exact solution and a truly multidimensional Godunov scheme for the acoustic equations*
W. Barsukow, C. Klingenberg
M2AN (2022) 56(1): 317-347 (arXiv:2004.04217)

7. *On the active flux scheme for hyperbolic PDEs with source terms*
W. Barsukow, J. P. Berberich, C. Klingenberg
SIAM J. Sci. Comp. (2021) 43(6): A4015-A4042 (arXiv:2108.02784)

6. *Truly multi-dimensional all-speed schemes for the Euler equations on Cartesian grids*
W. Barsukow
J. Comp. Phys. (2021) 435: 110216 (arXiv:2103:02621)

5. *The active flux scheme for nonlinear problems*
W. Barsukow
J. Sci. Comp. (2021) 86 (arXiv:2011.10056)

4. *The active flux scheme on Cartesian grids and its low Mach number limit*
W. Barsukow, J. Hohm, C. Klingenberg, P.L. Roe
J. Sci. Comp. (2019) 81(1): 594-622 (arXiv:1812.01612)

3. *Stationarity preserving schemes for multi-dimensional linear systems*
W. Barsukow
Math. Comp. (2019) 88(318): 1621-1645 (arXiv:1811.11766)

2. *A numerical scheme for the compressible low-Mach number regime of ideal fluid dynamics*
W. Barsukow, P.V.F. Edelmann, C. Klingenberg, F. Miczek, F.K. Roepke
J. Sci. Comp. (2017) 72(2): 623-646 (arXiv:1612.03910)

1. *On the relevance of bubbles and potential flows for stellar convection*
M.M.M. Bertolami, M. Viallet, V. Prat, W. Barsukow, A. Weiss
MNRAS (2016) 457(4): 4441-4453 (arXiv:1601.05811)

Awards and Scholarships

2021	Paris Région postdoctoral fellowship, success rate: 7.5% (renounced) (also listed under grants)
2019	DFG Research Fellowship (also listed under grants)
2018	DAAD PRIME / "Marie Curie Actions" Cofund postdoctoral fellowship (also listed under grants)
2015–2018	Ph. D. Scholarship of the German National Academic Foundation (Studienstiftung des Deutschen Volkes)
2012–2014	Scholarship of the German National Academic Foundation
2012	Offer for Germany Scholarship (renounced)
2010–2012	Scholar of the Land North Rhine-Westphalia

Invited Talks

2022	*Numerical Fluid mechanics*, CEA-SMAI/GAMNI, Paris, France
2021	ETH Zurich, Switzerland
2021	J.A. Dieudonné lab, Côte d'Azur University, Nice, France
2021	Institute for Mathematics, Aix-Marseille University, France
2021	Max Planck Institute for Plasma Physics, Munich, Germany
2020	Division of Applied Mathematics, Brown University, Providence, USA
2020	University of Maryland, College Park, USA
2019	Institute for Mathematics, University of Düsseldorf, Germany