

## Publications - Birgit Schörkhuber

### Preprints

20. Roland Donn timer and Birgit Schörkhuber. *Self-similar blowup for the cubic Schrödinger equation*. arXiv:2406.16597.
19. Po-Ning Chen, Michael McNulty, Birgit Schörkhuber. *Singularity formation for the higher dimensional Skyrme model in the strong field limit*. arXiv:2310.07042.

### Publications in peer-reviewed journals

18. Irfan Glogić, Sarah Kistner and Birgit Schörkhuber.  
*Existence and stability of shrinkers for the harmonic map heat flow in higher dimensions*  
Calculus of Variations and Partial Differential Equations (2024), no. 4, Paper No. 96, 33 pp.
17. Irfan Glogić and Birgit Schörkhuber.  
*Stable singularity formation for the Keller-Segel system in three dimensions*  
Archive for Rational Mechanics and Analysis, 248, 4 (2024).
16. Po-Ning Chen, Roland Donn timer, Irfan Glogić, Michael McNulty, Birgit Schörkhuber.  
*Co-dimension one stable blowup for the quadratic wave equation beyond the light cone*  
Communications in Mathematical Physics, 405, 34 (2024).
15. Elek Csobo, Irfan Glogić and Birgit Schörkhuber.  
*On blowup for the supercritical quadratic wave equation*  
Analysis & PDE, Vol. 17 (2024), No. 2, 617–680.
14. Irfan Glogić and Birgit Schörkhuber.  
*Co-dimension one stable blowup for the supercritical cubic wave equation*  
Advances in Mathematics, 390 (2021), Paper No. 107930, 79 pp.
13. Pawel Biernat, Roland Donn timer and Birgit Schörkhuber.  
*Hyperboloidal similarity coordinates and a globally stable blowup profile for supercritical wave maps*.  
International Mathematics Research Notices (2021), no. 21, 16530–16591.
12. Irfan Glogić and Birgit Schörkhuber.  
*Nonlinear stability of homothetically shrinking Yang-Mills solitons in the equivariant case*  
Communications in Partial Differential Equations, (2020), 45:8, 887-912.
11. Irfan Glogić, Maciej Maliborski and Birgit Schörkhuber.  
*Threshold for blowup for the supercritical cubic wave equation*.  
Nonlinearity, 33 (2020), no. 5, 2143–2158.

10. Roland Donn timer and Birgit Schörkhuber.  
*Stable blowup for the supercritical Yang-Mills heat flow.*  
Journal of Differential Geometry, Vol. 113, no. 1 (2019), pp. 55-94.
9. Pawel Biernat, Roland Donn timer and Birgit Schörkhuber.  
*Stable self-similar blowup in the supercritical heat flow of harmonic maps.*  
Calculus of Variations and Partial Differential Equations (2017), 56:171.
8. Roland Donn timer and Birgit Schörkhuber.  
*Stable blowup for wave equations in odd space dimensions.*  
Annales de l'Institut Henri Poincaré (C) Nonlinear Analysis (2017), 34:1181-1213.
7. Roland Donn timer and Birgit Schörkhuber.  
*On blowup in supercritical wave equations.*  
Communications in Mathematical Physics, 346 (2016), no. 3, 907-943.
6. Roland Donn timer and Birgit Schörkhuber.  
*A spectral mapping theorem for perturbed Ornstein-Uhlenbeck operators on  $L^2(\mathbb{R}^d)$ .*  
Journal of Functional Analysis (2015), 268(9):2479-2524.
5. Roland Donn timer and Birgit Schörkhuber.  
*Stable blow up dynamics for energy supercritical wave equations.*  
Transactions of the American Mathematical Society (2014) 366, No. 4, p. 2167-2189.
4. Birgit Schörkhuber, Thomas Meurer and Ansgar Jüngel.  
*Flatness of semilinear parabolic PDEs - A generalized Cauchy-Kowalevski approach.*  
IEEE Transactions on Automatic Control (2013), Vol. 58, No. 9, p. 2277-2291.
3. Birgit Schörkhuber, Thomas Meurer and Ansgar Jüngel.  
*Flatness-based trajectory planning for semilinear parabolic PDEs.*  
Proceedings of the 51st IEEE Conference on Decision and Control (2012) p. 3538 - 3543.
2. Roland Donn timer and Birgit Schörkhuber.  
*Stable self-similar blow up for energy subcritical wave equations.*  
Dynamics of Partial Differential Equations (2012) Vol. 9, No. 1, p. 63-87.
1. Roland Donn timer, Birgit Schörkhuber and Peter C. Aichelburg.  
*On stable self-similar blow up for equivariant wave maps - The linearized problem.*  
Annales Henri Poincaré (2012) Vol. 13, No. 1, p. 103-144.

## Oberwolfach Reports

1. Birgit Schörkhuber. *Singularity formation for the three-dimensional Keller-Segel system.*  
Oberwolfach Reports 19 (30/2022)/2, p. 1703 - 1706.
2. Birgit Schörkhuber. *Non-trivial self-similar blowup for the focusing energy-supercritical wave equation.*  
Oberwolfach Reports (5/2019), p. 387-389.

## Thesis

1. Birgit Schörkhuber. *Stable blow up dynamics for the radial wave equation with focusing power type nonlinearities*, Vienna University of Technology, 2013.