

## Peer reviewed publications of Marc Avila

1. [D. Morón, D. Feldmann and M. Avila](#). Effect of waveform on turbulence transition in pulsatile pipe flow. *J. Fluid Mech.*, 948:A20, 2022
2. [S.C. Endres, M. Avila and L. Mädler](#). A discrete differential geometric formulation of multiphase surface interfaces for scalable multiphysics equilibrium simulations. *Chem. Eng. Sci.*, 257, 117681, 2022.
3. [F. Meyer, C. Eigenbrod, V. Wagner, W. Paa, J.C. Hermanson, S. Ando and M. Avila](#). Oxygen droplet combustion in hydrogen under microgravity conditions. *Combustion and Flame*, 241, 112081, 2022.
4. [T. Schikarski, M. Avila, H. Trzenschiok, A. Güldenpfennig and W. Peukert](#). Quantitative modeling of precipitation processes. *Chem. Eng. J.*, 443:136195, 2022.
5. [H. Li, A. Fischer, M. Avila and D. Xu](#). Measurement error of tracer-based velocimetry in single-phase turbulent flows with inhomogeneous refractive indices. *Exp. Therm. Fluid Sci.*, 136:110681, 2022.
6. [T. Schikarski, H. Trzenschiok, W. Peukert and M. Avila](#). Inflow boundary conditions determine T-mixer efficiency. *Reaction Chemistry & Engineering*, 3, 559-568.
7. [T. Schikarski, M. Avila and W. Peukert](#). En route towards a comprehensive dimensionless representation of precipitation processes. *Chem. Eng. J.*, 428:131984, 2022.
8. [A. Vela-Martín and M. Avila](#). Deformation of drops by outer eddies in turbulence. *J. Fluid Mech.*, 929:A38, 2021.
9. [H. Li, M. Avila and D. Xu](#). A single-camera synthetic Schlieren method for the measurement of free liquid surfaces. *Exp. Fluids*, 62:227, 2021.
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14. [D. Feldmann, D. Morón and M. Avila](#). Spatiotemporal intermittency in pulsatile pipe flow. *Entropy*, 23:46, 2021.
15. [D. Xu, B. Song and M. Avila](#). Non-modal transient growth of disturbances in pulsatile and oscillatory pipe flows. *J. Fluid Mech.*, 907:R5, 2021.
16. [D. Xu, M. Heil, T. Seeböck and M. Avila](#). Resonances in pulsatile channel flow with an elastic wall. *Phys. Rev. Lett.*, 125:254501, 2020.
17. [C. Heinicke, L. Orzechowski and M. Avila](#). The MaMBA-concept for an extraterrestrial base and its first module mock-up. *Acta Astronaut.*, 173:404–413, 2020.
18. [D. Xu, A. Varshney, X. Ma, B. Song, M. Riedl, M. Avila and B. Hof](#). Nonlinear hydrodynamic instability and turbulence in pulsatile flow. *Proc. Natl. Acad. Sci. U.S.A.*, 117:11233–11239, 2020.
19. [S. Gasow, Z. Lin, H.C. Zhang, A.V. Kuznetsov, M. Avila and Y. Jin](#). Effects of pore scale on the macroscopic properties of natural convection in porous media. *J. Fluid Mech.*, 891:A25, 2020.
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21. [T. Schikarski, H. Trzenschiok, M. Avila and W. Peukert](#). Influence of mixing on the precipitation of organic nanoparticles: A Lagrangian perspective on scale-up based on self-similar distributions. *Chem. Eng. & Technol.*, 42:1635–1642, 2019.

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