

# Journal Papers (Excerpt)

## 2024

Tchoupe Sambou, Hermann Elio; Lauwers, Daniel; Petersen, Timm; Herrig, Tim; Klink, Andreas; Meinke, Matthias; Schröder, Wolfgang - "Investigating Workpiece Deflection in Precise Electrochemical Machining of Turbine Blades" - Journal of manufacturing and materials processing - vol 8 no 4 content/page 138 - [doi:10.3390/jmmp8040138](https://doi.org/10.3390/jmmp8040138)

Liu, Xin; Rüttgers, Mario; Quercia, Alessio; Egele, Romain; Pfaehler, Elisabeth; Shende, Rushikesh; Aach, Marcel; Schröder, Wolfgang; Balaprakash, Prasanna; Lintermann, Andreas - "Refining computer tomography data with super-resolution networks to increase the accuracy of respiratory flow simulations" - Future generation computer systems - vol 159 content/page 474-488 - [doi:10.1016/j.future.2024.05.020](https://doi.org/10.1016/j.future.2024.05.020)

Lagemann, Esther; Brunton, Steven L.; Schröder, Wolfgang; Lagemann, Christian - "Towards extending the aircraft flight envelope by mitigating transonic airfoil buffet" - Nature Communications - vol 15 content/page 5020 - [doi:10.1038/s41467-024-49361-3](https://doi.org/10.1038/s41467-024-49361-3)

Hösgen, Thomas; Meinke, Matthias; Schröder, Wolfgang - "Analysis of Ingress Into the Downstream Wheel Space of a 1.5-Stage Turbine By Full Circumference and Single Blade Passage Large-Eddy Simulations" - Journal of turbomachinery - vol 146 no 9 content/page 091006 - [doi:10.1115/1.4065129](https://doi.org/10.1115/1.4065129)

Rüttgers, Mario; Waldmann, Moritz; Vogt, Klaus; Ilgner, Justus Friedrich Rudolf; Schröder, Wolfgang; Lintermann, Andreas - "Automated surgery planning for an obstructed nose by combining computational fluid dynamics with reinforcement learning" - Computers in biology and medicine - vol 173 content/page 108383 - [doi:10.1016/j.compbiomed.2024.108383](https://doi.org/10.1016/j.compbiomed.2024.108383)

Hösgen, Thomas; Meinke, Matthias; Schröder, Wolfgang - "Analysis of single-blade passage and full circumference large-eddy simulations of turbine rim seal flows" - Journal of turbomachinery - vol 146 no 4 content/page 041002 - [doi:10.1115/1.4064086](https://doi.org/10.1115/1.4064086)

Wegmann, Tim; Meinke, Matthias; Fleischmann, Maximilian; Pischinger, Stefan; Schröder, Wolfgang - "Numerical Analysis of Mixing of Bio-Hybrid Fuels in a Direct Injection Engine with a Pre-Chamber Ignition System" - SAE technical paper - vol 2024-01-2619 content/page 1-16 - [doi:10.4271/2024-01-2619](https://doi.org/10.4271/2024-01-2619)

Lürkens, Thomas; Meinke, Matthias; Schröder, Wolfgang - "Impact of 2D engine nacelle flow on buffet" - CEAS Aeronautical Journal - vol 15 no 1 content/page 23-35 - [doi:10.1007/s13272-024-00728-8](https://doi.org/10.1007/s13272-024-00728-8)

Albers, Marian; Shao, Xiao; Schröder, Wolfgang - "Energy efficient actuated drag reduced compressible turbulent flat plate flow" - The international journal of heat and fluid flow - vol 106 content/page 109314 - [doi:10.1016/j.ijheatfluidflow.2024.109314](https://doi.org/10.1016/j.ijheatfluidflow.2024.109314)

Lagemann, Christian; Lagemann, Kai; Mukherjee, Sach; Schröder, Wolfgang - "Challenges of deep unsupervised optical flow estimation for particle-image velocimetry data" - Experiments in fluids - vol 65 no 3 content/page 30 - [doi:10.1007/s00348-024-03768-2](https://doi.org/10.1007/s00348-024-03768-2)

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Tchoupe Sambou, Hermann Elio; Lauwers, Daniel; Herrig, Tim; Klink, Andreas; Meinke, Matthias; Klaas, Michael; Schröder, Wolfgang - "Optical in Situ Analysis of Gas Bubble Evolution in Electrochemical Machining Based on Similarity Theory Using Particle Image Velocimetry" - Procedia CIRP - vol 117 content/page 257-262

Hübenthal, Fabian; Albers, Marian; Meinke, Matthias; Schröder, Wolfgang - "Surrogate-based optimization for active drag reduction of turbulent boundary layer flows" - Proceedings in applied mathematics and mechanics : PAMM - vol 23 no 4 content/page e202300190 - [doi:10.1002/pamm.202300190](https://doi.org/10.1002/pamm.202300190)

Lagemann, Esther; Albers, Marian; Lagemann, Christian; Schröder, Wolfgang - "Impact of Reynolds Number on the Drag Reduction Mechanism of Spanwise Travelling Surface Waves" - Flow, turbulence and combustion - content/page 14 Seiten - [doi:10.1007/s10494-023-00507-1](https://doi.org/10.1007/s10494-023-00507-1)

Herff, S.; Pausch, K.; Lintermann, A.; Schröder, Wolfgang - "Impact of the injector lateral offset on the dynamics of a lean premixed flame and the thermoacoustic stability of a burner" - Combustion and flame - vol 256 content/page 112995 - [doi:10.1016/j.combustflame.2023.112995](https://doi.org/10.1016/j.combustflame.2023.112995)

Dreier, Christian Georg; Vogt, Xenia; Schröder, Wolfgang; Vorländer, Michael - "Acoustic source characterization of simulated subsonic jet noise using spherical harmonics" - The journal of the Acoustical Society of America - vol 154 no 1 content/page 167-178 - [doi:10.1121/10.0020065](https://doi.org/10.1121/10.0020065)

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Wegmann, Tim; Meinke, Matthias; Schröder, Wolfgang - "Numerical Analyses of Spray Penetration and Evaporation in a Direct Injection Engine" - SAE technical papers - vol 2023-01-0310 content/page 16 Seiten - [doi:10.4271/2023-01-0310](https://doi.org/10.4271/2023-01-0310)

Mäteling, Esther; Albers, Marian; Schröder, Wolfgang - "How spanwise travelling transversal surface waves change the near-wall flow" - Journal of fluid mechanics - vol 957 content/page A30 - [doi:10.1017/jfm.2023.54](https://doi.org/10.1017/jfm.2023.54)

Gondrum, Miro; Satcunanathan, Sutharsan; Niemöller, Ansgar; Meinke, Matthias; Schröder, Wolfgang - "A direct-hybrid CFD/CAA method based on lattice Boltzmann and acoustic perturbation equations" - Acta Acustica - vol 7 content/page 5 - [doi:10.1051/aacus/2022062](https://doi.org/10.1051/aacus/2022062)

Zamponi, R.; Satcunanathan, S.; Moreau, S.; Meinke, Matthias; Schröder, Wolfgang; Schram, C. - "Effect of porosity on Curle's dipolar sources on an aerofoil in turbulent flow" - Journal of sound and vibration - vol 542 content/page 117353 - [doi:10.1016/j.jsv.2022.117353](https://doi.org/10.1016/j.jsv.2022.117353)

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Li, Wenfeng; Peng, Shenghong; Xi, Hengdong; Schröder, Wolfgang - "Experimental investigation on the degradation of turbulent friction drag reduction over semi-circular riblets" - Experiments in fluids - vol 63 no 12 content/page 190 - [doi:10.1007/s00348-022-03534-2](https://doi.org/10.1007/s00348-022-03534-2)

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Waldmann, Moritz; Rüttgers, Mario; Lintermann, Andreas; Schröder, Wolfgang - "Virtual Surgeries of Nasal Cavities Using a Coupled Lattice-Boltzmann–Level-Set Approach" - Journal of engineering and science in medical diagnostics and therapy - vol 5 no 3 content/page 031104 - [doi:10.1115/1.4054042](https://doi.org/10.1115/1.4054042)

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Akermann, Kevin; Renze, Peter; Schröder, Wolfgang - "Large-eddy simulation for solid particle transport and deposition in a helically rib-roughened pipe using an Euler-Lagrange approach" - Chemical engineering science - vol 253 content/page 117557 - [doi:10.1016/j.ces.2022.117557](https://doi.org/10.1016/j.ces.2022.117557)

Kiwitt, Thede; Fröhlich, Konstantin; Meinke, Matthias; Schröder, Wolfgang - "Nusselt correlation for ellipsoidal particles" - International journal of multiphase flow - vol 149 content/page 103941 - [doi:10.1016/j.ijmultiphaseflow.2021.103941](https://doi.org/10.1016/j.ijmultiphaseflow.2021.103941)

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Rommes, Bob; Lauwers, Daniel; Herrig, Tim; Meinke, Matthias; Schröder, Wolfgang; Klink, Andreas - "Concept for the experimental and numerical study of fluid-structure interaction and gas transport in Precise Electrochemical Machining" - Procedia CIRP - vol 102 content/page 204-209

Aljawad, Hussein; Rüttgers, Mario; Lintermann, Andreas; Schröder, Wolfgang; Lee, Kyungmin Clara - "Effects of the Nasal Cavity Complexity on the Pharyngeal Airway Fluid Mechanics: A Computational Study" - Journal of digital imaging - vol 34 no 5 content/page 1120-1133 - [doi:10.1007/s10278-021-00501-x](https://doi.org/10.1007/s10278-021-00501-x)

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