Publications

Doctoral Dissertation

K. Jain. *Transition to Turbulence in Physiological Flows: Direct Numerical Simulation of Hemodynamics in Intracranial Aneurysms and Cerebrospinal Fluid Hydrodynamics in the Spinal Canal*. PhD thesis, Universität Siegen, Germany, 2016.

Book Chapters

[1] **Kartik Jain**. CADA challenge: Rupture risk assessment using computational fluid dynamics. In *Cerebral Aneurysm Detection. CADA 2020. Lecture Notes in Computer Science*, volume 12643, pages 75–86. Springer, Cham, 2021.

[2] V. Kurtcuoglu, **Kartik Jain**, and B. A. Martin. Modelling of cerebrospinal fluid flow by computational fluid dynamics. In *Biomechanics of the Brain*, pages 215–241. Springer, 2019.

Articles in peer reviewed journals

[1] T. G. Vlogman and **Kartik Jain**. Efficient coupled lattice boltzmann and discrete element method simulations of small particles in complex geometries. *Computers and Mathematics with Applications (accepted for publication)*, 00:000–000, October 2024. PMID:00000000.

[2] L. van de Velde, E. Groot Jebbink, **Kartik Jain**, M. Versluis, and M. Reijnen. Lesion eccentricity plays a key role in determining the pressure gradient of serial stenotic lesions: Results from a computational hemodynamics study. *CardioVascular and Interventional Radiology*, 47(5):533–542, March 2024. PMID:38565717.

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[8] A. Wagner, E. Eggenweiler, F. Weinhardt, Z. Trivedi, D. Krach, C. Lohrmann, **Kartik Jain**, N. Karadimitriou, C. Bringedal, P. Voland, C. Holm, H. Class, H. Steeb, and I. Rybak. Permeability estimation of regular porous structures: A benchmark for comparison of methods. *Transport in Porous Media*, 00:1–23, 2021.

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[11] **Kartik Jain**. Transition to turbulence in an oscillatory flow through stenosis. *Biomechanics and Modeling in Mechanobiology*, 19:113–131, 2020. PMID:31359287.

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[1] T. G. Vlogman and **Kartik Jain**. Influence of injection parameters on the targeted delivery of microspheres to liver tumors during radioembolization. 4(0):583 – 586, 2024. 8th International Conference on Computational and Mathematical Biomedical Engineering.

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