

# Adarsh Krishnamurthy

## List of Publications by Year in descending order

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Version: 2024-02-01

59  
papers

1,134  
citations

430442

18  
h-index

414034

32  
g-index

59  
all docs

59  
docs citations

59  
times ranked

1124  
citing authors

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 1  | Patient-specific models of cardiac biomechanics. <i>Journal of Computational Physics</i> , 2013, 244, 4-21.   | 1.9 | 160       |
| 2  | Patient-specific modeling of dyssynchronous heart failure: A case study. <i>Progress in Biophysics and Molecular Biology</i> , 2011, 107, 147-155.                                      | 1.4 | 113       |
| 3  | Direct immersogeometric fluid flow analysis using B-rep CAD models. <i>Computer Aided Geometric Design</i> , 2016, 43, 143-158.   | 0.5 | 62        |
| 4  | A framework for parametric design optimization using isogeometric Analysis. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017, 316, 944-965.                          | 3.4 | 59        |
| 5  | NURBS-Python: An open-source object-oriented NURBS modeling framework in Python. <i>SoftwareX</i> , 2019, 9, 85-94.   | 1.2 | 59        |
| 6  | Learning localized features in 3D CAD models for manufacturability analysis of drilled holes. <i>Computer Aided Geometric Design</i> , 2018, 62, 263-275.                               | 0.5 | 53        |
| 7  | A three-dimensional finite element model of human atrial anatomy: New methods for cubic Hermite meshes with extraordinary vertices. <i>Medical Image Analysis</i> , 2013, 17, 525-537.  | 7.0 | 42        |
| 8  | An atlas-based geometry pipeline for cardiac Hermite model construction and diffusion tensor reorientation. <i>Medical Image Analysis</i> , 2012, 16, 1130-1141.                        | 7.0 | 39        |
| 9  | Computational investigation of left ventricular hemodynamics following bioprosthetic aortic and mitral valve replacement. <i>Mechanics Research Communications</i> , 2021, 112, 103604. | 1.0 | 39        |
| 10 | A Deep Learning Framework for Design and Analysis of Surgical Bioprosthetic Heart Valves. <i>Scientific Reports</i> , 2019, 9, 18560.   | 1.6 | 37        |
| 11 | Novel Role for Vinculin in Ventricular Myocyte Mechanics and Dysfunction. <i>Biophysical Journal</i> , 2013, 104, 1623-1633.  | 0.2 | 30        |
| 12 | Rapid B-rep model preprocessing for immersogeometric analysis using analytic surfaces. <i>Computer Aided Geometric Design</i> , 2017, 52-53, 190-204.                                   | 0.5 | 30        |
| 13 | Optimized GPU evaluation of arbitrary degree NURBS curves and surfaces. <i>CAD Computer Aided Design</i> , 2009, 41, 971-980.   | 1.4 | 29        |
| 14 | Algorithmically-consistent deep learning frameworks for structural topology optimization. <i>Engineering Applications of Artificial Intelligence</i> , 2021, 106, 104483.               | 4.3 | 26        |
| 15 | Performing Efficient NURBS Modeling Operations on the GPU. <i>IEEE Transactions on Visualization and Computer Graphics</i> , 2009, 15, 530-543.   | 2.9 | 24        |
| 16 | GPU-accelerated generation and rendering of multi-level voxel representations of solid models. <i>Computers and Graphics</i> , 2018, 75, 11-24.   | 1.4 | 21        |
| 17 | Direct evaluation of NURBS curves and surfaces on the GPU. , 2007, , .  |     | 20        |
| 18 | GPU-accelerated Hausdorff distance computation between dynamic deformable NURBS surfaces. <i>CAD Computer Aided Design</i> , 2011, 43, 1370-1379.                                       | 1.4 | 20        |

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|----|--|-----|-----------|
| 19 | Computing the Hausdorff distance between NURBS surfaces using numerical iteration on the GPU. <i>Graphical Models</i> , 2012, 74, 255-264.   | 1.1 | 19        |
| 20 | Biomechanics simulations using cubic Hermite meshes with extraordinary nodes for isogeometric cardiac modeling. <i>Computer Aided Geometric Design</i> , 2016, 43, 27-38.                        | 0.5 | 17        |
| 21 | A multiscale model for the study of cardiac biomechanics in single-ventricle surgeries: a clinical case. <i>Interface Focus</i> , 2015, 5, 20140079.   | 1.5 | 16        |
| 22 | Edge topology construction of Voronoi diagrams of spheres in non-general position. <i>Computers and Graphics</i> , 2019, 82, 332-342.  | 1.4 | 16        |
| 23 | GPU-Accelerated Minimum Distance and Clearance Queries. <i>IEEE Transactions on Visualization and Computer Graphics</i> , 2011, 17, 729-742.   | 2.9 | 15        |
| 24 | Industrial scale Large Eddy Simulations with adaptive octree meshes using immersogeometric analysis. <i>Computers and Mathematics With Applications</i> , 2021, 97, 28-44.                       | 1.4 | 15        |
| 25 | Accurate GPU-accelerated surface integrals for moment computation. <i>CAD Computer Aided Design</i> , 2011, 43, 1284-1295.   | 1.4 | 13        |
| 26 | Model of Human Fetal Growth in Hypoplastic Left Heart Syndrome: Reduced Ventricular Growth Due to Decreased Ventricular Filling and Altered Shape. <i>Frontiers in Pediatrics</i> , 2017, 5, 25. | 0.9 | 13        |
| 27 | Multi-Level 3D CNN for Learning Multi-Scale Spatial Features. , 2019, , .  |     | 11        |
| 28 | Polarized X-ray scattering measures molecular orientation in polymer-grafted nanoparticles. <i>Nature Communications</i> , 2021, 12, 4896.   | 5.8 | 11        |
| 29 | Optimization Framework for Patient-Specific Cardiac Modeling. <i>Cardiovascular Engineering and Technology</i> , 2019, 10, 553-567.  | 0.7 | 10        |
| 30 | A framework for biomechanics simulations using four-chamber cardiac models. <i>Journal of Biomechanics</i> , 2019, 91, 92-101.   | 0.9 | 10        |
| 31 | NURBS-Diff: A Differentiable Programming Module for NURBS. <i>CAD Computer Aided Design</i> , 2022, 146, 103199.   | 1.4 | 10        |
| 32 | Voronoi cells of non-general position spheres using the GPU. <i>Computer-Aided Design and Applications</i> , 2017, 14, 572-581.  | 0.4 | 8         |
| 33 | An integrated framework for solid modeling and structural analysis of layered composites with defects. <i>CAD Computer Aided Design</i> , 2019, 106, 1-12.                                       | 1.4 | 8         |
| 34 | Performance enhancement in tribological properties of lubricants by dispersing TiO2 nanoparticles. <i>Materials Today: Proceedings</i> , 2021, 47, 6180-6184.                                    | 0.9 | 8         |
| 35 | Performing efficient NURBS modeling operations on the GPU. , 2008, , .   |     | 7         |
| 36 | Accelerating geometric queries using the GPU. , 2009, , .  |     | 6         |

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|----|---|-----|-----------|
| 37 | Myofiber prestretch magnitude determines regional systolic function during ectopic activation in the tachycardia-induced failing canine heart. American Journal of Physiology - Heart and Circulatory Physiology, 2013, 305, H192-H202. | 1.5 | 6         |
| 38 | A Microstructurally Based Multi-Scale Constitutive Model of Active Myocardial Mechanics. , 2016, , 439-460.   |     | 6         |
| 39 | Scalable adaptive PDE solvers in arbitrary domains. , 2021, , .   |     | 6         |
| 40 | Fiber Layup Generation on Curved Composite Structures. CAD Computer Aided Design, 2021, 136, 103031.  | 1.4 | 5         |
| 41 | NURBS-based microstructure design for organic photovoltaics. CAD Computer Aided Design, 2020, 118, 102771.  | 1.4 | 4         |
| 42 | Left Ventricular Diastolic and Systolic Material Property Estimation from Image Data. Lecture Notes in Computer Science, 2015, 8896, 63-73.   | 1.0 | 4         |
| 43 | AI Guided Measurement of Live Cells Using AFM. IFAC-PapersOnLine, 2021, 54, 316-321.  | 0.5 | 4         |
| 44 | Simultonic: A Simulation Tool for Ultrasonic Inspection. AIP Conference Proceedings, 2006, , .  | 0.3 | 3         |
| 45 | Incorporation of composite defects from ultrasonic NDE into CAD and FE models. AIP Conference Proceedings, 2017, , .  | 0.3 | 3         |
| 46 | A framework for 3D x-ray CT iterative reconstruction using GPU-accelerated ray casting. AIP Conference Proceedings, 2019, , .   | 0.3 | 3         |
| 47 | Direct 3D printing of multi-level voxel models. Additive Manufacturing, 2021, 40, 101929.   | 1.7 | 3         |
| 48 | Analysis of Flow and Heat Transfer at a Finned Tube in Crossflow. , 2003, , 917.  |     | 2         |
| 49 | Multi-resolution 3D CNN for learning multi-scale spatial features in CAD models. Computer Aided Geometric Design, 2021, , 102038.   | 0.5 | 2         |
| 50 | Neural-network model for force prediction in multi-principal-element alloys. Computational Materials Science, 2021, 198, 110693.  | 1.4 | 2         |
| 51 | Simulation and Optimization of the Water-Jet Cleaning Process. , 2009, , .  |     | 1         |
| 52 | GPU-accelerated depth map generation for X-ray simulations of complex CAD geometries. AIP Conference Proceedings, 2018, , .   | 0.3 | 1         |
| 53 | Accurate moment computation using the GPU. , 2010, , .  |     | 1         |
| 54 | GPU-Accelerated Post-Processing and Animated Volume Rendering of Isogeometric Analysis Results. Computer-Aided Design and Applications, 2021, 19, 779-796.  | 0.4 | 1         |

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|----|--|-----|-----------|
| 55 | GPU-Accelerated Collision Analysis of Vehicles in a Point Cloud Environment. IEEE Computer Graphics and Applications, 2022, 42, 37-50.       | 1.0 | 1         |
| 56 | Multi-Scale Modeling of Patient-Specific Ventricular Geometry, Fiber Structure, and Biomechanics. Biophysical Journal, 2012, 102, 351a.      | 0.2 | 0         |
| 57 | Voronoi Cells of Non-general Position Spheres using the GPU. , 0, , .  |     | 0         |
| 58 | Automated Construction of Layer-by-Layer Finite Element Sub-Models of Damaged Composites Based on NDE Data. , 0, , .                         |     | 0         |
| 59 | HyBoDT: Hybrid Bounded Distance Transforms of Trimmed NURBS Models. Journal of Computing and Information Science in Engineering, 2022, 22, . | 1.7 | 0         |