# Thomas J R Hughes

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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|---|---|---|---|
| 365 papers | 55,655 citations | 120 h-index | 233 g-index |
| 395 ext. papers | 60,996 ext. citations | 4.3 avg, IF | 7.88 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 365 | Isogeometric model reconstruction of open shells via Ricci flow and quadrilateral layout-inducing energies. *Engineering Structures*, **2022**, 252, 113602 | 4.7 | 1 |
| 364 | Analysis-suitable unstructured T-splines: Multiple extraordinary points per face. *Computer Methods in Applied Mechanics and Engineering*, **2022**, 391, 114494 | 5.7 | 4 |
| 363 | Discontinuous Galerkin methods through the lens of variational multiscale analysis. *Computer Methods in Applied Mechanics and Engineering*, **2022**, 388, 114220 | 5.7 | 0 |
| 362 | Galerkin Formulations with Greville Quadrature Rules for Isogeometric Shell Analysis: Higher Order Elements and Locking **2022**, 207-215 | | |
| 361 | A Comparison of Matrix-Free Isogeometric Galerkin and Collocation Methods for Karhunen–Loève Expansion **2022**, 329-341 | | |
| 360 | Dynamic Fracture of Brittle Shells in a Space-Time Adaptive Isogeometric Phase Field Framework **2022**, 407-415 | | |
| 359 | An accurate strategy for computing reaction forces and fluxes on trimmed locally refined meshes. *Journal of Mechanics*, **2022**, 38, 60-76 | 1 | 0 |
| 358 | Quadrilateral layout generation and optimization using equivalence classes of integral curves: theory and application to surfaces with boundaries. *Journal of Mechanics*, **2022**, 38, 128-155 | 1 | 0 |
| 357 | Isogeometric discrete differential forms: Non-uniform degrees, Bézier extraction, polar splines and flows on surfaces. *Computer Methods in Applied Mechanics and Engineering*, **2021**, 376, 113576 | 5.7 | 4 |
| 356 | Patient specific, imaging-informed modeling of rhenium-186 nanoliposome delivery via convection-enhanced delivery in glioblastoma multiforme. *Biomedical Physics and Engineering Express*, **2021**, 7, | 1.5 | 1 |
| 355 | A matrix-free isogeometric Galerkin method for Karhunen–Loève approximation of random fields using tensor product splines, tensor contraction and interpolation based quadrature. *Computer Methods in Applied Mechanics and Engineering*, **2021**, 379, 113730 | 5.7 | 6 |
| 354 | Simulating the spread of COVID-19 a spatially-resolved susceptible-exposed-infected-recovered-deceased (SEIRD) model with heterogeneous diffusion. *Applied Mathematics Letters*, **2021**, 111, 106617 | 3.5 | 74 |
| 353 | The divergence-conforming immersed boundary method: Application to vesicle and capsule dynamics. *Journal of Computational Physics*, **2021**, 425, 109872 | 4.1 | 10 |
| 352 | Tuned hybrid nonuniform subdivision surfaces with optimal convergence rates. *International Journal for Numerical Methods in Engineering*, **2021**, 122, 2117-2144 | 2.4 | 9 |
| 351 | Computational medicine, present and the future: obstetrics and gynecology perspective. *American Journal of Obstetrics and Gynecology*, **2021**, 224, 16-34 | 6.4 | 1 |
| 350 | Polynomial spline spaces of non-uniform bi-degree on T-meshes: combinatorial bounds on the dimension. *Advances in Computational Mathematics*, **2021**, 47, 1 | 1.6 | 1 |
| 349 | Removal of spurious outlier frequencies and modes from isogeometric discretizations of second- and fourth-order problems in one, two, and three dimensions. *Computer Methods in Applied Mechanics and Engineering*, **2021**, 387, 114115 | 5.7 | 3 |

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| 348 | Smooth multi-patch discretizations in Isogeometric Analysis. *Handbook of Numerical Analysis*, **2021**, 467-543 | 1 | 2 |
| 347 | Mixed stress-displacement isogeometric collocation for nearly incompressible elasticity and elastoplasticity. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 369, 113112 | 5.7 | 5 |
| 346 | Towards untrimmed NURBS: CAD embedded reparameterization of trimmed B-rep geometry using frame-field guided global parameterization. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 369, 113227 | 5.7 | 8 |
| 345 | A numerical simulation study of the dual role of 5α-reductase inhibitors on tumor growth in prostates enlarged by benign prostatic hyperplasia via stress relaxation and apoptosis upregulation. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 362, 112843 | 5.7 | 6 |
| 344 | An adaptive space-time phase field formulation for dynamic fracture of brittle shells based on LR NURBS. *Computational Mechanics*, **2020**, 65, 1039-1062 | 4 | 18 |
| 343 | A Tchebycheffian Extension of Multidegree B-Splines: Algorithmic Computation and Properties. *SIAM Journal on Numerical Analysis*, **2020**, 58, 1138-1163 | 2.4 | 10 |
| 342 | Computational Cardiovascular Analysis with the Variational Multiscale Methods and Isogeometric Discretization. *Modeling and Simulation in Science, Engineering and Technology*, **2020**, 151-193 | 0.8 | 9 |
| 341 | Seamless integration of design and Kirchhoff–Love shell analysis using analysis-suitable unstructured T-splines. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 360, 112765 | 5.7 | 29 |
| 340 | Multi-degree B-splines: Algorithmic computation and properties. *Computer Aided Geometric Design*, **2020**, 76, 101792 | 1.2 | 18 |
| 339 | Thinner biological tissues induce leaflet flutter in aortic heart valve replacements. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 19007-19016 | 11.5 | 21 |
| 338 | Diffusion-reaction compartmental models formulated in a continuum mechanics framework: application to COVID-19, mathematical analysis, and numerical study. *Computational Mechanics*, **2020**, 66, 1-22 | 4 | 32 |
| 337 | Watertight Boolean operations: A framework for creating CAD-compatible gap-free editable solid models. *CAD Computer Aided Design*, **2019**, 115, 147-160 | 2.9 | 10 |
| 336 | An isogeometric finite element formulation for phase transitions on deforming surfaces. *Computer Methods in Applied Mechanics and Engineering*, **2019**, 351, 441-477 | 5.7 | 20 |
| 335 | Polynomial splines of non-uniform degree on triangulations: Combinatorial bounds on the dimension. *Computer Aided Geometric Design*, **2019**, 75, 101763 | 1.2 | 5 |
| 334 | Fast formation and assembly of finite element matrices with application to isogeometric linear elasticity. *Computer Methods in Applied Mechanics and Engineering*, **2019**, 355, 234-260 | 5.7 | 22 |
| 333 | Isogeometric boundary element methods and patch tests for linear elastic problems: Formulation, numerical integration, and applications. *Computer Methods in Applied Mechanics and Engineering*, **2019**, 357, 112591 | 5.7 | 14 |
| 332 | Integrating quantitative imaging and computational modeling to predict the spatiotemporal distribution of 186Re nanoliposomes for recurrent glioblastoma treatment **2019**, | | 1 |
| 331 | Analysis-suitable CAD Models based on Watertight Boolean Operations. *Proceedings in Applied Mathematics and Mechanics*, **2019**, 19, e201900275 | 0.2 | 1 |

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| 330 | Computer simulations suggest that prostate enlargement due to benign prostatic hyperplasia mechanically impedes prostate cancer growth. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 1152-1161 | 11.5 | 45 |
| 329 | Symbol-Based Analysis of Finite Element and Isogeometric B-Spline Discretizations of Eigenvalue Problems: Exposition and Review. *Archives of Computational Methods in Engineering*, **2019**, 26, 1639-1690 | 7.8 | 14 |
| 328 | Review of Patient-Specific Vascular Modeling: Template-Based Isogeometric Framework and the Case for CAD. *Archives of Computational Methods in Engineering*, **2019**, 26, 381-404 | 7.8 | 17 |
| 327 | Variationally consistent isogeometric analysis of trimmed thin shells at finite deformations, based on the STEP exchange format. *Computer Methods in Applied Mechanics and Engineering*, **2018**, 336, 39-79 | 5.7 | 55 |
| 326 | Explicit higher-order accurate isogeometric collocation methods for structural dynamics. *Computer Methods in Applied Mechanics and Engineering*, **2018**, 338, 208-240 | 5.7 | 37 |
| 325 | Improved conditioning of isogeometric analysis matrices for trimmed geometries. *Computer Methods in Applied Mechanics and Engineering*, **2018**, 334, 79-110 | 5.7 | 24 |
| 324 | A Review of Trimming in Isogeometric Analysis: Challenges, Data Exchange and Simulation Aspects. *Archives of Computational Methods in Engineering*, **2018**, 25, 1059-1127 | 7.8 | 58 |
| 323 | Phase-Field Formulation for Ductile Fracture. *Computational Methods in Applied Sciences (Springer)*, **2018**, 45-70 | 0.4 | 5 |
| 322 | Error estimates for projection-based dynamic augmented Lagrangian boundary condition enforcement, with application to fluid–structure interaction. *Mathematical Models and Methods in Applied Sciences*, **2018**, 28, 2457-2509 | 3.5 | 28 |
| 321 | Blended B-spline construction on unstructured quadrilateral and hexahedral meshes with optimal convergence rates in isogeometric analysis. *Computer Methods in Applied Mechanics and Engineering* , **2018**, 341, 609-639 | 5.7 | 33 |
| 320 | A framework for designing patient-specific bioprosthetic heart valves using immersogeometric fluid-structure interaction analysis. *International Journal for Numerical Methods in Biomedical Engineering*, **2018**, 34, e2938 | 2.6 | 56 |
| 319 | Isogeometric Analysis: Mathematical and Implementational Aspects, with Applications. *Lecture Notes in Mathematics*, **2018**, 237-315 | 0.4 | 4 |
| 318 | A diffuse interface method for the Navier–Stokes/Darcy equations: Perfusion profile for a patient-specific human liver based on MRI scans. *Computer Methods in Applied Mechanics and Engineering*, **2017**, 321, 70-102 | 5.7 | 23 |
| 317 | Smooth cubic spline spaces on unstructured quadrilateral meshes with particular emphasis on extraordinary points: Geometric design and isogeometric analysis considerations. *Computer Methods in Applied Mechanics and Engineering*, **2017**, 327, 411-458 | 5.7 | 64 |
| 316 | Hierarchically refined and coarsened splines for moving interface problems, with particular application to phase-field models of prostate tumor growth. *Computer Methods in Applied Mechanics and Engineering*, **2017**, 319, 515-548 | 5.7 | 32 |
| 315 | Multiscale and Stabilized Methods **2017**, 1-64 | | 7 |
| 314 | Truncated hierarchical tricubic C0 spline construction on unstructured hexahedral meshes for isogeometric analysis applications. *Computers and Mathematics With Applications*, **2017**, 74, 2203-2220 | 2.7 | 20 |
| 313 | Optimal and reduced quadrature rules for tensor product and hierarchically refined splines in isogeometric analysis. *Computer Methods in Applied Mechanics and Engineering*, **2017**, 316, 966-1004 | 5.7 | 55 |

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| 312 | Multi-degree smooth polar splines: A framework for geometric modeling and isogeometric analysis. *Computer Methods in Applied Mechanics and Engineering*, **2017**, 316, 1005-1061 | 5.7 | 56 |
| 311 | Truncated T-splines: Fundamentals and methods. *Computer Methods in Applied Mechanics and Engineering*, **2017**, 316, 349-372 | 5.7 | 47 |
| 310 | Immersogeometric cardiovascular fluid-structure interaction analysis with divergence-conforming B-splines. *Computer Methods in Applied Mechanics and Engineering*, **2017**, 314, 408-472 | 5.7 | 52 |
| 309 | Mathematics of Isogeometric Analysis: A Conspectus **2017**, 1-40 | | 3 |
| 308 | Fluids: Introduction and Survey **2017**, 1-3 | | |
| 307 | Tissue-scale, personalized modeling and simulation of prostate cancer growth. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, E7663-E7671 | 11.5 | 44 |
| 306 | Isogeometric analysis of boundary integral equations: High-order collocation methods for the singular and hyper-singular equations. *Mathematical Models and Methods in Applied Sciences*, **2016**, 26, 1447-1480 | 3.5 | 17 |
| 305 | A palette of fine-scale eddy viscosity and residual-based models for variational multiscale formulations of turbulence. *Computational Mechanics*, **2016**, 57, 629-635 | 4 | 2 |
| 304 | Isogeometric Phase-Field Simulation of Boiling. *Modeling and Simulation in Science, Engineering and Technology*, **2016**, 217-228 | 0.8 | |
| 303 | Inversion of geothermal heat flux in a thermomechanically coupled nonlinear Stokes ice sheet model. *Cryosphere*, **2016**, 10, 1477-1494 | 5.5 | 8 |
| 302 | Extended Truncated Hierarchical Catmull□Clark Subdivision. *Computer Methods in Applied Mechanics and Engineering*, **2016**, 299, 316-336 | 5.7 | 33 |
| 301 | A phase-field formulation for fracture in ductile materials: Finite deformation balance law derivation, plastic degradation, and stress triaxiality effects. *Computer Methods in Applied Mechanics and Engineering*, **2016**, 312, 130-166 | 5.7 | 238 |
| 300 | Isogeometric Compatible Discretizations for Viscous Incompressible Flow. *Lecture Notes in Mathematics*, **2016**, 155-193 | 0.4 | 2 |
| 299 | Truncated hierarchical Catmull□Clark subdivision with local refinement. *Computer Methods in Applied Mechanics and Engineering*, **2015**, 291, 1-20 | 5.7 | 67 |
| 298 | Selective and reduced numerical integrations for NURBS-based isogeometric analysis. *Computer Methods in Applied Mechanics and Engineering*, **2015**, 284, 732-761 | 5.7 | 61 |
| 297 | A locking-free model for Reissner□Mindlin plates: Analysis and isogeometric implementation via NURBS and triangular NURPS. *Mathematical Models and Methods in Applied Sciences*, **2015**, 25, 1519-1551 | 3.5 | 54 |
| 296 | Isogeometric collocation for large deformation elasticity and frictional contact problems. *Computer Methods in Applied Mechanics and Engineering*, **2015**, 296, 73-112 | 5.7 | 65 |
| 295 | Liquid□vapor phase transition: Thermomechanical theory, entropy stable numerical formulation, and boiling simulations. *Computer Methods in Applied Mechanics and Engineering*, **2015**, 297, 476-553 | 5.7 | 52 |

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| 294 | Patient-specific isogeometric structural analysis of aortic valve closure. *Computer Methods in Applied Mechanics and Engineering*, **2015**, 284, 508-520 | 5.7 | 72 |
| 293 | Isogeometric collocation: Neumann boundary conditions and contact. *Computer Methods in Applied Mechanics and Engineering*, **2015**, 284, 21-54 | 5.7 | 74 |
| 292 | A collocated C0 finite element method: Reduced quadrature perspective, cost comparison with standard finite elements, and explicit structural dynamics. *International Journal for Numerical Methods in Engineering*, **2015**, 102, 576-631 | 2.4 | 21 |
| 291 | Magnetic resonance imaging-based computational modelling of blood flow and nanomedicine deposition in patients with peripheral arterial disease. *Journal of the Royal Society Interface*, **2015**, 12, | 4.1 | 22 |
| 290 | An Introduction to Isogeometric Collocation Methods. *CISM International Centre for Mechanical Sciences, Courses and Lectures*, **2015**, 173-204 | 0.6 | 6 |
| 289 | Single-variable formulations and isogeometric discretizations for shear deformable beams. *Computer Methods in Applied Mechanics and Engineering*, **2015**, 284, 988-1004 | 5.7 | 77 |
| 288 | An immersogeometric variational framework for fluid-structure interaction: application to bioprosthetic heart valves. *Computer Methods in Applied Mechanics and Engineering*, **2015**, 284, 1005-1053 | 5.7 | 271 |
| 287 | Reduced Bézier element quadrature rules for quadratic and cubic splines in isogeometric analysis. *Computer Methods in Applied Mechanics and Engineering*, **2014**, 277, 1-45 | 5.7 | 100 |
| 286 | A residual based eddy viscosity model for the large eddy simulation of turbulent flows. *Computer Methods in Applied Mechanics and Engineering*, **2014**, 282, 54-70 | 5.7 | 11 |
| 285 | Isogeometric boundary-element analysis for the wave-resistance problem using T-splines. *Computer Methods in Applied Mechanics and Engineering*, **2014**, 279, 425-439 | 5.7 | 53 |
| 284 | Fluid-structure interaction analysis of bioprosthetic heart valves: Significance of arterial wall deformation. *Computational Mechanics*, **2014**, 54, 1055-1071 | 4 | 184 |
| 283 | Finite element and NURBS approximations of eigenvalue, boundary-value, and initial-value problems. *Computer Methods in Applied Mechanics and Engineering*, **2014**, 272, 290-320 | 5.7 | 147 |
| 282 | A higher-order phase-field model for brittle fracture: Formulation and analysis within the isogeometric analysis framework. *Computer Methods in Applied Mechanics and Engineering*, **2014**, 273, 100-118 | 5.7 | 300 |
| 281 | USNCTAM perspectives on mechanics in medicine. *Journal of the Royal Society Interface*, **2014**, 11, 20140201 | 4.1 | 28 |
| 280 | Amplitude–phase decompositions and the growth and decay of solutions of the incompressible Navier–Stokes and Euler equations. *Mathematical Models and Methods in Applied Sciences*, **2014**, 24, 1017-1035 | 3.5 | |
| 279 | Isogeometric contact: a review. *GAMM Mitteilungen*, **2014**, 37, 85-123 | 1.8 | 94 |
| 278 | Isogeometric analysis of nearly incompressible large strain plasticity. *Computer Methods in Applied Mechanics and Engineering*, **2014**, 268, 388-416 | 5.7 | 29 |
| 277 | Vascular deposition patterns for nanoparticles in an inflamed patient-specific arterial tree. *Biomechanics and Modeling in Mechanobiology*, **2014**, 13, 585-97 | 3.8 | 33 |

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| 276 | Volumetric T-spline construction using Boolean operations. *Engineering With Computers*, **2014**, 30, 425-439 | 4.3 | 58 |
| 275 | Volumetric T-spline Construction Using Boolean Operations **2014**, 405-424 | | 3 |
| 274 | Explicit trace inequalities for isogeometric analysis and parametric hexahedral finite elements. *Numerische Mathematik*, **2013**, 123, 259-290 | 2.2 | 29 |
| 273 | ISOGEOMETRIC DIVERGENCE-CONFORMING B-SPLINES FOR THE DARCY–STOKES–BRINKMAN EQUATIONS. *Mathematical Models and Methods in Applied Sciences*, **2013**, 23, 671-741 | 3.5 | 59 |
| 272 | Conformal solid T-spline construction from boundary T-spline representations. *Computational Mechanics*, **2013**, 51, 1051-1059 | 4 | 64 |
| 271 | Isogeometric boundary element analysis using unstructured T-splines. *Computer Methods in Applied Mechanics and Engineering*, **2013**, 254, 197-221 | 5.7 | 262 |
| 270 | Blended isogeometric shells. *Computer Methods in Applied Mechanics and Engineering*, **2013**, 255, 133-146 | 5.7 | 114 |
| 269 | Isogeometric divergence-conforming B-splines for the unsteady Navier–Stokes equations. *Journal of Computational Physics*, **2013**, 241, 141-167 | 4.1 | 97 |
| 268 | Isogeometric collocation: Cost comparison with Galerkin methods and extension to adaptive hierarchical NURBS discretizations. *Computer Methods in Applied Mechanics and Engineering*, **2013**, 267, 170-232 | 5.7 | 212 |
| 267 | Functional entropy variables: A new methodology for deriving thermodynamically consistent algorithms for complex fluids, with particular reference to the isothermal Navier–Stokes–Korteweg equations. *Journal of Computational Physics*, **2013**, 248, 47-86 | 4.1 | 52 |
| 266 | Isogeometric analysis of the advective Cahn–Hilliard equation: Spinodal decomposition under shear flow. *Journal of Computational Physics*, **2013**, 242, 321-350 | 4.1 | 77 |
| 265 | In silico vascular modeling for personalized nanoparticle delivery. *Nanomedicine*, **2013**, 8, 343-57 | 5.6 | 54 |
| 264 | Trivariate solid T-spline construction from boundary triangulations with arbitrary genus topology. *CAD Computer Aided Design*, **2013**, 45, 351-360 | 2.9 | 94 |
| 263 | Isogeometric Collocation: Cost Comparison with Galerkin Methods and Extension to Adaptive Hierarchical NURBS Discretizations. *Proceedings in Applied Mathematics and Mechanics*, **2013**, 13, 107-108 | 0.2 | 2 |
| 262 | Simulation of laminar and turbulent concentric pipe flows with the isogeometric variational multiscale method. *Computers and Fluids*, **2013**, 71, 146-155 | 2.8 | 25 |
| 261 | Discretization of Higher Order Gradient Damage Models Using Isogeometric Finite Elements **2013**, 89-120 | | |
| 260 | ISOGEOMETRIC DIVERGENCE-CONFORMING B-SPLINES FOR THE STEADY NAVIER–STOKES EQUATIONS. *Mathematical Models and Methods in Applied Sciences*, **2013**, 23, 1421-1478 | 3.5 | 111 |
| 259 | A finite strain Eulerian formulation for compressible and nearly incompressible hyperelasticity using high-order B-spline finite elements. *International Journal for Numerical Methods in Engineering* , **2012**, 89, 762-785 | 2.4 | 29 |

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| 258 | Mathematical modeling of coupled drug and drug-encapsulated nanoparticle transport in patient-specific coronary artery walls. *Computational Mechanics*, **2012**, 49, 213-242 | 4 | 67 |
| 257 | Isogeometric collocation for elastostatics and explicit dynamics. *Computer Methods in Applied Mechanics and Engineering*, **2012**, 249-252, 2-14 | 5.7 | 141 |
| 256 | Isogeometric Analysis for Topology Optimization with a Phase Field Model. *Archives of Computational Methods in Engineering*, **2012**, 19, 427-465 | 7.8 | 173 |
| 255 | Discrete spectrum analyses for various mixed discretizations of the Stokes eigenproblem. *Computational Mechanics*, **2012**, 50, 667-674 | 4 | 20 |
| 254 | Solid T-spline construction from boundary representations for genus-zero geometry. *Computer Methods in Applied Mechanics and Engineering*, **2012**, 249-252, 185-197 | 5.7 | 112 |
| 253 | An isogeometric design-through-analysis methodology based on adaptive hierarchical refinement of NURBS, immersed boundary methods, and T-spline CAD surfaces. *Computer Methods in Applied Mechanics and Engineering*, **2012**, 249-252, 116-150 | 5.7 | 312 |
| 252 | A simple algorithm for obtaining nearly optimal quadrature rules for NURBS-based isogeometric analysis. *Computer Methods in Applied Mechanics and Engineering*, **2012**, 249-252, 15-27 | 5.7 | 146 |
| 251 | Isogeometric variational multiscale large-eddy simulation of fully-developed turbulent flow over a wavy wall. *Computers and Fluids*, **2012**, 68, 94-104 | 2.8 | 36 |
| 250 | Multiscale Modeling for the Vascular Transport of Nanoparticles **2012**, 437-459 | | 2 |
| 249 | Converting an unstructured quadrilateral/hexahedral mesh to a rational T-spline. *Computational Mechanics*, **2012**, 50, 65-84 | 4 | 50 |
| 248 | On linear independence of T-spline blending functions. *Computer Aided Geometric Design*, **2012**, 29, 63-76 | 1.2 | 161 |
| 247 | Generalization of the twist-Kirchhoff theory of plate elements to arbitrary quadrilaterals and assessment of convergence. *Computer Methods in Applied Mechanics and Engineering*, **2012**, 209-212, 101-114 | 5.7 | 5 |
| 246 | Three-dimensional mortar-based frictional contact treatment in isogeometric analysis with NURBS. *Computer Methods in Applied Mechanics and Engineering*, **2012**, 209-212, 115-128 | 5.7 | 115 |
| 245 | Local refinement of analysis-suitable T-splines. *Computer Methods in Applied Mechanics and Engineering*, **2012**, 213-216, 206-222 | 5.7 | 244 |
| 244 | A phase-field description of dynamic brittle fracture. *Computer Methods in Applied Mechanics and Engineering*, **2012**, 217-220, 77-95 | 5.7 | 847 |
| 243 | An inexact Gauss-Newton method for inversion of basal sliding and rheology parameters in a nonlinear Stokes ice sheet model. *Journal of Glaciology*, **2012**, 58, 889-903 | 3.4 | 65 |
| 242 | ISOGEOMETRIC FAILURE ANALYSIS. *Springer Series in Geomechanics and Geoengineering*, **2011**, 113-116 | 0.1 | 3 |
| 241 | Converting an unstructured quadrilateral mesh to a standard T-spline surface. *Computational Mechanics*, **2011**, 48, 477-498 | 4 | 58 |

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| 240 | New rectangular plate elements based on twist-Kirchhoff theory. *Computer Methods in Applied Mechanics and Engineering*, **2011**, 200, 2547-2561 | 5.7 | 7 |
| 239 | Isogeometric finite element data structures based on Bézier extraction of NURBS. *International Journal for Numerical Methods in Engineering*, **2011**, 87, 15-47 | 2.4 | 313 |
| 238 | An isogeometric approach to cohesive zone modeling. *International Journal for Numerical Methods in Engineering*, **2011**, 87, 336-360 | 2.4 | 130 |
| 237 | An isogeometric analysis approach to gradient damage models. *International Journal for Numerical Methods in Engineering*, **2011**, 86, 115-134 | 2.4 | 140 |
| 236 | Isogeometric finite element data structures based on Bézier extraction of T-splines. *International Journal for Numerical Methods in Engineering*, **2011**, 88, 126-156 | 2.4 | 209 |
| 235 | Contact treatment in isogeometric analysis with NURBS. *Computer Methods in Applied Mechanics and Engineering*, **2011**, 200, 1100-1112 | 5.7 | 200 |
| 234 | A large deformation, rotation-free, isogeometric shell. *Computer Methods in Applied Mechanics and Engineering*, **2011**, 200, 1367-1378 | 5.7 | 246 |
| 233 | Provably unconditionally stable, second-order time-accurate, mixed variational methods for phase-field models. *Journal of Computational Physics*, **2011**, 230, 5310-5327 | 4.1 | 150 |
| 232 | Isogeometric Failure Analysis **2011**, 275-282 | | |
| 231 | ISOGEOMETRIC COLLOCATION METHODS. *Mathematical Models and Methods in Applied Sciences*, **2010**, 20, 2075-2107 | 3.5 | 257 |
| 230 | Improving stability of stabilized and multiscale formulations in flow simulations at small time steps. *Computer Methods in Applied Mechanics and Engineering*, **2010**, 199, 828-840 | 5.7 | 185 |
| 229 | Isogeometric analysis of the isothermal Navier-Stokes-Korteweg equations. *Computer Methods in Applied Mechanics and Engineering*, **2010**, 199, 1828-1840 | 5.7 | 158 |
| 228 | Stabilized Methods for Compressible Flows. *Journal of Scientific Computing*, **2010**, 43, 343-368 | 2.3 | 102 |
| 227 | A generalized finite element formulation for arbitrary basis functions: From isogeometric analysis to XFEM. *International Journal for Numerical Methods in Engineering*, **2010**, 83, 765-785 | 2.4 | 175 |
| 226 | Isogeometric variational multiscale modeling of wall-bounded turbulent flows with weakly enforced boundary conditions on unstretched meshes. *Computer Methods in Applied Mechanics and Engineering*, **2010**, 199, 780-790 | 5.7 | 216 |
| 225 | Efficient quadrature for NURBS-based isogeometric analysis. *Computer Methods in Applied Mechanics and Engineering*, **2010**, 199, 301-313 | 5.7 | 355 |
| 224 | Robustness of isogeometric structural discretizations under severe mesh distortion. *Computer Methods in Applied Mechanics and Engineering*, **2010**, 199, 357-373 | 5.7 | 192 |
| 223 | Isogeometric analysis using T-splines. *Computer Methods in Applied Mechanics and Engineering*, **2010** , 199, 229-263 | 5.7 | 711 |

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| 222 | Isogeometric shell analysis: The Reissner Mindlin shell. *Computer Methods in Applied Mechanics and Engineering*, **2010**, 199, 276-289 | 5.7 | 450 |
| 221 | An Automatic 3D Mesh Generation Method for Domains with Multiple Materials. *Computer Methods in Applied Mechanics and Engineering*, **2010**, 199, 405-415 | 5.7 | 117 |
| 220 | Turbulence modeling for large eddy simulations. *Computer Methods in Applied Mechanics and Engineering*, **2010**, 199, 779 | 5.7 | 3 |
| 219 | Variational Multiscale Theory of LES Turbulence Modeling. *ERCOFTAC Series*, **2010**, 99-108 | 0.1 | |
| 218 | n-Widths, sup inf s, and optimality ratios for the k-version of the isogeometric finite element method. *Computer Methods in Applied Mechanics and Engineering*, **2009**, 198, 1726-1741 | 5.7 | 198 |
| 217 | Augmented Lagrangian method for constraining the shape of velocity profiles at outlet boundaries for three-dimensional finite element simulations of blood flow. *Computer Methods in Applied Mechanics and Engineering*, **2009**, 198, 3551-3566 | 5.7 | 77 |
| 216 | Patient-specific isogeometric fluid Structure interaction analysis of thoracic aortic blood flow due to implantation of the Jarvik 2000 left ventricular assist device. *Computer Methods in Applied Mechanics and Engineering*, **2009**, 198, 3534-3550 | 5.7 | 299 |
| 215 | Enforcement of constraints and maximum principles in the variational multiscale method. *Computer Methods in Applied Mechanics and Engineering*, **2009**, 199, 61-76 | 5.7 | 19 |
| 214 | **2009**, | | 887 |
| 213 | F-bar projection method for finite deformation elasticity and plasticity using NURBS based isogeometric analysis. *International Journal of Material Forming*, **2008**, 1, 1091-1094 | 2 | 9 |
| 212 | NURBS-based isogeometric analysis for the computation of flows about rotating components. *Computational Mechanics*, **2008**, 43, 143-150 | 4 | 213 |
| 211 | Isogeometric fluid-structure interaction: theory, algorithms, and computations. *Computational Mechanics*, **2008**, 43, 3-37 | 4 | 663 |
| 210 | Multiphysics model for blood flow and drug transport with application to patient-specific coronary artery flow. *Computational Mechanics*, **2008**, 43, 161-177 | 4 | 39 |
| 209 | and projection methods for nearly incompressible linear and non-linear elasticity and plasticity using higher-order NURBS elements. *Computer Methods in Applied Mechanics and Engineering*, **2008**, 197, 2732-2762 | 5.7 | 240 |
| 208 | Duality and unified analysis of discrete approximations in structural dynamics and wave propagation: Comparison of p-method finite elements with k-method NURBS. *Computer Methods in Applied Mechanics and Engineering*, **2008**, 197, 4104-4124 | 5.7 | 285 |
| 207 | Isogeometric analysis of the Cahn Hilliard phase-field model. *Computer Methods in Applied Mechanics and Engineering*, **2008**, 197, 4333-4352 | 5.7 | 444 |
| 206 | Automatic 3D Mesh Generation for a Domain with Multiple Materials **2008**, 367-386 | | 11 |
| 205 | YZ discontinuity capturing for advection-dominated processes with application to arterial drug delivery. *International Journal for Numerical Methods in Fluids*, **2007**, 54, 593-608 | 1.9 | 111 |

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| 204 | Stabilized shock hydrodynamics: I. A Lagrangian method. *Computer Methods in Applied Mechanics and Engineering*, **2007**, 196, 923-966 | 5.7 | 68 |
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