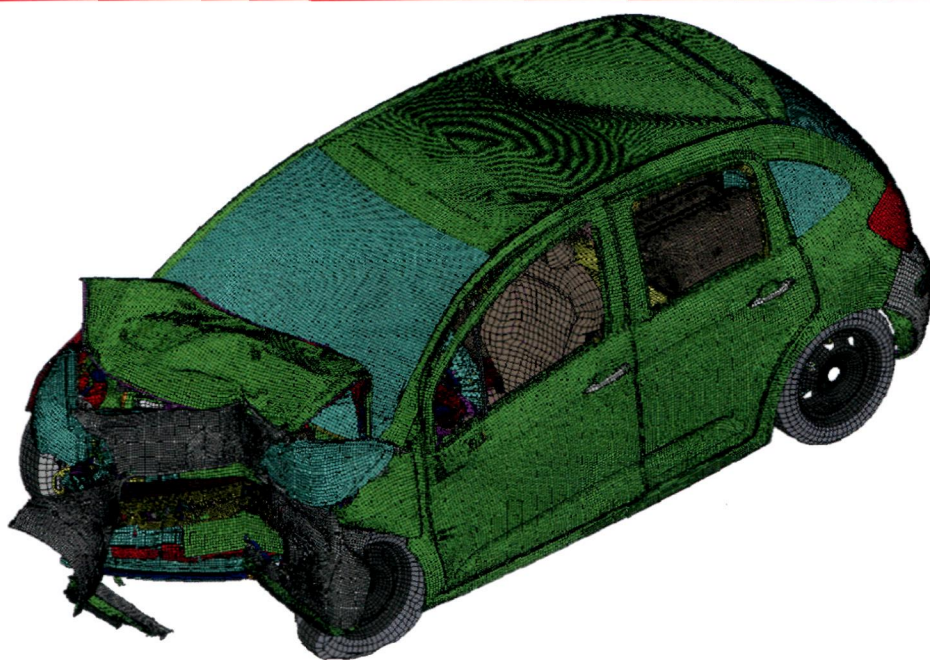


Computational Mechanics

Editor-in-Chief:
P. Wriggers

Editors:
W.K. Liu
T.E. Tezduyar
T.I. Zohdi



 Springer

Computational Mechanics

Solids, Fluids, Structures, Fluid-Structure Interactions, Biomechanics, Micromechanics,
Multiscale Mechanics, Materials, Constitutive Modeling, Nonlinear Mechanics, Aerodynamics

Volume 52 · Number 2 · August 2013

ORIGINAL PAPERS

A hybrid crystal plasticity and phase transformation model for high carbon steel

E.S. Alley · R.W. Neu 237

A ten node tetrahedral Cosserat Point Element (CPE) for nonlinear isotropic elastic materials

M. Jabareen · E. Hanukah · M.B. Rubin 257

Reduction of the number of material parameters by ANN approximation

W. Sumelka · T. Łodygowski 287

Local finite element enrichment strategies for 2D contact computations and a corresponding post-processing scheme

R.A. Sauer 301

Enhanced error estimator based on a nearly equilibrated moving least squares recovery technique for FEM and XFEM

J.J. Ródenas · O.A. González-Estrada · E.J. Fuenmayor · F. Chinesta 321

A variational constitutive framework for the nonlinear viscoelastic response of a dielectric elastomer

K.A. Khan · H. Wafai · T. El Sayed 345

Goal-oriented explicit residual-type error estimates in XFEM

M. Rüter · T. Gerasimov · E. Stein 361

Three-dimensional finite rotations treatment based on a minimal set parameterization and vector space operations in beam elements

S. Lopez 377

Quasi-explicit time-integration schemes for dynamic fracture with set-valued cohesive zone models

D. Doyen · A. Ern · S. Piperno 401

Optimal spatiotemporal reduced order modeling, Part I: proposed framework

A. LaBryer · P.J. Attar · P. Vedula 417

Optimal spatiotemporal reduced order modeling, Part II: application to a nonlinear beam

A. LaBryer · P.J. Attar · P. Vedula 433

Computational strategy for the crash design analysis using an uncertain computational mechanical model

C. Desceliers · C. Soize · M. Zarroug 453

Further articles can be found at www.springerlink.com

Abstracted/Indexed in *Science Citation Index*, *Science Citation Index Expanded (SciSearch)*, *SCOPUS*, *Astrophysics Data System (ADS)*, *Zentralblatt Math*, *Google Scholar*, *EBSCO*, *Academic OneFile*, *Academic Search*, *ACM Digital Library*, *ASFA*, *Current Abstracts*, *Current Contents/Engineering, Computing and Technology*, *Current Mathematical Publications*, *Digital Mathematics Registry*, *EI-Compendex*, *Gale*, *Journal Citation Reports/Science Edition*, *Mathematical Reviews*, *OCLC*, *SCImago*, *Summon by Serial Solutions*, *VINITI - Russian Academy of Science*

Instructions for Authors for *Comput Mech* are available at www.springer.com/466