2019

Finite element analysis of a modified progressive damage model for composite laminates under low-velocity impact.

Mixed-mode dynamic stress intensity factors by variation technique with finite block method.

Grinding temperature field prediction by meshless finite block method with double infinite element.


Generalized screw dislocations interacting with interfacial secondary crack in magneto-electro-elastic solid.

2018

Dimension reduction analysis with mapping and direct integration algorithm.

Finite and infinite block Petrov-Galerkin method for cracks in functionally graded materials.

New explicit iteration algorithms for solving coupled continuous Markovian jump Lyapunov matrix equations.

Prediction of 3D grinding temperature field based on meshless method considering infinite element.

Effect of nanotwin and dislocation pileup at twin boundary on dislocation emission from a semi-elliptical blunt crack tip in nanocrystalline materials.

Continuous constitutive model for bimodulus materials with meshless approach.

Effect of cooperative grain boundary sliding and migration on dislocation emission from interface collinear crack tip in nanocrystalline bi-materials.

Generalized method of fundamental solutions (GMFS) for boundary value problems.
Infinite element in meshless approaches.

Failure criterion of an asphalt mixture under three-dimensional stress state.

The thermal analysis of cutting/grinding processes by meshless finite block method.

Singular boundary method for wave propagation analysis in periodic structures.

Moving boundary analysis in heat conduction with multilayer composites by finite block method.

A systematic investigation of cycle number, temperature and electric field strength effects on Si anode.

An iteration method for solving the linear system Ax=b.

Medical Applications for 3D Printing: Recent Developments.

Inverse heat conduction in anisotropic and functionally graded media by finite integration method.

2017

Grain size effects on indentation-induced plastic deformation and amorphization process of polycrystalline silicon.

Preparation and thermal properties of mineral-supported polyethylene glycol as form-stable composite phase change materials (CPCMs) used in asphalt pavements.


Anti-plane fundamental solutions of functionally graded materials and applications to fracture mechanics.

Integral equation analysis for cracked strip of orthotropic functionally graded material.

Effect of nanoscale twin and dislocation pileup at twin boundary on crack blunting in nanocrystalline materials.

Finite block method in fracture analysis with functionally graded materials.
Li J, Liu JZ, Korakianitis T and Wen PH. Engineering Analysis With Boundary Elements vol. 82, 1339-1351.

Nucleation and growth mechanisms of nanoscale deformation twins in hexagonal-close-packed metal magnesium.

Stress dependence of the dislocation core structure and loop nucleation for face-centered-cubic metals.
Effect of a generalized shape Peierls potential and an external stress field on kink mechanism in a continuum model.  

**The Effect of Geometry on the Efficiency and Hemolysis of Centrifugal Implantable Blood Pumps.**  

2016

**Post buckling analysis for composite plate by finite block Petrov-Galerkin method.**  

**Investigation of subsurface damage considering the abrasive particle rotation in brittle material grinding.**  

**Experimental Study of Surface Curvature Effects on Aerodynamic Performance of a Low Reynolds Number Airfoil for Use in Small Wind Turbines.**  

**Misfit dislocations induced by lithium-ion diffusion in a thin film anode.**  

**Influence of nanoscale amorphization on emission of dislocations from a finite length crack tip in nanocrystalline materials.**  

**Anti-plane interfacial crack with functionally graded coating: static and dynamic.**  

**Boundary node Petrov-Galerkin method in solid structures.**  
Li M, Dou FF, Korakianitis T, Shi C and Wen PH. *Computational and Applied Mathematics* vol. 37, (1) 135-159.

**Finite block method for interface cracks.**  

**Effect of wedge disclination dipole on dislocation emission from a surface crack tip in nanocrystalline materials.**  

**Improved finite integration method for partial differential equations.**  
Li M, Tian ZL, Hon YC, Chen CS and Wen PH. *Engineering Analysis With Boundary Elements* vol. 64, 230-236.

**Analytical model for sandwich-lithiation in hollow amorphous silicon nano-anodes coated on carbon nanofibers.**  

2015

**Diffusion-induced stress and strain energy affected by dislocation mechanisms in a cylindrical nanoanode.**  

**Finite block Petrov-Galerkin method in transient heat conduction.**  

**Non-linear analysis of FGM composites by finite block method in cylindrical coordinates.**  

**Investigation into diffusion induced plastic deformation behavior in hollow lithium ion battery electrode revealed by analytical model and atomistic simulation.**  
The local Kansa's method for solving Berger equation.

A phase field study focuses on the transverse propagation of deformation twinning for hexagonal-closed packed crystals.

Mechanism of crack healing at room temperature revealed by atomistic simulations.

Stress intensity factor of a mode I crack inside a nanoscale cylindrical inhomogeneity.

Creep behavior as dislocation climb over NiAl nanoprecipitates in ferritic alloy: The effects of interface stresses and temperature.


Cooperative surface effect and dislocation effect in lithium ion battery electrode.


Frictional contact analysis of functionally graded materials with Lagrange finite block method.

Micromechanical modelling of textile composites.

2014

The local Kansa’s method for solving Berger equation.
Yang J, Liu X and Wen PH. *Engineering Analysis With Boundary Elements*. Elsevier Ltd.

Finite block Petrov-Galerkin method in transient heat conduction.
Li M, Munjiza A, Xu YG and Wen PH. *Engineering Analysis With Boundary Elements*.

Finite block method for transient heat conduction analysis in functionally graded media.

Meshless inverse method to determine temperature and heat flux at boundaries for 2D steady-state heat conduction problems.

High accurate solutions of nonlocal elasticity for sphere.

Integrated identification method of rheological model of sandstone in Sanmenxia bauxite.
An edge dislocation interacting with an elastic thin-layered semi-infinite matrix.

**Finite Block Method in elasticity.**

2013

**Finite integration method for partial differential equations.**

**Finite integration method for solving multi-dimensional partial differential equations.**
Li M, Chen CS, Hon YC and Wen PH. *Applied Mathematical Modelling*. Elsevier Inc.

**Two Dimensional Nonlocal Elasticity Analysis by Local Integral Equation Method.**

**Foreword: Advances in crack growth modelling.**
Aliabadi F and Wen P. *Key Engineering Materials* vol. 560,.

**Finite integration method for nonlocal elastic bar under static and dynamic loads.**
Li M, Hon YC, Korakianitis T and Wen PH. *Engineering Analysis With Boundary Elements* vol. 37, (5) 842-849.

**Elastodynamic problems by meshless local integral method: Analytical formulation.**
Wen PH and Aliabadi MH. *Engineering Analysis With Boundary Elements* vol. 37, (5) 805-811.

**Analytical formulation of meshless local integral equation method.**
Wen PH and Aliabadi MH. *Applied Mathematical Modelling* vol. 37, (4) 2115-2126.

**Screw dislocations interacting with two asymmetrical interfacial cracks emanating from an elliptical hole.**

**Finite integration method for partial differential equations.**

2012

**Crack growth by dimensional reduction methods.**

**Dynamic crack problems using meshless method.**

**Crack growth modelling in functionally graded materials by mesh-free method.**
Wen PH and Aliabadi MH. *Sdshm Structural Durability and Health Monitoring* vol. 8, (3) 223-247.

**Laminated elastic plates with piezoelectric sensors and actuators.**

**Elastic behavior of an edge dislocation inside the nanoscale coating layer.**

**Inverse heat conduction problems in three-dimensional anisotropic functionally graded solids.**

**Damage mechanics analysis of plain woven fabric composite micromechanical model for mesh-free simulations.**
Wen PH and Aliabadi MH. *Journal of Composite Materials* vol. 46, (18) 2259-2253.

**Dislocation emission from nanovoid with surface effects.**
The analytical solutions of incompressible saturated poroelastic circular Mindlin’s plate.
Wen PH. *Journal of Applied Mechanics, Transactions Asme* vol. 79, (5).

**Dual Boundary Element Method for Modelling Curved Crack Paths.**

Effective shear modulus approach for two dimensional solids and plate bending problems by meshless point collocation method.
Tu W, Gu YT and Wen PH. *Engineering Analysis With Boundary Elements* vol. 36, (5) 675-684.

Analysis of functionally graded plates by meshless method: A purely analytical formulation.
Wen PH and Aliabadi MH. *Engineering Analysis With Boundary Elements* vol. 36, (5) 639-650.

A hybrid finite difference and moving least square method for elasticity problems.
Wen PH and Aliabadi MH. *Engineering Analysis With Boundary Elements* vol. 36, (4) 600-605.

**The method of approximate particular solutions for solving certain partial differential equations.**

Analytical formulation of meshless local integral equation method.
Wen PH and Aliabadi MH. *Applied Mathematical Modelling*.

Meshfree continuum damage mechanics modelling for 3D orthogonal woven composites.

2011

Meshfree modeling and homogenization of 3D orthogonal woven composites.
Li LY, Wen PH and Aliabadi MH. *Composites Science and Technology* vol. 71, (15) 1777-1788.

**Three-dimensional analysis of functionally graded plates.**

The method of approximate particular solutions for solving elliptic problems with variable coefficients.
Chen CS, Fan CM and Wen PH. *International Journal of Computational Methods* vol. 8, (3) 545-559.

Optimisation of the protrusion geometry in Comeld(TM) joints.

A variational approach for evaluation of stress intensity factors using the element free Galerkin method.

A variational technique for element free analysis of static and dynamic fracture mechanics.
Wen PH and Aliabadi MH. *Key Engineering Materials* vol. 454, 31-46.

Inverse heat conduction problems by using particular solutions.

2010

The optimization of Comeld(TM) joints: A novel technique for bonding composites and metal.

**The method of particular solutions for solving scalar wave equations.**

A new damping modelling approach and its application in thin wall machining.

On the numerical prediction of stability in thin wall machining.
Adetoro OB, Vepa R, Sim WM and Wen PH.
The fundamental solution of poroelastic plate saturated by fluid and its applications.

Multi-region mesh free method for Comeld(TM) joints.
Tu W, Wen PH and Guild FJ. *Computational Materials Science* vol. 48, (3) 481-489.

Wen PH and Aliabadi MH. *Cmes-Comp Model Eng* vol. 61, (2) 133-154.

Meshless local Petrov-Galerkin (MLPG) method for wave propagation in 3D poroelastic solids.
Wen PH. *Engineering Analysis With Boundary Elements* vol. 34, (4) 315-323.

An improved prediction of stability lobes using nonlinear thin wall dynamics.
Adetoro OB, Sim WM and Wen PH. *Journal of Materials Processing Technology* vol. 210, (6-7) 969-979.

Critical shear stress produced by interaction of edge dislocation with nanoscale inhomogeneity.

Prediction of mechanistic cutting force coefficients using ALE formulation.

Simple method to predict balloon shape.
Wen PH and Dorrington GE. *P I Mech Eng G-J Aer* vol. 224, (G8) 897-904.

2009

The inverse problem of determining heat transfer coefficients by the meshless local petrov-galerkin method.

Numerical and experimental investigation for stability lobes prediction in thin wall machining.

Boundary element formulations for Mindlin plate on an elastic foundation with dynamic load.
Wen PH and Aliabadi MH. *Engineering Analysis With Boundary Elements* vol. 33, (10) 1161-1170.

Inverse fracture problems in piezoelectric solids by local integral equation method.
Sladek J, Sladek V, Wen PH and Hon YC. *Engineering Analysis With Boundary Elements* vol. 33, (8-9) 1089-1099.

Evaluation of mixed-mode stress intensity factors by the mesh-free Galerkin method: static and dynamic.

Mesh-free micromechanical model for woven fabric composite elastic moduli.
Wen PH and Aliabadi MH. *Journal of Multiscale Modeling* vol. 1, (2) 303-319.

Effect of interface stresses on the image force and stability of an edge dislocation inside a nanoscale cylindrical inclusion.

Interaction between a dislocation and a core-shell nanowire with interface effects.

Misfit dislocations in an annular strained film grown on a cylindrical nanopore surface.

Dynamic responses of shear flows over a deformable porous surface layer in a cylindrical tube.

A piezoelectric screw dislocation in a three-phase composite cylinder model with an imperfect interface.
Screw dislocations interacting with a coated inhomogeneity containing two imperfect interfaces.

Dipole of edge misfit dislocations and critical radius conditions for buried strained cylindrical inhomogeneity.
Fang QH, Liu YW and Wen PH. Philos Mag vol. 89, (20) 1585-1595.

2008

An inverse method to determine boundary temperature and heat flux for a 2D steady state heat conduction problem.

Thermal analysis of Reissner-Mindlin shallow shells with FGM properties by the MLPG.

Meshless method for crack analysis in functionally graded materials with enriched radial base functions.

The fundamental solution of Mindlin plates with damping in the Laplace domain and its applications.

Thermal bending of Reissner-Mindlin plates by the MLPG.
Sladek J, Sladek V, Solek P and Wen PH. Cmes - Computer Modeling in Engineering and Sciences vol. 28, (1) 57-76.

An improved meshless collocation method for elastostatic and elastodynamic problems.

Contribution to critical shear stress of nanocomposites produced by interaction of screw dislocation with nanoscale inclusion.

Screw dislocations in a three-phase composite cylinder model with interface stress.

Interaction between micro-particles in Oseen flows by the method of fundamental solutions.

A piezoelectric screw dislocation interacting with an elliptical inclusion containing electrically conductive interfacial rigid lines.

The fundamental solution of Mindlin plates resting on an elastic foundation in the Laplace domain and its applications.

Displacement discontinuity method for cracked orthotropic strip: Dynamic.
Wen PH, Aliabadi MH, Sladek J and Sladek V. Wave Motion vol. 45, (3) 293-308.

2007

Meshless method with enriched radial basis functions for fracture mechanics.
Wen PH and Aliabadi MH. Sdlim Structural Integrity and Durability vol. 3, (2) 107-119.

Geometrically nonlinear analysis of Reissner-Mindlin plate by meshless computation.
Wen PH and Hon YC. Cmes - Computer Modeling in Engineering and Sciences vol. 21, (3) 177-191.

Meshless method with enriched radial basis functions for fracture mechanics.
Wen PH and Aliabadi MH. Sdlim Structural Durability and Health Monitoring vol. 3, (2) 107-119.
Movement of a spherical cell in capillaries using a boundary element method.

Meshless local Petrov-Galerkin (MLPG) method for Reissner-Mindlin plates under dynamic load.

2006

Displacement discontinuity formulation for modeling cracks in orthotropic shear deformable plates.

Analysis of orthotropic thick plates by meshless local Petrov-Galerkin (MLPG) method.

Boundary element frequency domain formulation for dynamic analysis of Mindlin plates.

Meshless Local Petrov-Galerkin (MLPG) method for shear deformable shells analysis.
Sladek J, Sladek V, Wen PH and Aliabadi MH. Cmes - Computer Modeling in Engineering and Sciences vol. 13, (2) 103-117.

Post buckling analysis of Reissner plates by the boundary element method.
Wen PH, Aliabadi MH and Young A. J Strain Anal Eng vol. 41, (3) 239-252.

2005

Displacement discontinuity method for fracture mechanics analysis of Reissner plates: static and dynamic.

Large deflection analysis of Reissner plate by boundary element method.

2003

Boundary element analysis of curved cracked panels with adhesively bonded patches.

Fracture mechanics analysis of curved stiffened panels using BEM.

Boundary element analysis of cracked panels with mechanically fastened repair patches.

2002

Boundary element analysis of flat cracked panels with adhesively bonded patches.
Wen PH, Aliabadi MH and Young A. Engineering Fracture Mechanics vol. 69, (18) 2129-2146.

Boundary element analysis of reinforced shear deformable shells.

Boundary element analysis of shear deformable stiffened plates.
Wen PH, Aliabadi MH and Young A. Engineering Analysis With Boundary Elements vol. 26, (6) 511-520.

Boundary element analysis of cracked panels with mechanically fastened repair patches.
Wen PH, Aliabadi MH and Young A. Journal of Strain Analysis For Engineering Design vol. 37, (3) 223-237.

Boundary element analysis for damage tolerance assessment of aircraft panels.
Boundary element analysis for damage tolerance assessment of aircraft panels.

Fracture mechanics analysis of curved stiffened panels using BEM.
Aliabadi MH, WEN P and Young A. *Eng Analysis With Boundary Element Method* vol. 26, 511-520.

Boundary analysis of cracked panels with mechanically fastened repair patches.

2001

Boundary element analysis of curved cracked panels with mechanically fastened repair patches.
Wen PH. *Cmes - Computer Modeling in Engineering and Sciences* vol. 3, (1) 1-10.

2000

Stiffened cracked plates analysis by dual boundary element method.