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Publications:

Numerical simulation of the planar extrudate swell of pseudoplastic and viscoelastic fluids with the streamfunction and the VOF methods
Publication: Research - peer-review › Journal article – Annual report year: 2018

Uncovering the local inelastic interactions during manufacture of ductile cast iron: How the substructure of the graphite particles can induce residual stress concentrations in the matrix
Publication: Research - peer-review › Journal article – Annual report year: 2018

2D Numerical Modelling of the Resin Injection Pultrusion Process Including Experimental Resin Kinetics and Temperature Validation
Publication: Research - peer-review › Paper – Annual report year: 2017

A methodology for online visualization of the energy flow in a machine tool
Publication: Research - peer-review › Journal article – Annual report year: 2017

Analysis of the equivalent indenter concept used to extract Young's modulus from a nano-indentation test: some new insights into the Oliver–Pharr method
Publication: Research - peer-review › Journal article – Annual report year: 2017

A numerical investigation of the effect of ambient conditions on natural convection cooling of electronics
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Assessment of the Contour Method for 2-D Cross Sectional Residual Stress Measurements of Friction Stir Welded Parts of AA2024-T3—Numerical and Experimental Comparison
Publication: Research - peer-review › Journal article – Annual report year: 2017

Cavity prediction in sand mould production applying the DISAMATIC process
Publication: Research - peer-review › Journal article – Annual report year: 2017

CFD simulation and statistical analysis of moisture transfer into an electronic enclosure
Publication: Research - peer-review › Journal article – Annual report year: 2016

Drying of a tape-cast layer: Numerical investigation of influencing parameters
Publication: Research - peer-review › Journal article – Annual report year: 2017
Flow visualization and simulation of the filling process during injection molding
Publication: Research - peer-review › Journal article – Annual report year: 2016

Graphite nodules and local residual stresses in ductile iron: Thermo-mechanical modeling and experimental validation
Publication: Research › Ph.D. thesis – Annual report year: 2017

Hot-blade cutting of EPS foam for double-curved surfaces—numerical simulation and experiments
Publication: Research - peer-review › Journal article – Annual report year: 2017

Humidity Buildup in Electronic Enclosures Exposed to Constant Conditions
Publication: Research - peer-review › Journal article – Annual report year: 2017

Integrated Computational Modelling of Thermochemical Surface Engineering of Stainless Steel
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Internal Casting Stresses and Dimensional Stability
Publication: Research - peer-review › Book chapter – Annual report year: 2017

Laser additive manufacturing of multimaterial tool inserts: a simulation-based optimization study
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Mathematical modelling of moisture transport into an electronic enclosure under non-isothermal conditions
Publication: Research - peer-review › Journal article – Annual report year: 2017

Modelling the effect of coating on the stresses and microstructure evolution in chill casting of wind turbine main shafts
Publication: Research - peer-review › Journal article – Annual report year: 2017

Multi-objective optimization of cellular scanning strategy in selective laser melting
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Numerical modelling of the bonding process for wind turbine blades: model validation
Publication: Research - peer-review › Paper – Annual report year: 2017

Numerical simulation of flow and compression of green sand
Publication: Research › Ph.D. thesis – Annual report year: 2017

Numerical Simulations of Planar Extrusion and Fused Filament Fabrication of Non-Newtonian Fluids
Publication: Research - peer-review › Conference article – Annual report year: 2017

Preface to special issue of selected papers from Theoretical, Experimental, and Computational Mechanics (TECM)
Publication: Research - peer-review › Comment/debate – Annual report year: 2017

Selecting the optimum engineering model for the frequency response of fcc nanowire resonators
Publication: Research - peer-review › Journal article – Annual report year: 2017

The effect of saturation on resin flow in injection pultrusion: a preliminary numerical study
Publication: Research - peer-review › Paper – Annual report year: 2017

Thermal modelling of extrusion based additive manufacturing of composite materials
Publication: Research - peer-review › Paper – Annual report year: 2017
Thermo-Electrical Mathematical Model for Prediction of Ni-Cr Hot-Wire Temperature in Free Air and Inside Small Circular Cavities
Publication: Research - peer-review › Journal article – Annual report year: 2017

A computational model for heterogeneous heating during pulsed laser irradiation of polymers doped with light-absorbing microparticles
Publication: Research - peer-review › Journal article – Annual report year: 2016

A micro-mechanical analysis of thermo-elastic properties and local residual stresses in ductile iron based on a new anisotropic model for the graphite nodules: Paper
Publication: Research - peer-review › Journal article – Annual report year: 2016

Analysis of moisture transport between connected enclosures under a forced thermal gradient
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Analytical solution to the 1D Lemaitre's isotropic damage model and plane stress projected implicit integration procedure
Publication: Research - peer-review › Journal article – Annual report year: 2016

An analytical solution describing the shape of a yield stress material subjected to an overpressure
Publication: Research - peer-review › Conference article – Annual report year: 2016

An axisymmetrical non-linear finite element model for induction heating in injection molding tools
Publication: Research - peer-review › Journal article – Annual report year: 2016

A Review on the Mechanical Modeling of Composite Manufacturing Processes
Publication: Research - peer-review › Journal article – Annual report year: 2016

A thermo-electro-mechanical simulation model for hot wire cutting of EPS foam
Publication: Research - peer-review › Journal article – Annual report year: 2016

Ceramic tape casting: A review of current methods and trends with emphasis on rheological behaviour and flow analysis
Publication: Research - peer-review › Review – Annual report year: 2016

Drying of a tape-cast layer: Numerical modelling of the evaporation process in a graded/layered material
Publication: Research - peer-review › Journal article – Annual report year: 2016

Dynamic Length Metrology (DLM) for measurements with sub-micrometre uncertainty in a production environment
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Effect of Geometry In Frequency Response Modeling of Nanomechanical Resonators
Publication: Research - peer-review › Conference article – Annual report year: 2016

Estimation of Water Diffusion Coefficient into Polycarbonate at Different Temperatures Using Numerical Simulation
Publication: Research - peer-review › Conference article – Annual report year: 2016

Improvement in Surface Characterisitcs of Polymers for Subsequent Electroless Plating Using Liquid Assisted Laser Processing
Publication: Research - peer-review › Conference article – Annual report year: 2016

Improving accuracy of overhanging structures for selective laser melting through reliability characterization of single track formation on thick powder beds
On the isotropic elastic constants of graphite nodules in ductile cast iron: Analytical and numerical micromechanical investigations
Publication: Research - peer-review › Journal article – Annual report year: 2016

Optimization of electronic enclosure design for thermal and moisture management using calibrated models of progressive complexity
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Particle migration using local variation of the viscosity (LVOV) model in flow of a non-Newtonian fluid for ceramic tape casting
Publication: Research - peer-review › Journal article – Annual report year: 2016

Probabilistic analysis of a thermosetting pultrusion process
Publication: Research - peer-review › Journal article – Annual report year: 2016

Reducing residual stresses and deformations in selective laser melting through multi-level multi-scale optimization of cellular scanning strategy
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Rheological Characterization of Green Sand Flow
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Robotic Hot-Blade Cutting: An Industrial Approach to Cost-Effective Production of Double Curved Concrete Structures
Publication: Research - peer-review › Book chapter – Annual report year: 2016

Semi-empirical prediction of moisture build-up in an electronic enclosure using analysis of variance (ANOVA)
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Simulating the DISAMATIC process using the discrete element method — a dynamical study of granular flow
Publication: Research - peer-review › Journal article – Annual report year: 2016

Thermo-coupled Surface Cauchy-Born Theory: An Engineering Finite Element Approach to Modeling of Nanowire Thermomechanical Response
Publication: Research - peer-review › Journal article – Annual report year: 2015

Three-dimensional local residual stress and orientation gradients near graphite nodules in ductile cast iron
Publication: Research - peer-review › Journal article – Annual report year: 2016

Three-dimensional numerical modeling of an induction heated injection molding tool with flow visualization
Publication: Research - peer-review › Journal article – Annual report year: 2016

Vortex behavior of the Oldroyd-B fluid in the 4-1 planar contraction simulated with the streamfunction–log-conformation formulation
Publication: Research - peer-review › Journal article – Annual report year: 2016

Analysis of Ingot Forging Damage Evolution Using Different Simulation Methods
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

A new numerical framework to simulate viscoelastic free-surface flows with the finite-volume method
Publication: Research - peer-review › Conference article – Annual report year: 2015
Cellular scanning strategy for selective laser melting: Generating reliable, optimized scanning paths and processing parameters
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Cellwise conservative unsplit advection for the volume of fluid method
Publication: Research - peer-review › Journal article – Annual report year: 2015

Comparison of residual stresses in sand- and chill casting of ductile cast iron wind turbine main shafts
Publication: Research - peer-review › Conference article – Annual report year: 2015

Defining Allowable Physical Property Variations for High Accurate Measurements on Polymer Parts.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Flow Dynamics of green sand in the DISAMATIC moulding process using Discrete element method (DEM)
Publication: Research - peer-review › Conference article – Annual report year: 2015

Integrated FEM-DBEM simulation of crack propagation in AA2024-T3 FSW butt joints considering manufacturing effects
Publication: Research - peer-review › Conference article – Annual report year: 2015

Integrated Modelling of Crack Propagation in AA2024-T3 FSW Butt Joints Considering The Residual Stresses from the Manufacturing Process
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Investigation of process induced warpage for pultrusion of a rectangular hollow profile
Publication: Research - peer-review › Journal article – Annual report year: 2015

Mechanical Modelling of Pultrusion Process: 2D and 3D Numerical Approaches
Publication: Research - peer-review › Journal article – Annual report year: 2014

Modeling and simulation of the deformation process of PTFE flexible stamps for nanoimprint lithography on curved surfaces
Publication: Research - peer-review › Journal article – Annual report year: 2015

Modeling of damage in ductile cast iron – The effect of including plasticity in the graphite nodules
Publication: Research - peer-review › Conference article – Annual report year: 2015

Modelling of composition and stress profiles in low temperature surface engineered stainless steel
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Modelling residual stresses in friction stir welding of Al alloys - a review of possibilities and future trends
Publication: Research - peer-review › Journal article – Annual report year: 2014

Modelling the residual stresses and microstructural evolution in Friction Stir Welding of AA2024-T3 including the Wagner-Kampmann precipitation model
Publication: Research - peer-review › Poster – Annual report year: 2015

Modelling the solidification of ductile cast iron parts with varying wall thicknesses
Publication: Research - peer-review › Conference article – Annual report year: 2015

Multiscale coupling based on quasicontinuum method in nanowires at finite temperatures
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015
Numerical modelling of damage evolution in ingot forging
Publication: Research - peer-review › Conference article – Annual report year: 2015

Numerical simulation of viscoelastic free-surface flows using a streamfunction/log-conformation formulation and the volume-of-fluid method
Publication: Research › Ph.D. thesis – Annual report year: 2015

Outcomes of the DeepWind Conceptual Design
Publication: Research - peer-review › Conference article – Annual report year: 2015

Pultrusion of a vertical axis wind turbine blade part-I: 3D thermo-chemical process simulation
Publication: Research - peer-review › Journal article – Annual report year: 2014

Pultrusion of a vertical axis wind turbine blade part-II: combining the manufacturing process simulation with a subsequent loading scenario
Publication: Research - peer-review › Journal article – Annual report year: 2014

Robust simulations of viscoelastic flows at high Weissenberg numbers with the streamfunction/log-conformation formulation
Publication: Research - peer-review › Journal article – Annual report year: 2015

Temperature Dependence and Magnetic Properties of Injection Molding Tool Materials Used in Induction Heating
Publication: Research - peer-review › Journal article – Annual report year: 2015

The influence of the graphite mechanical properties on the constitutive response of a ferritic ductile cast iron – A micromechanical FE analysis
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Three-Dimensional Modeling of Glass Lens Molding
Publication: Research - peer-review › Journal article – Annual report year: 2015

Analysis of Cavity Pressure and Warpage of Polyoxymethylene Thin Walled Injection Molded Parts: Experiments and Simulations
Publication: Research - peer-review › Conference article – Annual report year: 2014

An evaluation of interface capturing methods in a VOF based model for multiphase flow of a non-Newtonian ceramic in tape casting
Publication: Research - peer-review › Journal article – Annual report year: 2014

A TEM Study on the Ti-Alloyed Grey Iron
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

A Two-Phase Flow Solver for Incompressible Viscous Fluids, Using a Pure Streamfunction Formulation and the Volume of Fluid Technique
Publication: Research - peer-review › Conference article – Annual report year: 2014

Bingham plastic fluid flow model in tape casting of ceramics using two doctor blades – analytical approach
Publication: Research - peer-review › Journal article – Annual report year: 2014

Cellular Scanning Strategy for Selective Laser Melting: Capturing Thermal Trends with a Low-Fidelity, Pseudo-Analytical Model
Publication: Research - peer-review › Journal article – Annual report year: 2014
DeepWind - from Idea to 5 MW Concept
Publication: Research - peer-review › Conference article – Annual report year: 2014

DeepWind, From idea to 5 MW concept
Publication: Research › Sound/Visual production (digital) – Annual report year: 2014

Effect of Uncertainty in Processing Parameters on the Microstructure of Single Melt Tracks Formed by Selective Laser Melting
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Evaluation of the DeepWind concept
Publication: Research - peer-review › Report – Annual report year: 2014

Evaluation of the viscoelastic behaviour and glass/mould interface friction coefficient in the wafer based precision glass moulding
Publication: Research - peer-review › Journal article – Annual report year: 2014

Fluid flow modelling in tape casting of ceramics: analytical and numerical approaches
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2014

Investigation of process induced residual stresses and deformations for industrially pultruded parts having UD and CFM layers
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Investigation of the spring-in of a pultruded L-shaped profile for various processing conditions and thicknesses
Publication: Research - peer-review › Journal article – Annual report year: 2014

Material characterization of a polyester resin system for the pultrusion process
Publication: Research - peer-review › Journal article – Annual report year: 2014

Modelling of defects in ingot forging: with the finite element flow formulation
Publication: Research › Ph.D. thesis – Annual report year: 2014

Modelling of Tape Casting for Ceramic Applications
Publication: Research › Ph.D. thesis – Annual report year: 2014

Modelling the deformation process of flexible stamps for nanoimprint lithography
Publication: Research › Ph.D. thesis – Annual report year: 2015

Modelling the pultrusion process of an industrial L-shaped composite profile
Publication: Research - peer-review › Journal article – Annual report year: 2014

Modelling the Pultrusion Process of Off Shore Wind Turbine Blades
Publication: Research › Ph.D. thesis – Annual report year: 2014

Multi-objective optimization of die geometry in ingot forging
Publication: Research - peer-review › Conference article – Annual report year: 2014

Numerical Model based Reliability Estimation of Selective Laser Melting Process
Publication: Research - peer-review › Conference article – Annual report year: 2014
Numerical modeling of AA2024-T3 friction stir welding process for residual stress evaluation, including softening effects
Publication: Research - peer-review › Journal article – Annual report year: 2014

Physical modeling and numerical simulation of V-die forging ingot with central void
Publication: Research - peer-review › Journal article – Annual report year: 2014

Precision Glass Molding: Validation of an FE Model for Thermo-Mechanical Simulation
Publication: Research - peer-review › Journal article – Annual report year: 2014

The effect of mandrel configuration on the warpage in pultrusion of rectangular hollow profiles
Publication: Research - peer-review › Journal article – Annual report year: 2014

The Effect of Product Size on the Pulling Force in Pultrusion
Publication: Research - peer-review › Journal article – Annual report year: 2014

Thermo-mechanical process modelling of industrially pultruded parts having UD and CFM layers
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Towards nanoimprint lithography on free-form surfaces: A global/local modelling approach for predicting the deformation of the flexible stamp
Publication: Research › Poster – Annual report year: 2014

Towards nanoimprint lithography on free-form surfaces: A global/local modelling approach for predicting the deformation of the flexible stamp
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2014

3D thermo-chemical-mechanical analysis of the pultrusion process
Publication: Research - peer-review › Conference article – Annual report year: 2013

A CFD Approach for Prediction of Unintended Porosities in Aluminum Syntactic Foam: A Preliminary Study
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

A CFD-Model for prediction of unintended porosities in metal matrix composites: A preliminary study
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

A finite volume alternate direction implicit approach to modeling selective laser melting
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

A new numerical framework to simulate viscoelastic free-surface flows with the finite-volume method
Publication: Research - peer-review › Paper – Annual report year: 2013

An explanation of the mechanism for laser induced selective activation using diffusion theory
Publication: Research - peer-review › Journal article – Annual report year: 2013

Application of nanometrology to polymer production
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

A Two-Phase Flow Solver for Incompressible Viscous Fluids, Using a Pure Streamfunction Formulation and the Volume of Fluid Technique
Publication: Research - peer-review › Paper – Annual report year: 2013
Cellular scanning strategy for selective laser melting: Evolution of optimal grid-based scanning path & parametric approach to thermal homogeneity
Publication: Research - peer-review › Conference article – Annual report year: 2013

Computational Approaches for Modeling the Multiphysics in Pultrusion Process
Publication: Research - peer-review › Journal article – Annual report year: 2013

Design Optimization of a 5 MW Floating Offshore Vertical-axis Wind Turbine
Publication: Research - peer-review › Conference article – Annual report year: 2013

Evaluation of the process induced residual stresses at the web-flange junctions of pultruded GFRP profiles
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2013

Interface Behavior in Functionally Graded Ceramics for the Magnetic Refrigeration: Numerical Modeling
Publication: Research - peer-review › Conference article – Annual report year: 2013

Investigation on the Effect of Sulfur and Titanium on the Microstructure of Lamellar Graphite Iron
Publication: Research - peer-review › Journal article – Annual report year: 2013

Life cycle strain monitoring in glass fibre reinforced polymer laminates using embedded fibre Bragg grating sensors from manufacturing to failure
Publication: Research - peer-review › Journal article – Annual report year: 2013

Modeling constitutive and micro-scale frictional behavior of PTFE
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Modeling the interface behavior in tape casting of functionally graded ceramics for magnetic refrigeration parts
Publication: Research - peer-review › Journal article – Annual report year: 2013

Modeling the constitutive and frictional behavior of PTFE flexible stamps for nanoimprint lithography
Publication: Research - peer-review › Journal article – Annual report year: 2013

Modeling the mechanical deformation of nickel foils for nanoimprint lithography on double-curved surfaces
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Modeling the mechanical deformation of PTFE flexible stamps for nanoimprint lithography on double-curved surfaces
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Modelling Eutectic Growth in Unmodified and Modified Near-Eutectic Al-Si Alloy
Publication: Research - peer-review › Conference article – Annual report year: 2014

Modelling of Damage During Hot Forging of Ingots
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Multi-Criteria Optimization in Friction Stir Welding Using a Thermal Model with Prescribed Material Flow
Publication: Research - peer-review › Journal article – Annual report year: 2013

Nanopatterning of Polymer Replication Tools
Publication: Research - peer-review › Poster – Annual report year: 2013
Numerical and semi-analytical modelling of the process induced distortions in pultrusion
Publication: Research - peer-review › Conference article – Annual report year: 2013

Numerical modeling of magnetic induction and heating in injection molding tools
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Numerical Modeling of the Side Flow in Tape Casting of a Non-Newtonian Fluid
Publication: Research - peer-review › Journal article – Annual report year: 2013

Numerical optimization of die geometry in open die forging
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Numerical simulations of viscoelastic flows with free surfaces
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Open die forging of large shafts with porosity defects – physical and numerical modelling
Publication: Research - peer-review › Conference article – Annual report year: 2013

Optimization of the Thermosetting Pultrusion Process by Using Hybrid and Mixed Integer Genetic Algorithms
Publication: Research - peer-review › Journal article – Annual report year: 2012

Prediction of process induced shape distortions and residual stresses in large fibre reinforced composite laminates: With application to Wind Turbine Blades
Publication: Research › Ph.D. thesis – Annual report year: 2013

Probabilistic modelling of the process induced variations in pultrusion
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Process induced residual stresses and distortions in pultrusion
Publication: Research - peer-review › Journal article – Annual report year: 2013

Quasi-steady state power law model for flow of \( \text{La}_{0.85}\text{Sr}_{0.15}\text{MnO}_3 \) ceramic slurry in tape casting
Publication: Research - peer-review › Journal article – Annual report year: 2013

Reliability Estimation of the Pultrusion Process Using the First-Order Reliability Method (FORM)
Publication: Research - peer-review › Journal article – Annual report year: 2012

Solidification of cast iron - A study on the effect of microalloy elements on cast iron
Publication: Research › Ph.D. thesis – Annual report year: 2013

The effect of hardening laws and thermal softening on modeling residual stresses in FSW of aluminum alloy 2024-T3
Publication: Research - peer-review › Journal article – Annual report year: 2013

The effect of mandrel heating on the quality of the pultrusion process
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2013

The effect of thermal contact resistance on the thermosetting pultrusion process
Publication: Research - peer-review › Journal article – Annual report year: 2013

The impact of process parameters on the residual stresses and distortions in pultrusion
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013
The Internal Stress Evaluation of Pultruded Blades for a Darrieus Wind Turbine
Publication: Research - peer-review › Conference article – Annual report year: 2013

Thermo-Chemical Modelling Strategies for the Pultrusion Process
Publication: Research - peer-review › Journal article – Annual report year: 2013

Utilizing multiple objectives for the optimization of the pultrusion process based on a thermo-chemical simulation
Publication: Research - peer-review › Conference article – Annual report year: 2013

1st DeepWind 5 MW Baseline design
Publication: Research - peer-review › Conference article – Annual report year: 2012

Addressing the mechanical deformation of flexible stamps for nanoimprint lithography on double-curved surfaces
Publication: Research › Conference abstract for conference – Annual report year: 2012

Addressing the mechanical deformation of flexible stamps for nanoimprint lithography on double-curved surfaces
Publication: Research › Poster – Annual report year: 2012

Analysis of nucleation modelling in ductile cast iron
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

A solidification model for unmodified, Na-modified and Sr-modified Al-Si alloys
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

A TEM Study on the Microstructure of Fine Flaky Graphite
Publication: Research › Conference abstract for conference – Annual report year: 2012

Effect of titanium on the near eutectic grey iron
Publication: Research › Conference abstract for conference – Annual report year: 2012

Elimination of Hot Tears in Steel Castings by Means of Solidification Pattern Optimization
Publication: Research - peer-review › Journal article – Annual report year: 2012

Estimating the workpiece-backingplate heat transfer coefficient in friction stirwelding
Publication: Research - peer-review › Journal article – Annual report year: 2012

Experimental Determination and Numerical Modelling of Process Induced Strains and Residual Stresses in Thick Glass/Epoxy Laminate
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Flow induced particle migration in fresh concrete: Theoretical frame, numerical simulations and experimental results on model fluids
Publication: Research - peer-review › Journal article – Annual report year: 2012

In situ measurement using FBGs of process-induced strains during curing of thick glass/epoxy laminate plate: experimental results and numerical modelling
Publication: Research - peer-review › Journal article – Annual report year: 2012

Interface Oscillation In the Side-by-Side (SBS) Tape Casting of Functionally Graded Ceramics (FGCs)
Publication: Research › Conference abstract in journal – Annual report year: 2012
Investigation of the thermal contact resistance in thermosetting pultrusion process
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Modelling and simulation of A-segregates in steel castings using a thermal criterion function: Part I - Background and validation
Publication: Research - peer-review › Journal article – Annual report year: 2012

Modelling the void deformation and closure by hot forging of ingot castings
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Numerical modeling of the conduction and radiation heating in precision glass moulding
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Numerical Modeling of the Flow of a Power Law Ceramic Slurry in the Tape Casting Process
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Numerisk modellering af formfyldning ved støbning i selvkompakterende beton
Publication: Research › Ph.D. thesis – Annual report year: 2013

Patterns of gravity induced aggregate migration during casting of fluid concretes
Publication: Research - peer-review › Journal article – Annual report year: 2012

Prediction of internal strains during curing, post-curing and demoulding of thick glass/epoxy composite - Analysis of different constitutive models
Publication: Research › Conference abstract for conference – Annual report year: 2012

Probabilistic thermo-chemical analysis of a pultruded composite rod
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

The effect of post-welding conditions in friction stir welds: From weld simulation to Ductile Failure
Publication: Research - peer-review › Journal article – Annual report year: 2012

Thermal modelling of the multi-stage heating system with variable boundary conditions in the wafer based precision glass moulding process
Publication: Research - peer-review › Journal article – Annual report year: 2012

Thermo-chemical simulation of a composite offshore vertical axis wind turbine blade
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Integrated Modeling of Process, Structures and Performance in Cast Parts
Publication: Research › Ph.D. thesis – Annual report year: 2011

A 1d Coupled Curing and Visco-Mechanical Void Growth Model of Thick Thermosetting Composite Laminates
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Autonomous Optimization of a Solidification Pattern and Its Effect on Porosity and Segregation in Steel Castings
Publication: Research › Article in proceedings – Annual report year: 2011

Deepwind - an innovative wind turbine concept for offshore
Publication: Research › Article in proceedings – Annual report year: 2011
Magnetic cooling at Risoe DTU
Publication: Research › Journal article – Annual report year: 2009

Modeling of high temperature- and diffusion-controlled die soldering in aluminum high pressure die casting
Publication: Research - peer-review › Journal article – Annual report year: 2009

Modelling Cr depletion under a growing Cr2O3 layer on austenitic stainless steel: the influence of grain boundary diffusion
Publication: Research - peer-review › Journal article – Annual report year: 2009

Modelling of Filling, Microstructure Formation, Local Mechanical Properties and Stress – Strain Development in High-Pressure Die Cast Aluminium Castings
Publication: Research - peer-review › Article in proceedings – Annual report year: 2009

Numerical Modeling of Multi-Material Active Magnetic Regeneration
Publication: Research › Article in proceedings – Annual report year: 2009

ON MODELLING OF MICROSTRUCTURE FORMATION, LOCAL MECHANICAL PROPERTIES AND STRESS – STRAIN DEVELOPMENT IN ALUMINIUM CASTINGS
Publication: Research - peer-review › Article in proceedings – Annual report year: 2009

Optimization of friction stir welding using space mapping and manifold mapping—an initial study of thermal aspects
Publication: Research - peer-review › Conference article – Annual report year: 2009

Optimization of Hardness in Friction Stir Welds
Publication: Research › Article in proceedings – Annual report year: 2009

Thermomechanical Modelling of Friction Stir Welding
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Projects:
Additive Manufacturing for marine propulsion systems
Project: PhD

Modelling the thermo-metallurgical-mechanical conditions in precision additive metal manufacturing
Project: PhD

Modelling the thermo-metallurgical-mechanical conditions in precision additive metal manufacturing
Project: PhD

Numerical modelling of heat treatment and post processing of additive manufactured metal parts
Project: PhD

Numerical Modelling of Material Flow in the Resin Infusion Pultrusion Process
Project: PhD
Numerical Modelling and Experimental Characterization of the Resin Injection Pultrusion Process
Project: PhD

Microporportioning with crushed sand: experiment and simulations of fine particles effect on rheology
Project: PhD

Interaction of stress and phase transformations during thermochemical surface engineering
Project: PhD

Bonding processes for large wind turbine blades - numerical modelling and experimental verification
Project: PhD

Exhaust Gas Valve for High Temperatures
Project

Modelling Climatic Reliability of Electronic Devices
Project: PhD

Modeling for Dynamic Length Metrology in Accurate Manufacture
Project: PhD

Climatic Reliability of Electronic Devices
Project: PhD

Developing semi-empirical models for predicting climate inside electronic device enclosures
Project: PhD

Numerical modeling of the hot wire and hot blade cutting processes
Project: PhD

Modelling the Effects of Process Induced Defects on Subsequent Mechanical Behaviour of Cast Components
Project: PhD

Thermomechanical modelling of casting large wind turbine parts
Project: PhD

Design and testing of high performance regenerators
Project: PhD

Numerical Simulation of Flow and Compression of Green Sand
Project: PhD

Numerical Simulation of Flow and Compression of Green Sand
Project: PhD

BLADERUNNER - Large scale cost-effective robotic production of advanced formwork
Project

Topology optimization for additive manufacturing
Project: PhD
Autonomous optimization of flow, solidification and thermomechanical conditions in the high pressure die casting process
Project: PhD

Modelling selective Laser Melting
Project: PhD

Modelling induction heating in the surface of injection moulding tools
Project: PhD

Improved design bases of welded joints in seawater
Project: PhD

Modelling of shape instabilities occurring during sintering
Project: PhD

Modelling the pultrusion process of off shore wind turbines blades
Project: PhD

Modelling the deformation process of flexible stamps for nanoimprint lithography
Project: PhD

Numerical modelling of defects distribution and residual stresses in forged components
Project: PhD

Numerical modelling of tape casting of functionally graded ceramic materials
Project: PhD

REWIND - Knowledge based engineering for improved reliability of critical wind turbine components
Project

Improvement of Feeder Technologies for Energy Savings in Cast Iron Foundries
Project: PhD

Numerical modelling of extrusion of functionally graded ceramic materials
Project: PhD

Modelling the effect of micro alloying elements in ductile cast iron
Project: PhD

Models for the energy performance of low-energy houses
Project: PhD

Scavenging and Swirling Flow in Two-Stroke Diesel Engines - A Numerical Study
Project: PhD

Integrated modelling of the glass moulding process
Project: PhD

Modeling the manufacturing process of wind turbine blades
Project: PhD
3-D Modelling and Testing of Contact Problems in Resistance Welding
Project: PhD

Numerisk modellering af formfyldning ved støbning i selvkompakterende beton
Project: PhD

Prediction of flow induced inhomogeneities in self compacting concrete
Project

Micro alloyed high strength net shape components
Project

Integrated Modelling of Process, Structures and Performance in Cast Parts
Project: PhD

Energy efficient and environmentally friendly cooling using magnetic refrigeration: Modeling of active magnetic regenerators for magnetic refrigeration at room temperature
Project

Modelling of Active Magnetic Regenerators for Magnetic Refrigeration at Room Temperature
Project: PhD

Modelling of Solidification and Interdiffusion in Lead Free Solder Materials
Project: PhD

Center for udfældning, modellering og karakterisering af højsmeltende blyfri mikrolod
Project

Modelling of Microstructure, Mechanical Properties and Structural Performance in Thin Walled Ductile Cast Iron
Project

Thermomechanical Modelling and Optimization of Dynamic Process Conditions in Friction Stir Welding
Project: PhD

Tool Optimization for Welding Processes
Project: PhD

Innovative Joining Processes Applying Integrated Modelling
Project

Rapid Prototyping by Asymmetric Single Point Incremental Forming of Sheet Metal
Project: PhD

Micro insert moulding
Project: PhD

IMPRESS, STVF research consortium
Project

Modellering af materialeflow i termomekaniske materialeprocesser
Project: PhD
IDEAL: Integrated Development Routes for Optimised Cast Aluminium Components
Project

Numerical Modelling of Laser Beam welding of Aluminium Alloy-Steel Joints
Project

Modelling Material Flow in manufacturing Processes with Eulerian Methods
Project

Modelling Metal Forming Processes with a 3-D Eulerian Finite Volume Method
Project

Strukturel optimering af støbte emner med numerisk modellering
Project: PhD

Modelling Distortions of Large, Thinwalled Light Alloy Alloy Castings
Project

Modellering af mekaniske og metallugriske egenskaber ved "Friction Stir" svejste sammenføjninger
Project: PhD

Testing and modelling of material and contact properties in resistance welding
Project: PhD

Development of an integrated numerical model for spray forming
Project

Modelling of residual stresses in spray formed structures
Project: PhD

Numerical Modelling of Residual Stresses In Spray Forming
Project

Development and Production of Flexible Vibration Transducers
Project: PhD

Constitutive modelling at high temperatures
Project

Numerisk modellering af konstitutive sammenhænge i termiske materialeprocesser
Project: PhD

Numerical simulation of welding processes
Project

Numerisk modellering af termisk inducerede spændinger og deformationer ved svejsning
Project: PhD

Residualspændinger i varmvalsete plader
Project: PhD
Plate Forming by Line Heating
Project: PhD

Termomekanisk processimulering
Project: PhD

Thermomechanical process simulation
Project

Simulering af sveisedeformationer i skibssektioner
Project: PhD

Porefrit aluminiumstøbegods fremstillet ved sandstøbning med vertikal skilleflade
Project: PhD

Optimeret støberriteknik for SG-jern via computersimulering
Project: PhD

MUP2 - Center for Structural Materials - MP2M - Materials processing, Properties and Modelling
Project