Research outputs:

**Effects of ambient pressure on ignition and flame characteristics in diesel spray combustion**
Research output: Research - peer-review › Journal article – Annual report year: 2019

**Hydrodynamic functionality of the lorica in choanoflagellates**
Research output: Research - peer-review › Journal article – Annual report year: 2019

**Hydrodynamics of the leucon sponge pump**
Research output: Research - peer-review › Journal article – Annual report year: 2019

**Non-singular Green's functions for the unbounded Poisson equation in one, two and three dimensions**
Research output: Research - peer-review › Journal article – Annual report year: 2019

**A regularization method for solving the Poisson equation for mixed unbounded-periodic domains**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Atomistic simulations of water flow in graphene channels driven by imposed thermal gradients**
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

**Effect of an external electric field on capillary filling of water in hydrophilic silica nanochannels**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Effect of charge inversion on Poiseuille flow of multivalent electrolyte solutions in nanochannels: an atomistic study**
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

**Evaluation of a Lagrangian Soot Tracking Method for the prediction of primary soot particle size under engine-like conditions**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Flagellate flow**
Research output: Research › Poster – Annual report year: 2019

**Hydrodynamic functionality of the lorica in choanoflagellates**
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018
Modelling of diesel spray flames under engine-like conditions using an accelerated Eulerian Stochastic Field method
Research output: Research - peer-review › Journal article – Annual report year: 2018

Near-wellbore modeling of a horizontal well with Computational Fluid Dynamics
Research output: Research - peer-review › Journal article – Annual report year: 2018

Numerical simulation of condensation of sulfuric acid and water in a large two-stroke marine diesel engine
Research output: Research - peer-review › Journal article – Annual report year: 2018

Variation of translocation efficiency through constriction larger than the particle by Brownian motion
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

Vortex simulations of wind turbines operating in atmospheric conditions using a prescribed velocity-vorticity boundary layer model
Research output: Research - peer-review › Journal article – Annual report year: 2018

Water thermophoresis in carbon nanotubes: the interplay between thermophoretic and friction forces
Research output: Research - peer-review › Journal article – Annual report year: 2018

Adjoint Optimisation of the Turbulent Flow in an Annular Diffuser
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2017

A regularized vortex-particle mesh method for large eddy simulation
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2017

Carbon Nanotubes as Thermally Induced Water Pumps
Research output: Research - peer-review › Journal article – Annual report year: 2017

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

CFD modeling of condensation process of water vapor in supersonic flows
Research output: Research - peer-review › Journal article – Annual report year: 2017

Characterization and Erosion Modeling of a Nozzle-Based Inflow-Control Device
Research output: Research - peer-review › Journal article – Annual report year: 2017

Computational Fluid Dynamics of Choanoflagellate Filter-Feeding
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2017

Drag reduction in silica nanochannels induced by graphitic wall coatings
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2017

Effects of Nozzle Diameter on Diesel Spray Flames: A numerical study using an Eulerian Stochastic Field Method
Research output: Research - peer-review › Journal article – Annual report year: 2017
Hybrid vortex simulations of wind turbines using a three-dimensional viscous-inviscid panel method
Research output: Research - peer-review › Journal article – Annual report year: 2017

Hydrodynamics of microbial filter feeding
Research output: Research - peer-review › Journal article – Annual report year: 2017

Investigation of journal orbit and flow pattern in a dynamically loaded journal bearing
Research output: Research - peer-review › Journal article – Annual report year: 2017

Iterative Brinkman penalization for simulation of impulsively started flow past a sphere and a circular disc
Research output: Research - peer-review › Journal article – Annual report year: 2017

Modelling of temporal and spatial evolution of sulphur oxides and sulphuric acid under large, two-stroke marine engine-like conditions using integrated CFD-chemical kinetics
Research output: Research - peer-review › Journal article – Annual report year: 2017

Numerical Simulation of Methane Slip in Dual Fuel Marine Engines
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

On phonons and water flow enhancement in carbon nanotubes
Research output: Research - peer-review › Comment/debate – Annual report year: 2017

Slip divergence of water flow in graphene nanochannels: the role of chirality
Research output: Research - peer-review › Journal article – Annual report year: 2017

Suspended particle transport through constriction channel with Brownian motion
Research output: Research - peer-review › Journal article – Annual report year: 2017

The collapse of Tacoma Narrows Bridge: a piece to the puzzle
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2017

Thermophoretic transport of water nanodroplets confined in carbon nanotubes: the role of friction
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2017

Wake structure and thrust generation of a flapping foil in two-dimensional flow
Research output: Research - peer-review › Journal article – Annual report year: 2017

3D Lagrangian VPM: simulations of the near-wake of an actuator disc and horizontal axis wind turbine
Research output: Research - peer-review › Conference article – Annual report year: 2016

A high order regularisation method for solving the Poisson equation and selected applications using vortex methods

A multiresolution method for solving the Poisson equation using high order regularization
Research output: Research - peer-review › Journal article – Annual report year: 2016

Carbon nanotube-based coatings to induce flow enhancement in hydrophilic nanopores
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2016

CFD modelling of condensation process of water vapor in supersonic flows
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016
CNT based thermal Brownian motor to pump water in nanodevices
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2016

Derivation and analysis of the analytical velocity and vortex stretching expressions for an O (N log N)-FMM
Research output: Research - peer-review › Conference article – Annual report year: 2016

Effect of delta wing on the particle flow in a novel gas supersonic separator
Research output: Research - peer-review › Journal article – Annual report year: 2016

Effect of meniscus contact angle during early regimes of spontaneous capillarity in nanochannels
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2016

Effect of swirling device on flow behavior in a supersonic separator for natural gas dehydration
Research output: Research - peer-review › Journal article – Annual report year: 2016

Effect of the meniscus contact angle during early regimes of spontaneous imbibition in nanochannels
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2016

LES And URANS simulations of the swirling flow in a dynamic model of a uniflow-scavenged cylinder
Research output: Research - peer-review › Journal article – Annual report year: 2016

Modelling of Combustion and Pollutant Formation in a Large, Two-Stroke Marine Diesel Engine using Integrated CFD-Skeletal Chemical Mechanism
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Modelling of diesel spray flame under engine-like conditions using an accelerated eulerian stochastic fields method: A convergence study of the number of stochastic fields
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Multiphase flow in porous media using CFD
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Numerical and experimental study of pulse-jet cleaning in fabric filters
Research output: Research - peer-review › Journal article – Annual report year: 2016

Numerical investigation of soot formation and oxidation processes under large two-stroke marine diesel engine-like conditions using integrated CFD-chemical kinetics
Research output: Research - peer-review › Journal article – Annual report year: 2016

Numerical Simulation of Condensation of Sulfuric Acid and Water in a Large Two-stroke Marine Diesel Engine
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2016

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

Simulation of bluff-body flows using iterative penalization in a multiresolution particle-mesh vortex method
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Simulation of impulsively started flow past a sphere and a disc using iterative brinkman penalization
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2016
Tangential inlet supersonic separators: a novel apparatus for gas purification
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Thermophoresis of water droplets inside carbon nanotubes
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2016

Ultrafast cooling by covalently bonded graphene-carbon nanotube hybrid immersed in water
Research output: Research - peer-review › Journal article – Annual report year: 2016

A high order multi-resolution solver for the Poisson equation with application to vortex methods
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2015

Atomistic Simulations of Fluid Flow through Graphene Channels and Carbon Nanotubes
Research output: Research - peer-review › Conference abstract in journal – Annual report year: 2015

Atomistic study of a nanometer-scale pump based on the thermal ratchet concept
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2015

Cavitation Estimates by Orbit Prediction of a Journal Bearing - Finite Element Modelling and Experimental Studies
Research output: Research - peer-review › Journal article – Annual report year: 2015

Continuum Navier-Stokes modelling of water flow past fullerene molecules
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2015

Continuum simulations of water flow past fullerene molecules
Research output: Research - peer-review › Journal article – Annual report year: 2015

Covalently Bonded Graphene-Carbon Nanotube Hybrid for High-Performance Thermal Interfaces
Research output: Research - peer-review › Journal article – Annual report year: 2015

Diesel Engine Tribology

Early Regimes of Water Capillary Flow in Slit Silica Nanochannels
Research output: Research - peer-review › Journal article – Annual report year: 2015

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

Flow enhancement of water flow through silica slit pores with graphene-coated walls
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2015

High order Poisson Solver for unbounded flows
Research output: Research - peer-review › Journal article – Annual report year: 2015
Improvement in journal bearing design with application of computational fluid dynamics
Research output: Research › Sound/Visual production (digital) – Annual report year: 2015

Integrated Analysis of the Scavenging Process in Marine Two-Stroke Diesel Engines

Iterative Brinkman penalization for remeshed vortex methods
Research output: Research › peer-review › Journal article – Annual report year: 2015

Kapitza Resistance between Few-Layer Graphene and Water: Liquid Layering Effects
Research output: Research › peer-review › Journal article – Annual report year: 2015

Numerical and Experimental Investigation of Heat Flow in Permanent Magnet Brushless DC Hub Motor
Research output: Research › peer-review › Journal article – Annual report year: 2015

On estimating the aerodynamic admittance of bridge sections by a mesh-free vortex method
Research output: Research › peer-review › Journal article – Annual report year: 2015

Simulating external flow using vortex method in two- and three dimensions
Research output: Research › peer-review › Conference abstract for conference – Annual report year: 2015

Simulation of external flows using a hybrid particle mesh vortex method
Research output: Research › Poster – Annual report year: 2015

Sustaining dry surfaces under water
Research output: Research › peer-review › Journal article – Annual report year: 2015

Water transport in graphene nano-channels
Research output: Research › peer-review › Conference abstract for conference – Annual report year: 2015

A numerical and experimental study of the scavenging process in a two-stroke marine diesel engine
Research output: Research › peer-review › Conference abstract for conference – Annual report year: 2014

Application of finite elements and computational fluid dynamics to predict and improve the filling ratio in journal bearings under dynamic loading
Research output: Research › peer-review › Article in proceedings – Annual report year: 2014

Cavitation analysis of a journal bearing - Finite Element modelling and experimental studies
Research output: Research › peer-review › Conference abstract in proceedings – Annual report year: 2014

CFD investigation of a transonic pulse-jet in a fabric filter applicaton
Research output: Research › peer-review › Conference abstract for conference – Annual report year: 2014

Continuum simulations of water flow in carbon nanotube membranes
Research output: Research › peer-review › Journal article – Annual report year: 2014

Continuum Simulations of Water Flow in Carbon Nanotube Membranes
Research output: Research › peer-review › Conference abstract for conference – Annual report year: 2014

Development of Smoothed Particle Hydrodynamics for Flow in Complex Geometries and Application of Open Source Software for the Simulation of Turbulent Flow
Research output: Research › Ph.D. thesis – Annual report year: 2014
Early regimes of water imbibition in nanoslit silica channels
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2014

Large eddy simulations of the influence of piston position on the swirling flow in a model two-stroke diesel engine
Research output: Research - peer-review › Journal article – Annual report year: 2014

Molecular dynamics simulations of water on a hydrophilic silica surface at high air pressures
Research output: Research - peer-review › Journal article – Annual report year: 2014

Moving least squares simulation of free surface flows
Research output: Research - peer-review › Journal article – Annual report year: 2014

Numerical analysis of the scavenge flow and convective heat transfer in large two-stroke marine diesel engines
Research output: Research - peer-review › Journal article – Annual report year: 2014

Numerical and Experimental Investigation of Heat Flow in Permanent Magnet Brushless DC Hub Motor
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

PIV and LDA measurements of the swirling flow in a low-speed two-stroke diesel engine
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2014

Simulations of a single turbulent vortex ring using a regularized particle-mesh based vortex method
Research output: Research - peer-review › Poster – Annual report year: 2014

Simulations of a single vortex ring using an unbounded, regularized particle-mesh based vortex method
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

Simulations of vortical flow using an unbounded, regularized particle-mesh based vortex method
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2014

Strain Engineering of Kapitza Resistance in Few-Layer Graphene
Research output: Research - peer-review › Journal article – Annual report year: 2014

Theoretical and experimental investigation of cavitation in main bearings for large two-stroke marine diesel engines
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2014

Turbulent swirling flow in a dynamic model of a uniflow-scavenged two-stroke engine
Research output: Research - peer-review › Journal article – Annual report year: 2014

A high order solver for the unbounded Poisson equation
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2013

A high order solver for the unbounded Poisson equation
Research output: Research - peer-review › Journal article – Annual report year: 2013

An improved interface penalisation for vortex methods
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2013

An Iterative Brinkman penalization for particle vortex methods
Research output: Research - peer-review › Conference abstract in journal – Annual report year: 2013
Barriers to Superfast Water Transport in Carbon Nanotube Membranes
Research output: Research - peer-review › Journal article – Annual report year: 2013

Effect of air on water capillary flow in silica nanochannels
Research output: Research - peer-review › Conference abstract in journal – Annual report year: 2013

Numerical analysis of jet impingement heat transfer at high jet Reynolds number and large temperature difference
Research output: Research - peer-review › Journal article – Annual report year: 2013

Phase-locked stereoscopic PIV measurements of the turbulent swirling flow in a dynamic model of a uniflow-scavenged two-stroke engine cylinder
Research output: Research - peer-review › Article in proceedings – Annual report year: 2013

PIV study of the effect of piston position on the in-cylinder swirling flow during the scavenging process in large two-stroke marine diesel engines
Research output: Research - peer-review › Journal article – Annual report year: 2013

Simulation of the Initial 3-D Instability of an Impacting Drop Vortex Ring
Research output: Research - peer-review › Conference abstract in journal – Annual report year: 2013

Swirling flow in a two-stroke marine diesel engine
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

Turbulent swirling flow in a model of a uniflow-scavenged two-stroke engine
Research output: Research - peer-review › Journal article – Annual report year: 2013

A high order solver for the unbounded Poisson equation
Research output: Research - peer-review › Conference abstract in journal – Annual report year: 2013

A high order solver for the unbounded Poisson equation with specific application to the equations of fluid kinematics
Research output: Research › Conference abstract in journal – Annual report year: 2012

A numerical study of the aerodynamic admittance of bridge deck sections by a two-dimensional mesh-free vortex method
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2012

CFD modelling of combined blast and contact cooling for whole fish
Research output: Research › Poster – Annual report year: 2012

High Order Poisson Solver for Unbounded Flows
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2012

Implementation of the Spalart-Allmaras turbulence model in the two-dimensional vortex-in-cell method
Research output: Research › Article in proceedings – Annual report year: 2012

Influence of piston displacement on the scavenging and swirling flow in two-stroke diesel engines
Research output: Research › Conference abstract for conference – Annual report year: 2012

Multiscale simulation of water flow past a C_{540} fullerene
Research output: Research - peer-review › Journal article – Annual report year: 2012
Staying dry under water
Research output: Research › Conference abstract in journal – Annual report year: 2012

Swirling flow in model of large two-stroke diesel engine
Research output: Research › Conference abstract in journal – Annual report year: 2012

Swirling flow in model of large two-stroke diesel engine
Research output: Research › Conference abstract in proceedings – Annual report year: 2012

Three dimensional remeshed smoothed particle hydrodynamics for the simulation of turbulent flow in complex geometries
Research output: Research › Conference abstract for conference – Annual report year: 2012

Turbulence modelling in the two-dimensional vortex-in-cell method
Research output: Research › peer-review › Conference abstract for conference – Annual report year: 2012

A multiresolution remeshed Vortex-In-Cell algorithm using patches
Research output: Research › peer-review › Journal article – Annual report year: 2011

Fast Water Transport in CNTs: length dependence and entrance/exit effects
Research output: Research › Conference abstract for conference – Annual report year: 2011

Influence of outlet geometry on the swirling flow in a simplified model of a large two-stroke marine diesel engine
Research output: Research › peer-review › Conference abstract for conference – Annual report year: 2011

Influence of piston position on the scavenging and swirling flow in two-stroke diesel engines
Research output: Research › peer-review › Conference abstract in proceedings – Annual report year: 2011

Molecular Dynamics Studies of Nanofluidic Devices
Research output: Research › Ph.D. thesis – Annual report year: 2012

Multiresolution Vortex-In-Cell Algorithm Mesh Patches
Research output: Research › Conference abstract for conference – Annual report year: 2011

Particle Methods in Bluff Body Aerodynamics
Research output: Research › Ph.D. thesis – Annual report year: 2012

The exhalant jet of mussels Mytilus edulis
Research output: Research › peer-review › Journal article – Annual report year: 2011

A multiresolution remeshed particle vortex method using patches
Research output: Research › Conference abstract for conference – Annual report year: 2010

Atomistic simulations of flow at the nanoscale
Research output: Research › Sound/Visual production (digital) – Annual report year: 2010

Coarse Grained Molecular Dynamics Simulations of Shear-Induced Instabilities of Lipid Bilayer Membranes in Water
Research output: Research › peer-review › Journal article – Annual report year: 2010

Discrete vortex method simulations of a turbulent flow past bridge decks with application to aerodynamic admittance
Research output: Research › Article in proceedings – Annual report year: 2010
Discrete vortex method simulations of the aerodynamic admittance in bridge aerodynamics
Research output: Research - peer-review › Journal article – Annual report year: 2010

Jet Impingement Heat Transfer at High Reynolds Numbers and Large Density Variations
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Molecular Dynamics Simulation of Water Nanodroplets on Silica Surfaces at High Air Pressures
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2010

Multiscale flow simulation of water past a fullerene
Research output: Research › Poster – Annual report year: 2010

Multiscale flow simulation of water past a fullerene
Research output: Research › Poster – Annual report year: 2010

Non-periodic molecular dynamics simulations of coarse grained lipid bilayer in water
Research output: Research - peer-review › Journal article – Annual report year: 2010

Particle Methods in Fluid Mechanics
Research output: Research › Article in proceedings – Annual report year: 2010

Piston surface heat transfer during combustion in large marine diesel engines
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Publisher's Note: “Thermally driven molecular linear motors: A molecular dynamics study” [J. Chem. Phys. 131, 241104 (2009)]
Research output: Research - peer-review › Editorial – Annual report year: 2010

A numerical study of the aerodynamic admittance of bridge sections
Research output: Research › Article in proceedings – Annual report year: 2009

Control algorithm for multiscale flow simulations of water
Research output: Research - peer-review › Journal article – Annual report year: 2009

Coupling Atomostic and Continuum Descriptions Using Dynamic Control
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Discrete vortex method simulations of aerodynamic admittance in bridge aerodynamics
Research output: Research › Conference abstract for conference – Annual report year: 2009

Discrete vortex method simulations of aerodynamic admittance in bridge aerodynamics
Research output: Research › Conference abstract for conference – Annual report year: 2009

Fluid Forces and Vortex Wakes of a Flapping Foil
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2009

Large-scale parallel discrete element simulations of granular flow
Research output: Research - peer-review › Journal article – Annual report year: 2009

Molecular Dynamics Simulations of a Linear Nanomotor Driven by Thermophoretic Forces
Research output: Research - peer-review › Poster – Annual report year: 2009
Molecular Dynamics Simulations of Water Droplets On Hydrophilic Silica Surfaces
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Molecular Dynamics Simulations of Water Nanodroplets on Silica Surfaces
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Multiscale Modeling
Research output: Research › Sound/Visual production (digital) – Annual report year: 2009

Multiscale simulations of water
Research output: Research › Conference abstract for conference – Annual report year: 2009

Multiscale Simulations Using Particles
Research output: Research › Conference abstract for conference – Annual report year: 2009

Parallel Scaling of the Discrete Element Method
Research output: Research › Paper – Annual report year: 2009

Phonon assisted thermophoretic motion of gold nanoparticles inside carbon nanotubes (vol 90, artn 253116, 2007)
Research output: Research - peer-review › Journal article – Annual report year: 2007

Thermally driven molecular linear motors - A molecular dynamics study
Research output: Research - peer-review › Journal article – Annual report year: 2009

Thermophoretic Motion of Water Nanodroplets confined inside Carbon Nanotubes
Research output: Research - peer-review › Journal article – Annual report year: 2009

theta-SHAKE: An extension to SHAKE for the explicit treatment of angular constraints
Research output: Research - peer-review › Journal article – Annual report year: 2009

A Parallel Immersed Interface Method for DPD Simulations of Complex Flow
Research output: Research › Article in proceedings – Annual report year: 2008

Atomistic Simulations of Thermophoretic Motion of water Nanodroplets in Carbon Nanotubes
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Nanofluidics - atomistic simulations of water under confinement
Research output: Research › Conference abstract for conference – Annual report year: 2008

On the Water-Carbon Interaction for Use in Molecular Dynamics Simulations of Graphite and Carbon Nanotubes: Additions and corrections
Research output: Research - peer-review › Journal article – Annual report year: 2008

Thermophoretic Motion of Water Nanodroplets confined inside Carbon Nanotubes
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2008

An immersed interface method for the Vortex-In-Cell algorithm
Research output: Research - peer-review › Conference article – Annual report year: 2007
A numerical study of the stability of helical vortices using vortex methods
Research output: Research - peer-review › Conference article – Annual report year: 2007

A stochastic boundary forcing for dissipative particle dynamics
Research output: Research - peer-review › Journal article – Annual report year: 2007

Control of density fluctuations in atomistic-continuum simulations of dense liquids
Research output: Research - peer-review › Journal article – Annual report year: 2007

Phonon assisted thermophoretic motion of gold nanoparticles inside carbon nanotubes
Research output: Research - peer-review › Journal article – Annual report year: 2007

A Software framework for the Portable Parallelization of Particle-Mesh Simulation
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2006

A software framework for the portable parallelization of particle-mesh simulations
Research output: Research - peer-review › Journal article – Annual report year: 2006

Nanoparticle Traffic on Helical Tracks: Thermophoretic Mass Transport through Carbon Nanotubes
Research output: Research - peer-review › Journal article – Annual report year: 2006

PPM – A highly efficient parallel particle–mesh library for the simulation of continuum systems
Research output: Research - peer-review › Journal article – Annual report year: 2006

Salt transport on islands in the Okavango Delta: Numerical investigations
Research output: Research - peer-review › Journal article – Annual report year: 2006

Temperature driven transport of gold nanoparticles physisorbed inside carbon nanotubes
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2006

Curvature Induced L-Defects in Water Conduction in Carbon Nanotubes
Research output: Research - peer-review › Journal article – Annual report year: 2005

Hybrid atomistic-continuum method for the simulation of dense fluid flow
Research output: Research - peer-review › Journal article – Annual report year: 2005

Numerical Simulation of Nano-, Meso, Macro- and Multiscale Fluid Dynamics
Research output: Research › Conference article – Annual report year: 2005

Solidification of gold nanoparticles in carbon nanotubes
Research output: Research - peer-review › Journal article – Annual report year: 2005

Thermophoresis Between Solids: A Molecular Dynamics Study of Gold Nanoparticles Confined and Thermally Driven Through Carbon Nanotubes
Research output: Research › Paper – Annual report year: 2005

Wetting of doped carbon nanotubes by water droplets
Research output: Research - peer-review › Journal article – Annual report year: 2005

Hydrodynamic properties of carbon nanotubes
Research output: Research - peer-review › Journal article – Annual report year: 2004
Hydrophobic hydration of C60 and carbon nanotubes in water
Research output: Research - peer-review › Journal article – Annual report year: 2004

Multiphase water flow inside carbon nanotubes
Research output: Research - peer-review › Journal article – Annual report year: 2004

Remeshed smoothed particle hydrodynamics simulation of the mechanical behavior of human organs
Research output: Research - peer-review › Journal article – Annual report year: 2004

Transverse momentum micromixer optimization with evolution strategies
Research output: Research - peer-review › Journal article – Annual report year: 2004

Water–Carbon Interactions 2: Calibration of Potentials using Contact Angle Data for Different Interaction Models
Research output: Research - peer-review › Journal article – Annual report year: 2004

Water–carbon interactions III: The influence of surface and fluid impurities
Research output: Research - peer-review › Journal article – Annual report year: 2004

An influence matrix particle–particle particle-mesh algorithm with exact particle–particle correction
Research output: Research - peer-review › Journal article – Annual report year: 2003

On the Water-Carbon Interaction for Use in Molecular Dynamics Simulations of Graphite and Carbon Nanotubes
Research output: Research - peer-review › Journal article – Annual report year: 2003

An immersed interface method for the vortex-in-cell algorithm
Research output: Research - peer-review › Conference article – Annual report year: 2002

Molecular dynamics simulation of vaporization of an ultra-thin liquid argon layer on a surface
Research output: Research - peer-review › Journal article – Annual report year: 2002

Carbon Nanotubes In Water: Structural Characteristics and Energetics
Research output: Research - peer-review › Journal article – Annual report year: 2001

Molecular Dynamics Simulation of Contact Angles of Water Droplets in Carbon Nanotubes
Research output: Research - peer-review › Journal article – Annual report year: 2001

Molecular dynamics simulation of nanodroplet evaporation
Research output: Research - peer-review › Journal article – Annual report year: 2001

Three-Dimensional Vortex Methods for Particle-Laden Flows with Two-Way Coupling
Research output: Research - peer-review › Journal article – Annual report year: 2001

Simulation of Particle Laden Flows Using Particle Methods
Research output: Research - peer-review › Journal article – Annual report year: 2000

Discrete vortex simulation of flow around five generic bridge deck sections
Research output: Research - peer-review › Journal article – Annual report year: 1998

Aeroelastic analysis of bridge girder sections based on discrete vortex simulations
Research output: Research - peer-review › Conference article – Annual report year: 1997
Two discrete vortex method for application to bluff body aerodynamics
Research output: Research › peer-review › Journal article – Annual report year: 1997

Discrete Vortex Method for Two-dimensional Flow past Bodies of Arbitrary Shape Undergoing Prescribed Rotary and Translational Motion
Research output: Research › Ph.D. thesis – Annual report year: 1994

Projects:

Emission modelling under marine-engine like conditions
Project: PhD

Prediction of Full Scale Ship Performance Using Computational Fluid Dynamics and Model Tank Tests
Project: PhD

PhD scholarship in CFD Analysis of the Impact of the Scale Build-Up on the Liquid Flow in the Wells used for Oil & Gas Production
Project: PhD

Dynamisk modellering af indvendigt riffede fordamperrør, med henblik på øget driftsfleksibilitet af termiske kraftværker
Project: PhD

Aeroelsatisk analyse af vindmøllerotor
Project: PhD

Aerodynamiske strømninger med strukturinteraktion
Project: PhD

Experimental and Numerical studies of water flow in choanocytes and choanoflagellates
Project: PhD

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Project: PhD

Two and Three Dimensional Modelling of Bridge Aerodynamics
Project: PhD

Development of Improved Cavitation and Noise Radiation Prediction Methods for Marine Propellers
Project: PhD

Optimizing Oil Production by Novel Technology Integration - Well flow modeling
Project: PhD

Integrated analysis of the scavenging process in marine two stroke diesel engines
Project: PhD

Numerical modelling of extrusion of functionally graded ceramic materials
Project: PhD
Multiscale Simulations using Particle-Vortex Methods with Application to Bluff Body Aerodynamics
Project: PhD

Computational Nanofluidics. Multiscale Simulations of Flow in Nanochannels
Project: PhD

Scavenging and swirling flow in two-stroke diesel engines - An experimental study
Project: PhD

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

Heat Transfer in Large Two-Stroke Marine Diesel Engines
Project: PhD

Turbulence Modeling in Multiresolution Vortex Methods with Application to Bluff Body Aerodynamics
Project: PhD

Simulation and Modelling of Wakes and Wake Interaction in Offshore Wind Farms
Project: PhD

Scientific GPU Computing for PDE Solvers
Project: PhD

Diesel Engine Tribology
Project: PhD

Multiscale Simulation of Wave Forces on Ocean Energy Devices
Project: PhD

Computational Nanofluidics Multiscale Simulations of Flow in Nanochannels
Project: Research

Scavenging and Swirling Flow in Two-Stroke Diesel Engines
Project: Research

Activities:

Atomistic simulations of water flow in graphene channels driven by imposed thermal gradients
Activity: Talks and presentations › Conference presentations

Complex Motion in Fluids Summer School
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.