

International Journal of Crashworthiness

The printable version is no longer supported and may have rendering errors. Please update your browser bookmarks and please use the default browser print function instead.

Weltweit verbreitete, seit 1996 erscheinende Fachzeitschrift, die von der Taylor & Francis Group verlegt wird. Es wird nicht nur über das Crashverhalten von Landfahrzeugen, sondern auch von Schiffen, Flugzeugen und Raumfahrzeugen berichtet.

Erscheinungsweise: 6 x jährlich

Einmal im Jahr findet die ICRASH-Konferenz (International Crashworthiness Conference) statt.

1996 1997 1998 1999

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

2018

Issue 4

- Biomechanical investigation of astronaut's seat geometry to reduce neck and head injuries while landing impact
- Design of energy-dissipating structure with functionally graded auxetic cellular material
- Modelling strategies for numerical simulation of aircraft ditching
- Identification of optimal topologies for crashworthiness with the evolutionary level set method
- Energy absorption characteristics of a foam-filled tri-tube under axial quasi-static loading: experiment and numerical simulation
- Crash behaviour and performance of long fibre reinforced thermoplastic material in comparison with continuous fibre reinforcement
- Optimisation for bending crashworthiness of functionally graded foam-filled cellular structure
- Numerical and experimental investigation of corrugated tubes under lateral compression

Issue 3

- A numerical study on the injury prevention for the occupants seated in aircraft side-facing seats
- Dogs in passenger vehicles - crash safety evaluation of travel crates
- Falls resulting in mild traumatic brain injury and focal traumatic brain injury: a biomechanical analysis

- Multiobjective reliability-based design optimisation for front structure of an electric vehicle using hybrid metamodel accuracy improvement strategy-based probabilistic sufficiency factor method
- Precise method of vehicle velocity determination basing on measurements of car body deformation–non-linear method for ‘Full Size’ vehicle class
- Structure-material-performance integration lightweight optimisation design for frontal bumper system
- Validation of a railway inline seating model for occupants injury biomechanics
- On the assessment of the macro-element methodology for full vehicle crashworthiness analysis

Issue 2

- Characteristics of the gaze of a driver following a preceding vehicle and cognition time for an approaching vehicle
- Air flow, heat transfer and impact study of ventilated and non-ventilated full-face motorcycle helmet
- Improvement of lateral shoulder impact response of a multi-body pedestrian model
- Comparative study of brake pads in Malaysian automotive aftermarket
- Factors causing abdominal injuries to a vehicle occupant in frontal impact accidents
- Heavy truck front-end deployable system opportunities for crash compatibility with passenger vehicles
- Opportunities for improved heavy truck occupant protection in rollover and overhead loading impacts
- Finite element head model simulation of the case suspected of diffuse axonal injury in the traffic accident
- Crash concepts for CFRP transport aircraft – comparison of the traditional bend frame concept versus the developments in a tension absorbers concept
- Bird strike assessment for a composite wing flap
- Advances in numerical ditching simulation of flexible aircraft models

Issue 1

- A novel aircraft energy absorption strut system with corrugated composite plate to improve crashworthiness
- Comparison of potential injuries to the head and lower extremities of a motorcyclist during impact with W-beam and wire rope barriers using FE simulations
- Serious injuries in the traffic accident situation: definition, importance and orientation for countermeasures based on a representative sample of in-depth-accident-cases in Germany
- Crashworthiness study for multi-cell composite filling structures
- Design and simulation of a rear underride protection device (RUPD) for heavy vehicles
- Thin-walled structural configurations for enhanced crashworthiness
- Improvement of Q0 dummy restraint in lateral sled impacts regarding R129 criteria

- Numerical and experimental study of multimode failure phenomena in GFRP laminates of different lay-ups
- A precise method of vehicle velocity determination based on measurements of car body deformation – non-linear method for the ‘Luxury’ vehicle class
- Thoracic side airbags and structural performance in vehicle-vehicle lateral impacts

2017

Issue 6

- Effect of velocity and fibres on impact performance of composite laminates – Analytical and experimental approach
- Steer-induced loss of control of a minibus on a wet surface
- Railway occupant passive safety improvement by optimal design
- Numerical investigation on automotive bumper structure improvements for pedestrian protection
- Optimal deceleration of surrogate models in a generic side impact set-up
- Investigation of the vehicle restraint system in a frontal impact
- Transient dynamic impact suppression of a Baja chassis using frontal and rear shock absorbers
- A study into the kinematic response for unbelted human occupants during emergency braking

Issue 5

- Ballistic impact behaviour of stiffened aluminium plates for gas turbine engine containment system
- Response and injury of the human leg for axial impact durations applicable to automotive intrusion and underbody blast environments
- Numerical and experimental study on the design strategy of a new collapse zone structure for railway vehicles
- Impact characteristics and crashworthiness of multi-cell, square, thin-walled, structures under axial loads
- An optimisation approach to choose thickness of three members to improve IIHS small-overlap structural rating
- Numerical modelling and experimental analysis of the passenger side airbag deployment in out-of-position
- Theoretical analysis and multi-objective optimisation for gradient engineering material arresting system
- Effect of fibre direction and stacking sequence on dynamic impact performance of composite bicycle frame
- Numerical investigation into the effect of various trigger configurations on crashworthiness of GFRP crash boxes made of different types of cross sections
- Simulation study on gender differences in occupant dynamic response during spacecraft

landing impact

Issue 4

- Evaluate the crashworthiness response of an aircraft fuselage section with luggage contained in the cargo hold
- Design optimisation of composite bumper beam with variable cross-sections for automotive vehicle
- Investigation of two finite element modelling approaches for ballistic impact response of composite laminates
- 3D computational fluid dynamic modelling for pulsatile blood wave propagation in the event of car crash
- Development of a finite element model for comparing metal and composite fuselage section drop testing
- Mechanisms of using knee bolster to control kinematical motion of occupant in reclined posture for lowering injury risk
- Traffic accident severity prediction using a novel multi-objective genetic algorithm
- Energy-absorption optimisation of locomotives and scaled equivalent model validation
- Effect of cervical spine alignment on neck injury risk during rear-end impact – numerical study using neck finite element model

Issue 3

- Bending analysis and design optimisation of tailor-rolled blank thin-walled structures with top-hat sections
- Surface modelling of vehicle frontends for pedestrian safety with the FlexPLI
- Factor comparison of passenger-vehicle to vulnerable road user crashes in Beijing, China
- Impact simulation and optimisation of elastic fuel tanks reinforced with exoskeleton for aerospace applications
- Novel approach for design of 3D-multi-cell thin-walled circular tube to improve the energy absorption characteristics under axial impact loading
- Crashworthiness efficiency optimisation for two-directional functionally graded foam-filled tubes under axial crushing impacts
- Head protection with cyclist helmet in impact against vehicle A-pillar
- Methodologies of stochastic simulation for helicopter accidents and nonparametric evaluation of the stochastic responses

Issue 2

- Effects of layout design changes on frontal crash behaviour of small motorcycles
- Crashworthiness analysis and structural optimisation of multi-cell square tubes under axial and oblique loads
- Crashworthiness design of functionally graded structures with variable diameters
- The effect of placenta location on the safety of pregnant driver and her fetus

- Crashworthiness of G4(2W) guardrail system: a finite element parametric study
- Energy absorption characteristics of aluminium/CFRP hybrid beam under impact loading
- Features of serious pedestrian injuries in vehicle-to-pedestrian accidents in Japan
- Numerical parametric study on factors affecting passenger safety in motorcoach frontal collision

Issue 1

- Computational models for simulations of lithium-ion battery modules under quasi-static and dynamic constrained compression tests
- A method for connected vehicle trajectory prediction and collision warning algorithm based on V2V communication
- Reliable optimisation design of vehicle structure crashworthiness under multiple impact cases
- Comparison of chest injury measures of hybrid III dummy
- Lightweight design: detailed comparison of roof panel solutions at crash and stiffness analyses
- Effect of crushable blockouts on a full-scale guardrail system
- Acceleration-based criterion for intrusions in frontal impacts
- A review on rear under-ride protection devices for trucks

2016

Issue 6

- Crashworthiness optimisation of A-pillar in passenger car in rear-end collision with truck
- Experimental study of headform-PVB laminated windshield impact
- New high precision method for determining vehicle crash velocity based on measurements of body deformation
- Experimental study of in-plane mechanical performance of carbon/glass hybrid woven composite at different strain rates
- Response of a full-face motorcycle helmet FE model to the UNECE 22.05 chin bar impact test
- Interaction mechanism of crushing of tubes and honeycomb under axial loading
- Investigation of the deformations of the car's roof elements after rollover
- Dynamic bending behaviour of magnesium alloy rectangular thin-wall beams filled with polyurethane foam
- Risk analysis of animal-vehicle crashes: a hierarchical Bayesian approach to spatial modelling
- Inertial effects on the mechanical response of aluminium foam-filled braided stainless steel tubes under transverse loading
- Modelling and simulation of crash tests of N2-W4-A category safety road barrier in horizontal concave arc

Issue 5

- Design concepts for an integrated whiplash mitigating head restraint and seat
- Skid control of a small electric vehicle with two in-wheel motors: simulation model of ABS and regenerative brake control
- Optimisation study on multibody vehicle-front model for pedestrian safety
- Crashworthiness analysis of a bridge rail-to-guardrail transition
- FE simulation of soft wing impactor for aviation mast frangibility testing – sensitivity to model assumptions
- The effect of including a fetus in the uterus model on the risk of fetus mortality through drop test and frontal crash simulations
- Crashworthiness of guardrail posts embedded in cohesionless soils: a parametric study
- Structural crashworthiness analysis of a ladder frame chassis subjected to full frontal and pole side impacts
- Hybrid RFID system for driver assistant and active road accident prevention

Issue 4

- Material parameters design of vehicle body based on three-level factorial design under impact loading
- Vector model of vehicle collisions for inferring velocity from loss of kinetic energy with restitution on residual crush surface
- Strategy to increase the speed of a small car impact to a semi-rigid barrier designed for high impact severity
- Effects of cervical arthroplasty on neck response during a simulated rotary-wing aircraft impact
- Crashing analysis and multi-objective optimisation of duplex energy-absorbing structure for subway vehicle
- Responses of 3D four-directional and five-directional circular braided composite tubes under transverse impact
- A case-control study of vehicle panel damage and thoracic injury in rollover crashes

Issue 3

- Computer modelling of vehicle rollover crash tests conducted with the UNSW Jordan Rollover System
- Study of the influence of muscle activation on a driver's lower extremity injury
- Reliability-based multiobjective optimisation of vehicle bumper structure holes for the pedestrian flexible legform impact
- Assessment of the impact speed and angle conditions for the EN1317 barrier tests
- Energy absorption characteristics and a meta-model of miniature frusta under axial impact
- Design and analysis of a graded honeycomb shock absorber for a helicopter seat during a crash condition

- Optimisation of rotorcraft fuel tank for crashworthiness based on a neural network
- Performance of metallic defences submitted to vehicle impact

Issue 2

- A novel approach for the assessment of robustness of vehicle structures under crash
- Data mining on road safety: factor assessment on vehicle accidents using classification models
- Development of injury prediction models for advanced automatic collision notification based on Japanese accident data
- Evaluation of driver lower extremity injuries in 16 oblique crashes with THOR
- Solidity effect on crashworthiness characteristics of thin-walled tubes having various cross-sectional shapes
- Finite element analysis of foam-filled honeycomb structures under impact loading and crashworthiness design
- Computational simulation of frontal impact of motorcycle telescopic fork

Issue 1

- Fast Bayesian approach to model calibration of vehicle occupant restraint systems
- Integration of the forming effects into vehicle front rail crash simulation
- Transient loss of cabin volume in NASA Test 7
- Contributing factors and severity of serious single-passenger vehicle collisions in Beijing
- Numerical investigation of the axial impact loading behaviour of single, double and stiffened circular tubes
- Relevant factors for active pedestrian safety based on 100 real accident reconstructions
- Optimisation study on multibody vehicle-front model for pedestrian safety
- Design concepts for an integrated whiplash mitigating head restraint and seat

2015

Issue 6

- Locally analysing the risk factors for fatal single vehicle crashes hot spots in Western Australia
- Pulse shape analysis and data reduction of real-life frontal crashes with modern passenger cars
- Head boundary conditions in pedestrian crashes with passenger cars: six-degrees-of-freedom post-mortem human subject responses
- Rotational acceleration measurement for pedestrian head impact
- Crashworthiness study of a full vehicle-lumped model using parameters optimisation
- Crashworthiness and ditching behaviour of blended-wing-body (BWB) aircraft design
- Investigation of diffuse axonal injury induced by rotational acceleration via numerical

reconstructions of in vivo rat head impact experiments

- Methods of evaluating ES-2 leg flail in dynamic evaluation and certification tests of side-facing aircraft seats

Issue 5

- Parametrised fuselage modelling to evaluate aircraft crash behaviour in early design stages
- Rollover testing with volunteer live human subject
- Improving safety of runway overrun through foamed concrete aircraft arresting system: an experimental study
- Crash simulations of aircraft fuselage section in water impact and comparison with solid surface impact
- A concept for mitigating head injury under translational blunt impact
- Parametric study and multi-objective crashworthiness optimisation of reinforced hexagonal honeycomb under dynamic loadings
- Occupant severity prediction from simulation of small car impact with various concrete barrier profiles

Issue 4

- Rollover protection for occupants of heavy truck sleeper cabs
- Dynamic response of bird strike on aluminium foam-based sandwich panels
- Incidences of various passenger vehicle front-end designs on pedestrian lower limb injuries
- Use of a modified HYBRID III 50th dummy to estimate the effectiveness of market restraint systems for forklift truck drivers
- Development of new deformable barriers for testing vehicle performance in different crash configurations
- Analytical, experimental and numerical study of a graded honeycomb structure under in-plane impact load with low velocity
- Optimal design of a crashworthy octagonal thin-walled sandwich tube under oblique loading

Issue 3

- Finite-element modelling of restrained occupant partial ejection under rollover conditions
- Development of a mobility scooter finite element model
- Analysis of test tools for evaluation of contact-based sensor systems for pedestrian detection
- Investigation of occupant arm position and door properties on thorax kinematics in side impact crash scenarios – comparison of ATD (anthropomorphic test device) and human models
- Improvement research on the one-step algorithm for bus rollover collision based on the improved gradient method

- Crashworthiness study on functionally graded thin-walled structures
- Dynamic strength of a modified W-beam BCT trailing-end termination system

Issue 2

- Increasing automobile crash response metamodel accuracy through adjusted cross validation error based on outlier analysis
- Evaluation of the vehicle/safety barrier/sign support interaction by means of FEM simulations
- Evaluation of effective mass during head impact due to standing falls
- Numerical study of a hybrid wire-net bonnet for pedestrian safety
- Crash simulation of wound composite tubes based on multi-level modelling
- Estimating the crash responses of a vehicle from the other size vehicle tested
- Experimental and numerical crushing analyses of thin-walled magnesium profiles
- Determination of the fracture behaviour of axial splitting tubes and the numerical prediction of their energy absorption capabilities
- Modelling a 32-seat bus and virtual testing for R66 compliance

Issue 1

- Parametric study for head injury criteria response of three-year olds in a child restraint system in oblique and lateral intrusive side impact
- Gabions: evaluation of potential as low-cost roadside barriers
- Numerical analysis of low-velocity rigid-body impact response of composite panels
- Multi-objective optimisation of functionally graded honeycomb filled crash boxes under oblique impact loading
- Predicting the crushing behaviour of composite material using high-fidelity finite element modelling
- Simulating occupant injury in rollover crashes. Part 1: a numerical comparison of design procedures for vehicle roof strength assessment
- Energy absorption of circular aluminium tubes with functionally graded thickness under axial impact loading

2014

Issue 6

- Research on the crashworthy structures of subway vehicles
- Another look at the static stability factor (SSF) in predicting vehicle rollover
- Impact severity assessment in vehicle accidents
- Crash performance of a preemie positioning device to enhance infant safety in vehicles
- Improvement of crush can configuration
- Crash-level analysis on passenger cars' total secondary safety

- Impact performance evaluation of MASH TL4 bridge barrier
- Numerical simulation of crash impact test for fuel cell group of rotorcraft

Issue 5

- Restraint device for airway management in low-birthweight infants
- Kinematics and injury risk of a wheelchair occupant in a railway vehicle crash
- Development of finite element model for the analysis of a guardrail post subjected to dynamic lateral loading
- A static test method to assess swivel seat strength in frontal impact
- Survey of LATCH vehicle hardware
- Material modelling for crash simulation of thin extruded aluminium sections
- Bumper contact sensor for pedestrian collisions based on analysis of pedestrian kinematic behaviour
- Investigation of a crash concept for CFRP transport aircraft based on tension absorption
- Physical and empirical models for motorcycle speed estimation from crush

Issue 4

- Bicycle helmet modelling and validation under linear and tangential impacts
- Crashworthiness and lightweight optimisation of thin-walled conical tubes subjected to an oblique impact
- Effect of humidity on dynamic characteristics of foam CF45 for the TRL pedestrian legform impactor
- Evaluation of energy loss in motorcycle-to-car collisions
- An experimental and numerical investigation into the dynamic crash testing of vehicle bumper fabricated using friction stir welding and gas metal arc welding
- Optimisation design of reinforced S-shaped frame structure under axial dynamic loading
- Coupled human body and side impact model to predict thoracic response
- Development of compatibility assessments for full-width and offset frontal impact test procedures in FIMCAR (Frontal Impact and Compatibility Assessment Research)

Issue 3

- Innovative passive and active countermeasures for near side crash safety
- In-depth real-world bicycle accident reconstructions
- Development of a 3-year-old child head-neck finite element model and derivation of novel head injury criterion
- Development and validation of an FE model for motorcycle-car crash test simulations
- Evaluation of two crew module boilerplate tests using newly developed calibration metrics
- Research on a one-step fast simulation algorithm for bus rollover collision based on total strain theory
- A finite element analysis of high-energy absorption cellular materials in enhancing passive safety of road vehicles in side-impact accidents

- Comparison of MADYMO and physical models for brain injury reconstruction
- A new metamodel method using Gaussian process based bias function for vehicle crashworthiness design

Issue 2

- Development of head injury risk functions based on real-world accident reconstruction
- Possibility of installing a data acquisition system in a pedestrian headform impactor
- Numerical investigation of the energy absorption characteristics of a fan-shaped deployable energy absorber
- Energy absorption characteristics of aluminium alloy AA7XXX and AA6061 tubes subjected to static and dynamic axial load
- Optimisation of vehicle front-end geometry for adult and pediatric pedestrian protection
- Nonlinear finite element analysis applied to the development of alpine ski safety net
- Influence of elastic and plastic support on the energy absorption of the extruded aluminium tube using ductile failure criterion
- Development of an occupant multi-body model based on Japanese male characteristics data for rear impact analysis
- Front underride protection device (FUPD) development: design strategy with simultaneous loading

Issue 1

- Framework for adjusting for both stress triaxiality and mesh size effect for failure of metals in shell structures
- Effect of the blockout crushability on the response of guardrail post subjected to lateral impact
- Evaluation of crashworthiness of a carbon-fibre-reinforced polymer (CFRP) ladder frame in a body-on-frame vehicle
- Geometrical compatibility in structural shape optimisation for crashworthiness
- Similarity scoring methodology for comparing real-world cases to crash test standards
- The effect of mass properties on road accident reconstruction
- Development of a regulation for testing the effectiveness of a rigid side underride protection device (SUPD)

2013

Issue 6

- Shoulder belt-induced flexion–distraction fractures of the cervical spine
- Crash response optimisation of helicopter seat and subfloor
- Development of an advanced multi-material bird-strike model using the smoothed particle hydrodynamics method
- Adaptive structure concept for reduced crash pulse severity in frontal collisions

- An approach to capture the residual strength of laminated safety glass according to the FMVSS 226 load case Ejection Mitigation with the finite-element software LS-DYNA
- Study of the bending response of metal foam-filled beams applied to enhance the rollover behaviour of coach structures
- Evaluation of methods for the development of representative responses and corridors from biomechanical data using mechanical models
- Validation of restoration time for pedestrian headform impactor skin

Issue 5

- Fast strength assessment of mitre gates to ship impact
- Development of a new crash/dynamics control integrated mathematical model for crashworthiness enhancement of vehicle structures
- Research on effects of composite skin on crashworthiness of composite fuselage section
- Emergency landing dynamic conditions: a comparison with accident impact conditions
- Surrogate-based optimisation of automotive structures under multiple crash and vibration design criteria
- A stability maintenance method and experiments for multi-player tandem aluminium honeycomb array
- Rollover crashworthiness analysis of a railroad passenger car
- Computer simulations of obesity effects on occupant injury in frontal impacts
- Human rib response to different restraint systems in frontal impacts: a study using a human body model
- The safety performance of guardrail systems: review and analysis of crash tests data
- About the preliminary design of a self-aligning energy absorber system for railway vehicles

Issue 4

- Buckling considerations and cross-sectional geometry development for topology optimised body in white
- Adaptive sampling-based RBDO method for vehicle crashworthiness design using Bayesian metric and stochastic sensitivity analysis with independent random variables
- Racetrack SAFER barrier on temporary concrete barriers
- Influence of pitching and yawing during frontal passenger vehicle crash tests on driver occupant's kinematics and injury
- Surface material effects on fall-induced paediatric head injuries: a combined approach of testing, modelling and optimisation
- A methodology for improving structural robustness in frontal car-to-car crash scenarios
- Go-kart-related injuries and fatalities in Australia
- Dynamic testing and modelling of composite fuselage frames and fasteners for aircraft crash simulations

Issue 3

- Selected Papers from ICRASH 2010-2012: Validation of a dynamic rollover test device
- Influence of vehicle secondary impact following an emergency braking on an unbelted occupant's neck, head and thorax injuries
- The uncertain optimisation of buffering characteristics of landing airbag in manned airdrop
- Multibody modelling of gabion beams for impact applications
- Selected Papers from ICRASH 2010-2012: Wavelet analysis of piezoelectric transducer signals to detect rib fractures during impact tests
- Hexagonal honeycomb cell optimisation by way of meta-model techniques
- Selected Papers from ICRASH 2010-2012: Considering manufacturing effects in automotive structural crashworthiness: A simulation chaining approach
- Selected Papers from ICRASH 2010-2012: Applications and limitations of wrap-around ratio to vehicle speed estimation in pedestrian collision analysis
- An investigation of inertial unlatching of side-release seat belt buckles using computational modelling
- CORRIGENDUM: A scaling method for modelling the crashworthiness of novel roadside barrier designs

Issue 2

- Selected Papers from ICRASH 2010-2012: Application of fibre-reinforced composites beam as energy absorption member in vehicle
- Placement of traffic barriers on roadside and median slopes – guidelines based on numerical simulations
- Heavy vehicle frontal sled crash test analysis – chest deflection response in the Hybrid III dummy
- Influence of impacts on static and low-cycle fatigue characteristics of composite specimens
- Vehicle occupant movement and impact with the interior in frontal collisions – the ‘second collision’
- Composite cylinders of natural gas vehicles simulation crash test
- Use of Euler parameters for the evaluation of ATD head trajectory from angular rate sensor and accelerometer data in aircraft seat certification testing
- Analysis of train driver protection in rail collisions: Part I. Evaluation of injury outcome for train driver in desk impact
- Analysis of train driver protection in rail collisions: Part II. Design of a desk with improved crashworthiness performance

Issue 1

- Selected Papers from ICRASH 2010-2012: Investigation into suitability of current ATDs (Anthropomorphic Test Devices) to represent ageing drivers
- Determining the strain rate dependence of cortical and cancellous bones of human tibia using a Split Hopkinson pressure bar
- Crash simulation of the fuselage section with central wing box for a regional jet

- Numerical and experimental investigation of a lightweight bonnet for pedestrian safety
- Selected Papers from ICRASH 2010-2012: Development and validation of a coupled head-neck FEM – application to whiplash injury criteria investigation
- Experimental method for dynamic residual strength characterisation of aircraft sandwich structures
- Energy absorption characteristics of glass/epoxy nano composite laminates by impact loading
- A scaling method for modelling the crashworthiness of novel roadside barrier designs

2012

Issue 6

- Investigation of motorcyclist safety systems contributions to prevent cervical spine injuries using HUMOS model
- Selected Papers from ICRASH 2010-2012: Numerical investigation into the collapse behaviour of an aluminium egg-box under quasi-static loading
- Computational modelling of vehicle interior components for impact applications: moulding residual stress
- Development and validation of a parametric child anthropomorphic test device model representing 6–12-year-old children
- Influence of impact velocity on energy absorption characteristics and friction coefficient of expansion tube
- The failure modelling of knee ligaments in the finite element model
- Numerical study on the influence of superstructure configuration on coach rollover resistance performance
- Characteristics of fatal single-vehicle crashes in Europe
- Crashworthiness of composite inserts in vehicle structure
- Reconstruction and simulation of the vehicle to road safety barrier oblique collision based on the Levenberg–Marquardt algorithm

Issue 5

- Analysis of the behaviour of biker protection devices for roadside barriers
- Performance of polymeric reinforcements in vehicle structures submitted to frontal impact
- Weight-saving potential of open- and closed-cell functionally graded foams under compressive loading
- Projectile impact testing of glass fiber-reinforced composite and layered corrugated aluminium and aluminium foam core sandwich panels: a comparative study
- Crash and structural analyses of an aluminium railroad passenger car
- Multi-objective optimisation design of a double-chamber airbag landing system with structure-selection techniques
- Calibrating material parameters to model the thin-walled components made of die cast

AM60B magnesium alloy

- Effects of pedestrian gait, vehicle-front geometry and impact velocity on kinematics of adult and child pedestrian head
- The effect of impact speed on the HIC obtained in pedestrian headform tests

Issue 4

- Numerical investigation of energy absorbers in composite materials for automotive applications
- Dynamic response of the leading edge wing under soft body impact
- A tunable hand biofidelity-enhancing device for Hybrid III dummies
- Body deformation study in a Formula One race car crashing into a rigid barrier at different crash angles
- Development of granular-medium-based impact energy management system
- Assessment of the protective performance of hood using head FE model in car-to-pedestrian collisions
- Pregnant driver injury investigations in oblique crashes
- Analytical models versus experimental results for composites containing nanoclay as secondary reinforcement under high velocity impact
- Effect of bird geometry and orientation on bird-target impact analysis using SPH method

Issue 3

- FE analysis of child occupant kinematics in CRS (child restraint system) in side oblique impact
- Assessment of pedestrian head impact dynamics in small sedan and large SUV collisions
- Crashworthiness optimisation of vehicle structures with magnesium alloy parts
- Energy absorption behaviours of CSM-based GFRC plates with hemispherical features
- Application of FRP in a vehicle for Student Formula SAE Competition of Japan
- FE modelling of a motorcycle tyre for full-scale crash simulations
- Effect of length on crashworthiness parameters and failure modes of steel and hybrid tube made by steel and GFRP under low velocity impact
- Mechanical properties and failure mechanisms of closed-cell PVC foams
- Effects of table design in railway carriages on pregnant occupant safety

Issue 2

- The case for a dynamic rollover test
- An innovative method for categorising the contributing factors to intersection crashes using fault tree modelling
- Finite element analysis of kinematic behaviour and injuries to pedestrians in vehicle collisions
- Impact crash analyses of an off-road utility vehicle – part I: validation of finite-element model for body structure

- Impact crash analyses of an off-road utility vehicle – part II: simulation of frontal pole, pole side, rear barrier and rollover impact crashes
- Comparison of vehicle kinematics and occupant responses between Jordan rollover system and an over-the-road rollover
- The newly updated FMVSS 216 roof crush modelling and analysis
- Modelling and validation of motorcyclist helmet with composite shell
- Truck frontal underride protection – compatibility factors influencing passenger car safety

Issue 1

- Behaviour of high bumper vehicles in pedestrian scenarios with full finite element human models
- Improved car occupant safety by expandable A-pillars
- Crashworthiness investigation of conical and cylindrical end-capped tubes under quasi-static crash loading
- Effects of roof crush loading scenario upon body in white using topology optimisation
- Effect of humidity on pedestrian legform impactor-to-car bumper impact test results
- Behaviour of helmets during head impact in real accident cases of motorcyclists
- Wood-steel structure for roadside safety barriers
- Case study of a frontal car accident involving three fatally injured children

2011

Issue 6

- Test system, vehicle and occupant response repeatability evaluation in rollover crash tests: the deceleration rollover sled test
- A study on inversion of metallic thin-walled conical shells
- Evaluation of the effective mass of the body for helmet impacts
- Comprehensive computational rollover sensitivity study, Part 1: influence of vehicle pre-crash parameters on crash kinematics and roof crush
- Evaluation of the kinematics and injury potential to different sizes of pedestrians impacted by a utility vehicle with a frontal guard
- Injury severity of occupants in lateral collisions in standard and small vehicles: Analysis of ITARDA's (Institute for Traffic Accident Research and Data Analysis) in-depth investigation data
- Multi-objective optimisation and sensitivity analysis of a paratransit bus structure for rollover and side impact tests
- External biofidelity in lateral impact measurement of global and local forces
- Performance limit analysis for common roadside and median barriers using LS-DYNA

Issue 5

- Simulation analysis for the safety protection of cervical vertebra under unusual landing

impact

- Modelling composite crushing initiation using a cohesive element formulation
- Wheelchair occupant kinematics during a rail carriage crash
- Parametric design and structural improvements to optimise frontal crashworthiness of a truck
- Numerical investigation on carbon foam-based dampers for helicopter seats
- On the effect of testing uncertainties in the homologation tests of motorcycle helmets according to ECE 22.05A.
- Development of generic road vehicle multibody models for crash analysis using an optimisation approach
- Implications of the inline seating layout on the protection of occupants of railway coach interiors
- Side impact occupant response with varying positions

Issue 4

- Development of a novel material for improved crash energy management in collisions involving vulnerable road users
- Computer simulation of real-world vehicle-pedestrian impacts
- Characteristics of crashes involving injured children in side impacts
- Crashworthiness design of transport aircraft subfloor using polymer foams
- Use of a head component tester to evaluate the injury potential of an aircraft head-up display
- Fracture tolerance of the patellofemoral joint in frontal knee impacts of 75 and 35 year-old males
- Crashworthiness design optimisation of metal honeycomb energy absorber used in lunar lander
- Computational modelling of vehicle interior components for impact applications: Thickness analysis
- Calculation of vehicle-lumped model parameters considering occupant deceleration in frontal crash
- Crash analysis of a three-year-old human child model in side impacts considering normal and incorrect CRS usage

Issue 3

- Aggressive driving among British, Dutch, Finnish and Turkish drivers
- Strain-based topology optimisation for crashworthiness using hybrid cellular automata
- The crashworthiness of civil aircraft using different quadrangular tubes as cabin-floor struts
- Comparison of rear seat occupant injuries in AM50 and AF05 in frontal crashes
- Lower leg injury simulation for EuroNCAP compliance
- Influence of the body on the response of the helmeted head during impact

- Head and neck responses in oblique motorcycle helmet impacts: a novel laboratory test method
- Effect of increase in weight and stiffness of vehicles on the safety of rear seat occupants
- Railroad passenger car collision analysis and modifications for improved crashworthiness
- Development of a wire rope model for cable guardrail simulation

Issue 2

- Computational and experimental modification of portable sign structure design following NCHRP 350 criteria
- Documentation of evidence and calculation of acceleration in aircraft accident reconstruction
- An energy absorption performance index for cellular materials - development of a side-impact cork padding
- Experimental and finite element robustness studies of a bumper system subjected to an offset impact loading
- Structural response and strain patterns of isolated ribs under lateral loading
- The first collision point position identification method in vehicle-pedestrian impact accident
- Application of viscoelastic hybrid models to vehicle crash simulation
- A multi-body systems approach to simulate helicopter occupant protection systems
- Diving injury occurrence in rollover collisions: a critical analysis of Malibu I, Malibu II and CRIS (Controlled Rollover Impact System)

Issue 1

- Individual differences of pedestrian behaviour in midblock crosswalk and intersection
- The application for skull injury in vehicle-pedestrian accident
- Study on crashworthiness of wagon's frame under frontal impact
- Design and calculation of a railway car composite roof under concrete cube crash
- Integrated probabilistic analysis of nuclear power plant building damage due to an aircraft crash
- Seatbelt effectiveness for rear seat occupants in full and offset frontal crash tests
- Evaluation of the passive safety in cars adapted with steering control devices for disabled drivers
- Design optimisation of vehicle roof structures: benefits of using multiple surrogates
- The optimisation of the energy absorption of partially Al foam-filled commercial 1050H14 and 6061T4 Al crash boxes

2010

Issue 6

- The effectiveness of matching front rail heights in car-to-car crashes

- Experimental investigation of strain rate effects on the crushing characteristics of composite sandwich panels
- Dynamic process of ring systems as energy absorber subjected to lateral impact loading
- Optimisation of vehicle side interior panels for occupant safety in side impact
- On a new crush trigger for energy absorption of composite tubes
- Energy-absorbing FUPDs (front underrun protective device) and their interactions with fronts of passenger cars
- A computational approach for probabilistic analysis of water impact simulations
- Non-linear finite element analyses of automobiles and their elements in crashes

Issue 5

- Development of simplified truck chassis model for crash analysis in different impact scenarios
- Crushing response of bow structure of aluminium high-speed crafts at the event of inclined collisions: numerical simulation
- Analysis of loading of lower extremities based on bending moment in car-to-pedestrian collisions
- Development and validation of pedestrian sedan bucks using finite-element simulations: a numerical investigation of the influence of vehicle automatic braking on the kinematics of the pedestrian involved in vehicle collisions
- Kinematics simulation and head injury analysis for rollovers using MADYMO
- Assessing the performance of various restraints on ambulance patient compartment workers during crash events
- Effect of muscle contraction on the lower limb response in low speed car-pedestrian lateral impact: simulations for a walking pedestrian
- Review of the Jordan Rollover System (JRS) vis-à-vis other dynamic crash test devices

Issue 4

- Methodology for mass minimisation of a seat structure with integrated safety belts constrained by biomechanical responses on the occupant in frontal crashes
- Influence of cellular imperfections on mechanical response of metallic foams
- The effect of constrained hip-joint design on crash dummy responses
- The effect of geometrical parameters on the energy absorption characteristics of thin-walled structures under axial impact loading
- Experimental investigation of rubber ball impacts on aluminium plates
- Experimental study on crushing characteristics of brittle fibre/epoxy hybrid composite tubes
- Crashworthiness design of thin-walled curved beams with box and channel cross sections
- A numerical performance comparison of a dual-phase steel and aluminium alloy bumper bar system
- Reliability-based robust multi-objective crashworthiness optimisation of S-shaped box

beams with parametric uncertainties

Issue 3

- Analysis of the kinematics of pregnant drivers during low-speed frontal vehicle collisions
- Correlation of vehicle crash model parameters to car properties in low-speed collisions: a design of experiments approach
- Controlling the axial crushing of circular metal tubes using an expanding rigid ring press fitted on top of the structure
- Evaluation of finite element models of seat structures with integrated safety belts using full-scale experiments
- Aircraft accident reconstruction: comparison of data
- A vehicle seat design concept for reducing whiplash injury risk in low-speed rear impact
- Investigation of 184 passenger car-pedestrian accidents
- A comparative study of the crashworthiness of civil aircraft with different strut configurations
- Critical evaluation of the SHARP (safety helmet assessment and rating program) motorcycle helmet rating

Issue 2

- A study of head-brain injuries in car-to-pedestrian crashes with reconstructions using in-depth accident data in China
- Evaluation of finite element human body models in lateral padded pendulum impacts to the shoulder
- A response surface approach to front-car optimisation for minimising pedestrian head injury levels
- Thin-walled curved hexagonal beams in crashes - FEA and design
- Study on characteristics of a crashworthy high-speed train nose
- Kinematics of the thorax under dynamic belt loading conditions
- Evaluation of a new security system to reduce thoracic injuries in case of motorcycle accidents
- The development of a European fatal accident database
- Effectiveness of the helmet for bicyclists on injury reduction in German road accident situations - state of affairs on GIDAS
- Lightweight impact crash attenuators for a small Formula SAE race car

Issue 1

- Overview on the development of a test standard for the evaluation of motorcyclists' impacts on road infrastructure elements
- Countermeasures to mitigate head and neck injuries to toddlers in frontal and lateral vehicle crash conditions
- Head injuries due to unrestrained objects during frontal collisions

- Fluid structure interaction of submerged metallic and composite plates subjected to low velocity impact loading
- 'Egg-box' panel for commercial vehicle front – compressive loading tests
- Scale modelling of aircraft fuselage: an innovative approach to evaluate and improve crashworthiness
- A numerical investigation of mid-femoral injury tolerance in axial compression and bending loading
- Bird impact effects on different types of aircraft bubble windows using numerical and experimental methods
- Development and evaluation of a finite element truck chassis crash model
- Erratum: Scaling head-neck response data and derivation of 5th percentile female side-impact dummy head-neck response requirements in NBDL test conditions

2009

Issue 6

- Frontal crash severity in different road environments measured in real-world crashes
- Identification of lumped parameter automotive crash models for bumper system development
- Driven dart impact response and simulation of a multi-layer HDPE (high-density polyethylene)
- Automatic generation and validation of patient-specific finite element head models suitable for crashworthiness analysis
- Full-scale vertical drop test and numerical simulation of a crashworthy helicopter seat/occupant system
- Simulation analysis of human neck injury risk under high-level landing impact
- Effects of the triggering of circular aluminum tubes on crashworthiness
- Improving the crashworthiness characteristics of cylindrical tubes subjected to axial compression by cutting wide grooves from their outer surface
- Variation in crash severity depending on different vehicle types and objects as collision partner
- Bus rollover crashworthiness under European standard: an optimal analysis of superstructure strength using successive response surface method
- Analytical Matlab/Simulink model of pyrotechnical gas generators for airbags

Issue 5

- Energy-absorption capability of multi-axial warp-knitted FRP tubes
- Variation of road traffic crashes among drivers and passengers
- Vibration of stiffened plates with cutout under concentrated load
- Numerical and experimental investigations on the behaviour of the sandwiched tube-type airbag

- Application of aluminium honeycomb model using shell elements to offset deformable barrier model
- Challenge and approach to real-world pedestrian protection – investigated by Polar-II pedestrian dummy
- Impact strength and response behaviour of CFRP (carbon fibre reinforced plastic) guarder belt for side collision of automobiles
- Investigating the possible role of placenta position in road accident consecutive foetal loss
- The effect of seatbelt tensioner for pregnant female drivers involved in rear-end vehicle collisions
- The effect of the implementation of circular holes as crush initiators to the crushing characteristics of mild steel square tubes: experimental and numerical simulation
- Three-dimensional multibody dynamics analysis of accidental falls resulting in traumatic brain injury
- Search for pedestrian protection regulations for commercial vehicles
- Erratum: The kinematic behaviour and responses of Hybrid III 3YO dummy and child human FE model in ISOFIX CRS in frontal impact

Issue 4

- Effects of incidence angle in bird strike on integrity of aero-engine fan blade
- Mobile phone and seat belt usage and its impact on road accident fatalities and injuries in southeast Iran
- A method to improve the energy absorption capability of fibre-reinforced composite tubes
- Control-oriented modelling of occupants in frontal impacts
- Response of lower limb in full-scale car-pedestrian low-speed lateral impact – influence of muscle contraction
- Application of foam-filled conical tubes in enhancing the crashworthiness performance of vehicle protective structures
- Experimental investigation of the collapse modes and energy absorption characteristics of composite tubes
- MADYMO reconstruction of a real-world collision between a vehicle and cyclist
- The kinematic behaviour and responses of Hybrid III 3YO dummy and child human FE model in ISOFIX CRS in frontal impact

Issue 3 (Special Issue: Advanced Protection Systems (APROSYS): Part 2)

- Guest Editors' Note
- Scaling head-neck response data and derivation of 5th percentile female side-impact dummy head-neck response requirements in NBDL (Naval Biodynamics Laboratory) test conditions
- On the consequences of non linear constitutive modelling of brain tissue for injury prediction with numerical head models
- Influence of pedestrian head surrogate and boundary conditions on head injury risk prediction

- AlSi7 metallic foams – aspects of material modelling for crash analysis
- Robustness analysis through virtual testing

Issue 2

- Finite element based robustness study of a truck cab subjected to impact loading
- A comparative study of design optimisation methodologies for side-impact crashworthiness, using injury-based versus energy-based criterion
- Comparison of human FE model and crash dummy responses in various child restraint systems
- Child safety analysis for forward-facing child restraint system in frontal impact
- The relationship of injury risk to accident severity in impacts with roadside barriers
- Off-axis compression behaviour of honeycomb core in WT-plane
- Emerging trend in motorisation and the epidemic of road traffic crashes in an economically growing country
- Preliminary investigation of driver head dynamics during impact of a small car with a high-containment safety barrier
- Design and analysis of Annisquam River Bridge railing
- Development of a finite element model of the knee-thigh-hip of a 50th percentile male including ligaments and muscles

Issue 1

- Materials characterisation and crash modelling of composite-aluminium honeycomb sandwich material
- Energy absorption properties of braided glass/epoxy tubes subjected to quasi-static axial crushing
- A study on introduction of notch into thin-walled polygonal shell member to control plastic buckling behaviour in axial collapse
- Impact perforation of sandwich panels with Coremat®
- Improving the accuracy of vehicle crashworthiness response predictions using an ensemble of metamodels
- Crack analysis in PVB laminated windshield impacted by pedestrian head in traffic accident
- Thermal buckling of laminated composite conical shell panel with and without piezoelectric layer with random material properties
- Improvement of crashworthiness behaviour for simplified structural models of aircraft fuselage
- Load path distribution within the pelvic structure under lateral loading

2008

Issue 6 (Special Issue: Advanced Protection Systems (APROSYS): Part 1)

- Editorial: Special Issue dedicated to the EU Integrated Project Advanced Protection Systems (APROSYS)
- APROSYS: Advances in secondary safety research
- A generic evaluation methodology for advanced safety systems
- Improvements to the protection of vulnerable road users: Retrofittable, energy-absorbing front end for heavy goods vehicles
- APROSYS in-depth database of serious pedestrian and cyclist impacts with vehicles
- A first step in computer modelling of the active human response in a far-side impact
- Injury criteria implementation and evaluation in FE models applications to lower limb segments
- Improved head injury criteria based on head FE model
- A new pre-crash system for side impact protection
- Reliability analysis of a crashed thin-walled s-rail accounting for random spot weld failures

Issue 5

- A study of the pedestrian impact kinematics using finite element dummy models: the corridors and dimensional analysis scaling of upper-body trajectories
- BioRID II manikin and human seating position in relation to car head restraint
- The importance of muscle tension on the outcome of impacts with a major vertical component
- Impact behaviour of a multi-body system with energy dissipation
- Numerical simulation of aircraft interior components under crash loads
- Structural polyurethane foam: testing and modelling for automotive applications
- Effectiveness and evaluation of SEAS (secondary energy absorbing structure) of SUV in frontal impact
- Design optimisation of tapered thin-walled square tubes
- Compatibility between sports-utility vehicles and sedan-type vehicles
- Characterisation and modelling of short fibre reinforced polymers for numerical simulation of a crash
- Design of motorcyclist-friendly guardrail using finite element analysis
- Development of an embedded vehicle safety system for frontal crash detection

Issue 4

- Experimental investigation of the collapse modes and the main crushing characteristics of composite sandwich panels subjected to flexural loading
- Modelling the effect of forming history in impact simulations: evaluation of the effect of thickness change and strain hardening based on experiments
- Analysis of traumatic brain injury due to primary head contact during vehicle-to-pedestrian impact
- Numerical (analytical-based) model for the study of vehicle frontal collision
- Polymer composites for the automotive industry: characterisation of the recycling effect

on the strain rate sensitivity

- C IV class tram crashworthiness assessment
- Crash performance of X-shaped support base work zone temporary sign structures
- Virtual modelling of safety helmets: practical problems

Issue 3

- Structural and impact behaviour of an innovative low-cost sandwich panel
- Energy-absorption capability of thin laminates subjected to heavy-mass projectile impact of varying nose geometries
- Simulated evaluation of pedestrian safety for flat-front vehicles
- Development of a fluid-filled catheter system for dynamic pressure measurement in soft-tissue trauma
- Design of ventilated helmets: computational fluid and impact dynamics studies
- A two-stage multi-objective optimisation of vehicle crashworthiness under frontal impact
- Frontal thoracic response to dynamic loading: the role of superficial tissues, viscera and the rib cage
- Development of a finite element model of the shoulder: application during a side impact
- Three-dimensional finite element simulation of pelvic fracture during side impact with pelvis-femur-soft tissue complex
- Role of gender and driver behaviour in road traffic crashes
- Predicting brain injury under impact with a strain measure from analytical models

Issue 2

- Static axial collapse of foam-filled steel thin-walled rectangular tubes: experimental and numerical simulation
- Experimental observations of AA6061-T6 round extrusions under a cutting deformation mode with a deflector
- Design and application of an instrumented projectile for load measurements during impact
- Performance analysis of a bumper-pedestrian contact sensor system by using finite element models
- Multiphysics out of position airbag simulation
- Enhancing the impact energy absorption in roll over protective structures
- Aerodynamic design of high-sided coaches to reduce cross-wind sensitivity, based on wind tunnel tests
- Loading behaviour of 90° 'UREAD' energy channels
- Crashes with roadside objects along motorcycle lanes in Malaysia
- A reduced-order finite element model for the simulation of automotive side structure crash response
- Single-vehicle collisions in Europe: analysis using real-world and crash-test data

Issue 1

- Investigating the effects of strengthening the crossbeam in frontal car-to-car impacts
- Interactions among structural components during complex impact events
- Influence of occupant restraint system on traumatic brain injuries
- Vehicle/occupant movement in moderate speed in-line collisions
- A measurement study of a pressure transducer subjected to water drop impact
- A review of airbag test and analysis
- Trailer truck-mounted attenuator
- Modelling motorcyclist injury severity resulting from sideswipe collisions at T-junctions in the United Kingdom: new insights into the effects of manoeuvres
- Optimum design for energy absorption of bitubal hexagonal columns with honeycomb core
- Bending of cylindrical steel tubes: numerical simulation using Grid computing

2007

Issue 6

- The influence of seat structure and passenger weight on the rollover crashworthiness of an intercity coach
- A design optimization approach of vehicle hood for pedestrian protection
- Validation of the simplified super folding element theory applied for axial crushing of complex aluminium extrusions
- Development of simplified thin-walled beam models for crashworthiness analyses
- Diving versus roof intrusion: a review of rollover injury causation
- Child restraint seat design considerations to mitigate injuries to three-year-old children in side impact crashes
- Mechanism analysis of pedestrian knee-bending angle by SUV type vehicles using human FE model
- Reconstruction of pedestrian-vehicle accident using sequential linear programming optimizer
- Topology optimization of energy-absorbing structures
- Crash performance of cellular foams with reduced relative density part 1: rib thickness variation
- Crash performance of cellular foams with reduced relative density part 2: rib deletion

Issue 5

- Model characterization and failure analysis of welded aluminium components including process history
- Numerical studies concerning upper neck and head responses in frontal crashes with seat-integrated safety belts

- Realistic simulation models for airbags and humans–new possibilities and limits of FE simulation
- Expansion of circular tubes by rigid tubes as impact energy absorbers: experimental and theoretical investigation
- Development of simplified finite element models for straight thin-walled tubes with octagonal cross section
- Material and structural crashworthiness characterization of paratransit buses
- Detailed tire modeling for crash applications
- Pre-crash investigation using a driving simulator and numerical analyses to determine the influence of the arms positions
- Consideration of vehicle handling and stability with improved roof strength
- The localized low-velocity impact response of aluminium honeycombs and sandwich panels for occupant head protection: experimental characterization and analytical modelling
- Issues in ALE simulation of airbags

Issue 4

- Mechanism analysis of pedestrian knee-bending angle by sedan-type vehicle using human FE model
- The effect of brain mass and moment of inertia on relative brain–skull displacement during low-severity impacts
- Modelling the effects of an inflatable tubular structure (ITS) on occupant kinematics and injury risk in the rollover of a sports utility vehicle (SUV)
- Modelling and simulation of seat-integrated safety belts including studies of pelvis and torso responses in frontal crashes
- Evaluation of knee injury threshold in pedestrian–car crash loading using numerical approach
- Setting initial targets in vehicle side impact safety design using regression-based modeling
- A review of composite structures subjected to dynamic loading
- Smart head restraint system
- Multi-scale and multi-model methods for efficient crash simulation

Issue 3

- Bicycle helmet retention system testing and evaluation
- Structural response of paratransit buses in rollover accidents
- Real accidents involving vulnerable road users: in-depth investigation, numerical simulation and experimental reconstitution with PMHS
- The development of a load sensing trolley for frontal offset testing
- Identification of the spongy bone mechanical behavior under compression loads: numerical simulation versus experimental results

- Crashworthiness optimization of empty and filled aluminum crash boxes
- Comparison of the load/displacement and energy absorption performance of round and square AA6061-T6 extrusions under a cutting deformation mode
- Benchmarking and accident characteristics of flat-fronted commercial vehicles with respect to pedestrian safety
- Experimental study on the interface fracture toughness of PVB (polyvinyl butyral)/glass at high strain rates
- Polymer foams to optimize passive safety structures in helmets
- Study of a device for controlling the pulses of sled testing
- Conditions of possible head impacts for standing passengers in public transportation: an experimental study

Issue 2

- A new crash test configuration for car-to-car frontal collisions with small lateral overlap
- Experimental study of the bone behaviour of the human skull bone for the development of a physical head model
- Restrained occupant protection performance under rollover conditions using an intelligent rollover protection subsystem
- Safety barrier performance predicted by multi-body dynamics simulation
- Estimating bicyclist into pedestrian collision speed
- Car-car crash compatibility: development of crash test procedures in the VC-Compat project
- Experimental and simulated flexion tests of humerus
- Advanced smart airbags: The solution for real-life safety?
- Application of the finite element method to predict the crashworthy response of a metallic helicopter underfloor structure onto a hard surface
- An algorithm for optimised generation of a finite element mesh for folded airbags

Issue 1

- Numerical simulations of motorcycle helmet impact tests
- An experimental methodology for evaluating survivability of an aeronautical construction from composite materials: An overview
- Natural optima in human skull: a low-velocity impact study
- Train's crashworthiness design and collision analysis
- Rollover far side roof strength test and simulation
- Reinforcement of vehicle roof structure system against rollover occupant injuries
- A new analytical model for high-velocity impact of thick composites
- Observations from repeatable dynamic rollover tests
- A road vehicle multibody model for crash simulation based on the plastic hinges approach to structural deformations

2006

Issue 6

- An elastic-plastic free-free beam under asymmetric normal and oblique impact
- A methodology for the simulation of out-of-position driver airbag deployment
- Finite element analysis of seat belt bunching phenomena
- Thoracic deformation response of pedestrians resulting from vehicle impact
- A study of an Asian anthropometric pedestrian in vehicle-pedestrian accidents using real-world accident data
- Modeling of car seat and human body interaction under rear impact
- Multi-directional optimisation against biomechanical criteria of a head-helmet coupling
- The development of a new low-speed impact test to improve bumper performance and compatibility
- Efficiency and identification procedures of damage models in dynamic
- Implementation of composite roof structures in transit buses to increase rollover roof strength and reduce the likelihood of rollover
- Assessment criteria for assessing energy-absorbing front underrun protection on trucks

Issue 5

- An experimental investigation on the behaviour of self-piercing riveted connections in aluminium alloy AA6060
- Evaluation of passenger railroad car roll over crashworthiness
- Experimental evaluation of the wheelchair occupant protection under different impact conditions using commercial wheelchairs
- Analysis of Nij in simulated real-world crashes with a 3-year-old Hybrid-III
- The effect of mobile phone use on driving style and driving skills
- Crash analysis and modeling of two vehicles in frontal collisions using two types of smart front-end structures: an analytical approach using IHBMA (Incremental Harmonic Balance Method)
- Computer modeling of lift trucks and operators to simulate lateral tipover
- Rollover crashworthiness of a rural transport vehicle using MADYMO

Issue 4

- An offset rigid barrier-based test: equivalence to the Insurance Institute for Highway Safety frontal offset impact safety test
- Numerical simulation of fluid-structure interaction of liquid cargo filled tank during ship collision using the ALE finite element method
- Offset impact behaviour of bumper beam—longitudinal systems: experimental investigations
- Offset impact behaviour of bumper beam—longitudinal systems: numerical simulations

- Positioning of motorcyclist dummies in crash simulations
- Effects of pre-impact pedestrian position and motion on kinematics and injuries from vehicle and ground contact
- Elements of passive safety of railway vehicles in collision
- Effect of tensile properties on the energy-absorbing capacity of weld-bonded austenitic stainless steel profiles
- A hybrid technique for determining optimal restraint system characteristics

Issue 3

- Bird strike simulation on a novel composite leading edge design
- Multi-scale human body model to predict side impact thoracic trauma
- Parametric effects on the performance of traffic light poles in vehicle crashes
- Optimisation of energy absorption of an A-pillar by metal foam insert
- Evaluation of frontal occupant protection system responses to crash pulse variations
- Bending collapse of thin-walled beams with channel cross-section
- Simplified modelling of thin-walled box section beam
- The influence of a flexible lumbar spine in far-side impact testing

Issue 2

- Proposal of injury risk curves for evaluating pedestrian femur/pelvis injury risk using EEVC upper legform impactor based on accident reconstruction
- Dynamic response of laminated automotive glazing impacted by spherical featureless headform
- Finite element analysis of cyclist lower limb response in car—bicycle accident
- Experimental study on energy absorption characteristics of motorcycle front wheel—tyre assembly in frontal impact
- Development and testing of a non-energy-absorbing anchorage system for roadside poles
- Projectile impact on sandwich panels
- Numerical modeling of a dual crush mode welded aluminum crash structure
- Finite element modelling of the crushing response of composite sandwich panels with FRP tubular reinforcements

Issue 1

- Influence of damage on the prediction of axial crushing behavior of thin-walled aluminum extruded tubes
- An improved representation of vehicle incompatibility in frontal NCAP tests using a modified rigid barrier
- A simplified test methodology for crashworthiness evaluation of aircraft seat cushions
- Bending of cylindrical steel tubes: numerical modelling
- Assessment of vehicle roof crush test protocols using FE models: inverted drop tests versus updated FMVSS No. 216

- Evaluation of head injury criteria using a finite element model validated against experiments on localized brain motion, intracerebral acceleration, and intracranial pressure
- Feedback control of occupant motion during a crash

2005

Issue 6

- Influence of head restraint position on long-term AIS 1 neck injury risk
- Influence of muscle preactivation of the lower limb on impact dynamics in the case of frontal collision
- Limiting performance analysis of biomechanical systems for optimal injury control – Part 1: Theory and methodology
- Limiting performance analysis of biomechanical systems for optimal injury control – Part 2: Applications
- Quantification of constant stiffness force-shortening model parameters for vehicles tested under United States side impact protocols
- Proposed variable stiffness of vehicle longitudinal frontal members
- Transition from progressive to global buckling of aluminium extrusions – a numerical study
- Load/displacement and energy absorption performances of AA6061-T6 tubes under a cutting deformation mode
- Combination of grey model GM(1, 1) with three-point moving average for accurate vehicle fatality risk prediction

Issue 5

- Wind forces and aerodynamics: contributing factors to compromise bus and coach safety?
- Finite point method: a new approach to model the inflation of side curtain airbags
- Local structural force evaluation of a vehicle in side barrier impacts
- Modeling slip base mechanisms
- Test procedures for vehicle compatibility evaluation
- Evaluation of fleet systems model for vehicle compatibility
- Effects of front wheels and steering-suspension systems during vehicle oblique collisions with a flared guardrail terminal
- Numerical simulation of thin-walled metallic circular frusta subjected to axial loading
- Design, fabrication and testing of a component HIC tester for aircraft applications
- Design of HIC compliant aircraft bulkheads and cabin class divider panels
- Experimental and numerical analyses of the axial crushing behaviour of hat sections partially filled with aluminium foam

Issue 4

- FE simulations of motorcycle—car frontal crashes, validations and observations

- Motorcycle crash tests — an overview
- Safety performance evaluation of secure mailboxes using finite element simulations and crash testing
- Sled tests and CIREN data illustrating the benefits of booster seats
- Design and sled testing of a high back booster seat prototype offering improved side impact protection
- Structural adaptivity in frontal collisions: implications on crash pulse characteristics
- Initiation and propagation of damage in laminated composite shells due to low velocity impact
- Nonlinear impact behaviour of laminated composite shells in hygrothermal environments
- Dynamic stability of stiffened plates with cutout subjected to harmonic in-plane partial edge loading
- Numerical simulation of mow strip subcomponents used with strong post guardrail systems

Issue 3

- Crack initiation in laminated automotive glazing subjected to simulated head impact
- Initialisation of volume fraction in fluid/structure interaction problem
- Designing for head impact safety using a combination of lumped parameter and finite element modeling
- Development of FE meshes for folded airbags
- Finite element modeling and validation of a 3-strand cable guardrail system
- Bending hinge characteristic of thin-walled square tubes
- Axial crushing performance of braided composite tubes
- Cervical spine injuries sustained by motorcyclists in road crashes in Malaysia
- The effect of using universal anchorages in child restraint seats on the injury potential for children in frontal crash

Issue 2

- Analysis of crush behaviours of a rail cab car and structural modifications for improved crashworthiness
- Wheel impact performance with consideration of material inhomogeneity and a simplified approach for modeling
- Comparison of shoulder range-of-motion and stiffness between volunteers, Hybrid III and THOR Alpha in static frontal impact loading
- Numerical simulations of multiple vehicle crashes and multidisciplinary crashworthiness optimization
- Crash simulation of a vertical drop test of a commuter-class aircraft
- A numerical study on the quasi-static axial crush characteristics of square aluminum tubes with chamfering and other triggering mechanisms
- Characteristics of 3.5 kg pedestrian headform impactor prototypes developed by

JAMA-JARI and ACEA-TNO

- A study of injury parameters for rearward and forward facing 3-year-old child dummy using numerical simulation

Issue 1

- An assessment of constitutive models of concrete in the crashworthiness simulation of roadside safety structures
- An experimental investigation into the energy absorption and force/displacement characteristics of aluminum foam filled braided stainless steel tubes under quasistatic tensile loading conditions
- Ear injury from air bag deployment noise?
- Modelling bird impacts on an aircraft wing – Part 1: Material modelling of the fibre metal laminate leading edge material with continuum damage mechanics
- Modelling bird impacts on an aircraft wing – Part 2: Modelling the impact with an SPH bird model
- Frontal collision behaviour: Comparison of onboard collision recorder data with car population characteristics
- Kinematics and injury pattern in rollover accidents of cars in German road traffic – an in-depth-analysis by GIDAS
- Dynamic characterization of polymers to improve numerical simulations for passive safety
- Cervical muscle response to trunk flexion in whiplash-type right lateral impacts
- Development of a mathematical model for evaluating child occupant behaviour in the case of a vehicle side impact simulation

2004

Issue 6

- Development and validation of a vehicle suspension finite element model for use in crash simulations
- Evaluation of structural parameters for vehicle crash compatibility
- Car structural characteristics of fatal frontal crashes in Sweden
- The effect of occupant position in volunteers subjected to whiplash-type rear impacts
- Tolerance of the human leg and thigh in dynamic latero-medial bending
- Designing for safety during pregnancy through a system for automotive engineers
- Predicting fractures due to blunt impact: a sensitivity analysis of the effects of altering failure strain of human rib cortical bone
- A parametric study of the bending crash performance of empty and metal foam-filled box-beams
- Numerical modelling of quasi-static axial crush of square aluminium-composite hybrid tubes
- A new approach for safety crash test: using a genetic algorithm

Issue 5

- A comprehensive failure model for crashworthiness simulation of aluminium extrusions
- A computational model of the human head and neck system for the analysis of whiplash motion
- A methodology to assess frontal stiffness to improve crash compatibility
- Design of train crash experimental tests by optimization procedures
- Static and dynamic roof crush simulation using LS-DYNA3D
- Tank instructor module crash simulation
- A study of modelling approaches for rail vehicle collision behaviour
- Crashworthiness analysis of the Placentia, CA rail collision
- Finite element modelling of the human head-neck: modal analysis and validation in the frequency domain
- Compartment strength and its evaluation in car crashes

Issue 4

- Assessment of basic experimental impact simulations for coupled fluid/structure interactions modeling
- A visco-elastic foam as head restraint material – experiments and numerical simulations using a biorid model
- Design and analysis of an aluminum F-shape bridge railing
- Optimization of single skin surfaces for head injury prevention – a comparison of optima calculated for global versus local injury thresholds
- Failure analysis of arbitrarily shaped human skull due to impact
- Dynamic simulation and energy absorption of tapered tubes under impact loading
- Influence of FE model variability in predicting brain motion and intracranial pressure changes in head impact simulations
- An investigation into the head and neck injury potential of three-year-old children in forward and rearward facing child safety seats
- Finite element simulation of internally grooved thin-wall PVC tubes subjected to axial plastic collapse

Issue 3

- Preliminary analysis of fuel tank impact
- Compatibility between passenger vehicles and road barriers during oblique collisions
- Evaluation of a singular value decomposition approach for impact dynamic data correlation
- Numerical simulation of the crushing process of composite materials
- Structural topology optimization for crashworthiness
- Simplified modelling of vehicle frontal crashworthiness using a modal approach
- Anisotropic damage for crashworthiness of vehicles

- Car frontal collisions: occupant compartment forces, interface forces and stiffnesses

Issue 2

- Structural adaptivity for acceleration level reduction in passenger car frontal collisions
- Development of JAMA—JARI pedestrian headform impactor in compliance with ISO and IHRA standards
- Joining of aluminium using self-piercing riveting: Testing, modelling and analysis
- Quasi-static crushing of S-shaped aluminum front rail
- Head-neck finite element model of the crash test dummy THOR
- Contribution to the definition of a partial overlapping plastic strain rates domain for moderate loadings - application to tensile testing on metallic materials
- Quasi-static and dynamic axial crushing of thin-walled circular stainless steel, mild steel and aluminium alloy tubes
- Confidence limits for impact speed estimation from pedestrian projection distance

Issue 1

- Factor causing scatter in dynamic certification test results for compliance with EEVC WG17 legform impactor standard
- Injury tolerances for oblique impact helmet testing
- Design optimization of metallic hexagonal cross sections
- Finite element modeling of the crash performance of roadside barriers
- Predicting impact loads of a car crashing into a concrete roadside safety barrier
- Friction modelling between solid elements
- Experimental observations on the crush characteristics of AA6061 T4 and T6 structural square tubes with and without circular discontinuities
- Dynamic response of the pelvis under side impact load - a three-dimensional finite element approach
- Evaluation of impact severity measures for AIS 1 neck injuries in frontal impacts using crash recorder data

2003

Issue 6

- Radioss finite element model of the Thor dummy
- Tests and simulation of a w-beam rail-to-post connection
- Static and dynamic behaviour of a polypropylene for bumpers
- Crashworthiness of helicopters on water: Test and simulation of a full-scale WG30 impacting on water
- Occupant analysis and seat design to reduce neck injury from rear end impact
- Numerical modelling of the axial plastic collapse of externally grooved steel thinwalled

tubes

- Velocity changes, mean accelerations and displacements of some car types in frontal collisions
- Human head tolerance limits to specific injury mechanisms
- Influence of crash severity and contact surfaces characteristics on the dynamic behavior of forward facing child occupants
- Impact response of Hybrid III dummy and cadaver knee-femur-pelvis complex

Issue 5

- FE investigation of a spirally slotted tube under axially compressive static and dynamic impact loading
- Crash simulation with glassy polymers – constitutive model and application
- ISOFIX – possibilities and problems of a new concept for child restraint systems
- Aluminium and magnesium castings – experimental work and numerical analyses
- Energy absorbing characteristics of circular frustra
- Empty and foam-filled circular aluminium tubes subjected to axial and oblique quasistatic loading
- Lower extremity injuries in side-impact vehicle crashes
- Experimental investigation on the crushing properties of carbon fibre braided composite tubes

Issue 4

- N-point linear interpolation of motor vehicle crush profiles applied to various force-shortening models
- An investigation into the crashworthiness characteristics of steering wheel armatures from common compact passenger cars
- Validated multibody model for train crash analysis
- The creation of three-dimensional finite element models for simulating head impact biomechanics
- A comparative study on vehicle aluminum and steel hood assemblies
- Real world car crash investigations – A new approach
- The kicking machine: A device for impact testing of structural components
- Three dimensional analysis of multidirectional composites subjected to low velocity impact
- A modern aerospace modeling approach for evaluation of aircraft fuselage crashworthiness

Issue 3

- Energy absorbing stand-up roadside signposts
- Prediction of crushing behaviour of honeycomb structures
- A comparison of the crashworthiness performance of geometrically identical aluminium

and magnesium steering wheel armatures

- Static and dynamic axial collapse of fibreglass composite thin-walled tubes: finite element modelling of the crush zone
- Evaluation of the effectiveness of a bus and coach seat during rear end impact by means of sled tests
- Analysis of collision between pedestrian and small car
- Injuries to children in child restraints
- Mathematical modelling of lower leg responses in offset crashes
- Investigation of impact and damage tolerance in advanced aerospace composite structures
- A cost effective far side crash simulation

Issue 2

- Improving occupant safety in coach rollover
- Proposal for a dynamic rollover protective system test
- Australian research to develop a vehicle compatibility test
- Development of structural crashworthiness to the European side impact test in Ford AUII Falcon
- Swedish vision zero experience
- Evaluation of a new visco-elastic foam for automotive applications
- New injury reference values determined for TRL legform impactor from accident reconstruction test
- Finite element analysis of impacts on water and its application to helicopter water landing and occupant safety
- Development of a third generation mechanically inflated airbag head restraint system and its characterisation under impact loading

Issue 1

- Global NCAP harmonisation - initial position, requirements and prospects
- Reconstruction of occupant kinematics and kinetics for real world accidents
- Topology optimization for crashworthiness of frame structures
- Towards a finite element head model used as a head injury predictive tool
- FE simulation of head-on and side impact crash analysis between a nose cone type structure and rigid objects
- An advanced methodology for estimating vehicle rollover propensity
- Contact and impact models for vehicle crashworthiness simulation
- Axisymmetric progressive crushing of circular tubes
- Measuring rollover roof strength for occupant protection
- Carbon skinned aluminium foam nose cones for high performance circuit vehicles

Issue 4

- Crashworthiness analysis of a lock gate impacted by two different river ships
- Optimization of Vehicle Crash Pulses in Relative Displacement Domain
- Assessment of multi-physics FE methods for bird strike modelling-Application to a metallic riveted airframe
- Study of die cast magnesium components for crash safety
- Possibilities and limitation for protective measures for injury reduction Of vulnerable road users
- Design and validation of a new omnidirectional dummy neck For low speed impacts
- Impact testing in Formula One
- Rollover crash tests

Issue 3

- Comparative evaluation of the THOR advanced frontal crash test dummy
- Knee ligament failure under dynamic loadings
- Finite element modelling and simulation of upper limb with radioss
- Pedestrian forward projection impact
- Impact model development for the reconstruction of current motorcycle accidents
- A new concept for a helicopter sub-floor structure crashworthy in impacts on water and rigid surfaces
- Optimal design of train structures for crashworthiness using a multiload approach
- Quasi-static response of laterally simple compressed hexagonal rings

Issue 2

- An experimental air bag test system for the study of air bag deployment Loads
- Full face protective helmet modelling and coupling with a Human head model
- A method to determine structural sensitivities in vehicle crashworthiness design
- Energy absorption of braided composite tubes
- Development and validation of the FAT finite element model for the side impact dummy „EUROSID-1“
- Computer modelling of trans-shoulder forces in motor vehicle accidents

Issue 1

- A multibody methodology for the design of anti-climber devices for train crashworthiness simulation
- Crushing properties of pultruded glass reinforced square tubes
- Computer modelling of trans-shoulder forces in motor vehicle Accidents
- Usage of recycled plastic bottles in roadside safety devices

- Analysis of impact on soft soil and its application to aircraft crashworthiness
- Folding-crumpling of thin-walled aluminium frusta
- Car to car interaction in frontal collisions: A model for the behaviour of the car population and options for improved crashworthiness
- An investigation into the energy absorption characteristics of a four-spoke steering wheel armature subjected to impact loading

2001

Issue 4

- Non-linear numerical modelling of aircraft impact
- Finite element buckling analysis of laminated composite stiffened shells
- Full-scale crash test and simulation of a composite helicopter
- Some effects of Australian Design Rule (ADR) 69 on frontal crash outcomes
- Finite element modelling of anthropomorphic test devices for vehicle crashworthiness evaluation
- Structural Dynamic Responses with Generalised Explicit Finite Difference Models
- Crash strength and energy management of axially loaded extruded aluminium components reinforced with epoxy-based Terocore Foam
- Modelling of glass reinforced thermoplastic composite side-impact structures
- Inertia effects on some crashworthiness parameters for cylindrical shells under axial impact
- Biomechanical simulation of whiplash - some implications for seat design
- Determination of head/neck loads during manoeuvring acceleration
- Influence of deceleration profiles on occupant velocity differential and injury potential

Issue 3

- New dummy head prototype : development, validation and injury criteria
- Gender-Related Spinal Injury Assessment Considerations in Military Aviation Occupant Protection Modelling
- The thoracic member under side impact: an Experimental Approach
- Optimal control of helicopter seat cushions for the reduction of spinal injuries
- Behaviour of frontal protection system in passenger vehicles
- Automatic time stepping algorithms for implicit numerical simulations of blade/casing interactions
- Axial crushing of hybrid square sandwich composite vehicle hollow bodyshells with reinforced core: Experimental
- Advantages of safety belts in heavy trucks - Results of real life crash analyses and of a crash test with a Mercedes-Benz ACTROS 1853
- Crashworthiness Evaluation Using Integrated Vehicle and Occupant Finite Element Models
- Finite Element Simulation of Energy Absorption Devices under Axial Static Compressive

and Impact Loading

- Simulation of helicopter under-floor structure impact on water

Issue 2

- Effectiveness of cargo barriers to protect front seat occupants in rear impacts - crash test evaluation
- Finite element simulation of the axial collapse of thin-wall square frusta
- Application of plastic collapse mechanisms for the axial crushing analysis of tubular steel structures filled with aluminium foam
- Design of aluminium foam-filled crash boxes of square and circular cross-sections
- Analysis of crash response of aluminium foam-filled front side rail of a passenger car
- Augmented Lagrangian procedure for implicit computation of contact-impact between deformable bodies
- Optimisation for minimum weight of foam-filled tubes under large twisting rotation
- A Review of the effectiveness of seat belt systems: design and safety considerations
- A two-dimensional analysis of the biomechanics of frontal and occipital head impact injuries
- Prediction of head and neck injury in transport aircraft seats as a function of occupant size and seat configuration

Issue 1

- Dynamic material properties and inelastic failure in structural crashworthiness
- The effect of impact velocity and steering wheel orientation on the crashworthiness of a steering wheel armature
- Sign support height analysis using finite element simulation
- Detailed simulation of the Airbag Inflation Process Using a Coupled CFD/FE Method
- A new oblique impact test for motorcycle helmets
- Kinematic Contact-Impact Algorithm with Friction
- Elasto-plastic response of a free-free beam subjected to pulse loads at any cross-section
- Evaluation of passenger rail vehicle crashworthiness
- Impact Testing and Simulation of a Crashworthy Composite Fuselage Concept
- Finite element simulation of biomechanical response of the human body subjected to lateral impact

2000

Issue 4

- Biaxial bending collapse of thin-walled beams filled partially or fully with aluminium foam
- A demonstrator bumper system based on aluminium foam filled crash boxes
- A hybrid model for pedestrian impact and projection

- A study on a retrofit of the breakaway cable terminal
- Mathematical models integral rating
- Kalman filter estimates of chest velocity
- Experimental study of crush behaviour of sheet aluminium foam-filled sections
- Characteristics and potential applications of a novel shock absorbing elastomeric composite for enhanced crashworthiness
- Investigations on impact testing of head injury protection helmets

Issue 3

- Structural Stiffness, Elastic Recovery, and Occupant Inertial Effects on Measured Door Response in a Laterally Struck Vehicle
- Finite element modelling of skull fractures caused by direct impact
- Development of a finite element model of the human neck subjected to high g-level lateral deceleration
- Analysis and Design Consideration of an Energy Absorbing Steering System Using Orthogonal Arrays
- Interplay of factors influencing collapse modes in axially crushed tubes
- Two-Dimensional Collisions of Vehicles (Case of Consideration of Tire Forces During Impact)
- Axial collapse of hybrid square sandwich composite tubular components with corrugated core: Experimental
- Analysis of polyester and epoxy composite shells subjected to axial crushing

Issue 2

- Biofidelity Evaluation of Dynamic and Static Response Characteristics of the Thor Lx Dummy Lower Extremity
- Designing for the critical impact point on a new bullnose guardrail system
- Validated crash simulation of the most common guardrail system in the USA
- Smart frictional impact energy absorber
- Efficient implicit schemes for the treatment of the contact between deformable bodies: Application to shock-absorber devices
- The bending of fibre-reinforced composite thin-walled tubular components: Numerical modelling
- Recycled paper-rolled tubes as potential energy absorbing elements

Issue 1

- Simple and effective lumped mass models for determining kinetics and dynamics of car-to-car crashes
- Development of a Detailed Vehicle Finite Element Model Part I: Methodology
- Development of a Detailed Vehicle Finite Element Model Part II: Material Characterization and Component Testing

- Airframe Water Impact Analysis
- Failure analysis of multiple delaminated composite plates due to low velocity impact
- Investigation on the Crash Behaviour of Knitted Glass Fibre Reinforced Poly(ethylene-terephthalate) Structures
- Lateral compression of empty and filled single tubes by short width indenters
- Developments in the simulation of real world car to pedestrian accidents using a pedestrian humanoid finite element model

1999

Issue 4

- Some Phenomena in the structural crashworthiness field
- Determination of the Energy Absorption of Cylindrical Shells under Axial Loading by Analysis of the Dynamic Buckling and Folding Process
- Experimental and analytical investigations on the energy absorption by tapering
- Study of axisymmetric crushing mechanisms by sequential limit analysis
- Development and validation of high fidelity vehicle crash simulation models
- Three-dimensional finite element modelling of vehicle crashes against roadside safety barriers
- Train crashworthiness and its impact on society
- Application of Computer-Aided analysis tools for aircraft occupant and seat crashworthiness problems

Issue 3

- Development of a side facing seat and seat belt system for the Australian Army Perentie 4x4
- Pedestrian impact and run over using a multibody simulation tool
- Efficient implicit schemes for the treatment of the contact between deformable bodies: Application to shock-absorber devices
- Performance validation of two finite element models Of a side impact dummy
- Mechanisms of Ankle and Hind-foot Injuries to Drivers and Passengers in Frontal Crashes as Deduced from Field Studies
- Effects of temperature on the crash behaviour of glass fibre reinforced polyamide 12

Issue 2

- High-speed passenger train crashworthiness and occupant survivability
- Modifications to Existing Rolling Stock to Improve Crashworthiness
- The prediction of frontal impact crashworthiness of a spaceframe sportscar
- Analysis of pedestrian head impacts to the bonnets of European vehicles
- The concept of double-walled sandwich columns for energy absorption

- Energy absorption of riveted structures
- Composite vehicle structural crashworthiness - A status of design methodology and numerical simulation techniques

Issue 1

- Analysis and evaluation of a redesigned 3" x3" slipbase sign support system using finite element simulations
- Multibody modelling of a side impact test apparatus
- Finite element modelling of the human body in vehicle side impact
- Vehicle structural impact and occupant biomechanics in a multibody integrated environment
- A Study of Standards for Child Restraint System Sled Tests
- A feasibility study for an optimising algorithm to guide car structure design under side impact loading
- Finite element modelling of fracture in long bones

1998

Issue 4

- Mechanisms of cervical spine fractures and soft tissue injuries of motorcyclists for the assessment of the effectiveness of back protectors
- Frontal impacts with small partial overlap: real life data from crash recorders
- The simulation of real world car to pedestrian accidents using a pedestrian humanoid finite element model
- The response of square cross-section tubes under lateral impact loading
- Finite element transient dynamic analysis of laminated composite Pretwisted rotating plates subjected to impact
- Kinematics of SID on side-facing aircraft seat

Issue 3

- A study on crushing characteristics of thick-walled aluminum tubes under axial loading
- Analysis of airbag depowering and related parameters in out of position environment
- Validation of an Analytical Model of a Right-Angle Collision between a Vehicle and a Fixed, Rigid Object
- Collapse of thin-walled empty and filled square tubes under lateral loading between rigid plates
- Serious neck injury in rollovers - is roof crush a factor?
- Static and dynamic bending strength of the leg
- International Crashworthiness Conference - IJCRASH'98

Issue 2

- Side Impact Protection - Occupants in the Far-Side Seat
- Compatibility analysis of Mini cars in frontal collisions using MADYMO
- Tracking the energy in an energy absorbing guardrail terminal
- Injury mechanisms and criteria for the human foot and ankle under axial impacts to the foot
- Thermal influence on mild steel behaviour during a crash event
- An investigation on the impact performance of pipelines

Issue 1

- The Influence of Frontal Crash Test Speeds on the Compatibility of Passenger Cars in Real World Accidents
- Promoting safety using retrospective large databases
- Estimating crash performance for new car design
- Vehicle safety in Australia using real world crash data
- Benefit of in depth data for analysing injury mechanisms of accidents with bicyclists and motorcyclists
- Reconstructing crashes involving emergency braking on wet roads
- Taxonomy of heavy vehicle accidents

1997

Issue 4

- Effect of an Ultralight Metal Filler on the Torsional Crushing Behaviour of Thin-Walled Prismatic Columns
- The use of finite element analysis in roadside hardware design
- Plastic collapse of metallic conical frusta of large semi-apical angles
- Paediatric Neck Modelling using Finite Element Analysis

Issue 3

- Editorial: Regulations Vs. Crash Test Vehicle Rating Systems
- Finite element model and validation of a surrogate crash test vehicle for impacts with roadside objects
- Mathematical simulation of knee responses associated with leg fracture in car-pedestrian accidents
- A study on large deflection of thin-walled tubes under pure bending
- Automobile side impact modelling using ATB software

Issue 2

- Improving bus rollover design through modal analysis
- The Development of a 'Smart Seat' Occupant Size and Position Sensing System for the

Enhancement of Occupant Protection

- Mechanics of a mechanically triggered airbag head restraint system for occupant protection in rear end impact
- Brain kinematics in physical model tests with translational and rotational acceleration
- Biomechanics of cervical spinal cord injury in flexion and extension: A physical model to estimate spinal cord deformations
- Impact biomechanics of the human thorax-abdomen complex

Issue 1

- Response of helmets in direct and oblique impacts
- Numerical simulation of the Lynx helicopter main lift-frame component collapse
- Aviation safety and crashworthy seat design
- Evaluation and design of vehicle structures for crash protection - a systems approach
- A multibody approach to the vehicle and occupant integrated simulation
- FASIM_C++ - A versatile developing environment for vehicle dynamics simulation
- Vehicle Frontal Crashworthiness Analysis by Simplified Structure Modeling using Nonlinear Spring and Beam Elements
- Thoracic response and injury with belt, driver side airbag, and force limited belt restraint systems

1996

Issue 4

- Evaluation of parameters affecting simulation of airbag deployment and interaction with occupants
- Analysis of energy-absorbing seat configurations for aircraft
- Optimal design of composite fuselage frames for crashworthiness
- MADYMO models of the human and dummy lower limbs to investigate biomechanical responses
- Development of the Heathrow Express crashworthy rail vehicle
- Simulation of brain kinematics in closed head impact

Issue 3

- Finite element impact response analysis of doubly curved composite sandwich shells Part-II : numerical results
- Parameter estimation for head impacts and brain injury in crash reconstruction
- Energy absorption for a truck-front bumper bar
- A study on crushing behaviour and energy absorption capacity of a thin-walled rectangular tube under axial compression
- An investigation of fracture mechanisms of carbon epoxy laminates subjected to impact and compression-after-impact loading

- Computer simulation of impact damage on thin-skinned carbon fibre composite panels
- The effect of multiple impact damage on the residual compressive strength of composite structures
- Side impact protection: the use of 3-D reinforced composite panels

Issue 2

- Development of energy absorbing devices using a kinetostatic multibody dynamics methodology
- A side airbag system to meet chest injury measures: evaluation by mathematical simulations
- Predicting the crashworthiness of vehicle structures made by lightweight design materials and innovative joining methods
- An evaluation of deformation based Chest Injury Criteria using a hybrid III finite element model
- Finite element impact response analysis of doubly curved composite sandwich shells Part-I: theoretical formulation
- Calculation of the dynamic axial crushing response of complex prismatic sections
- Non-destructive crash testing

Issue 1

- Introduction to crashworthiness
- Modelling verification of an airframe section and comparisons with impact test
- Structural crashworthiness simulation of a rear end collision of a small European car
- A mathematical model of the BIOSID dummy
- Modelling of occupant biomechanics with emphasis on the analysis of lower extremity injuries
- Lessons learned in modeling a moving deformable barrier (MDB) impacting a rigid wall
- Strain rate and inertial effects in free external inversion of tubes
- Non-destructive crash testing

Weitere Infos

- <http://www.tandfonline.com/>
 - http://www.tandfonline.com/toc/tcrs20/current#.VbThk_IsOao
-

Abgerufen von

„https://www.colliseum.eu/wiki/index.php?title=International_Journal_of_Crashworthiness&oldid=27091“

Diese Seite wurde zuletzt am 1. November 2018 um 09:12 Uhr bearbeitet.

Bitte beachten Sie unsere Lizenzbedingungen für das Colliseum.