

## CONTENTS

Abstracted/Indexed in: *Acoustics Abstracts; Bioengineering Abstracts; Biological Abstracts; Current Contents/Engineering, Technology, and Applied Sciences; Excerpta Medica; FLUIDEX; International Aerospace Abstracts; Mathematical Reviews, Research Alert; Shock & Vibration Digest; and the Science Citation Index (Acoustics and Mechanics)*

### Special Issue on Vibro-Impact Systems, Loughborough University, UK, 20–22 July 2006

BABITSKY, V., IBRAHIM, R., OKUMA, M. and SILBERSCHMIDT, V., Guest Editorial	373
<b>Vibro-Impact Systems</b>	
SOKOLOV, I.J., BABITSKY, V.I. and HALLIWELL, N.A., Autoresonant vibro-impact system with electromagnetic excitation	375
BATAKO, A.D.L., LALOR, M.J. and PIIRONEN, P.T., Numerical bifurcation analysis of a friction-driven vibro-impact system	392
POTTHAST, C., TWIEFEL, J. and WALLASCHEK, J., Modelling approaches for an ultrasonic percussion drill	405
TANGASAWI, O., THEODOSSIADES, S. and RAHNEJAT, H., Lightly loaded lubricated impacts: Idle gear rattle	418
MASON, J., HOMER, M. and EDDIE WILSON, R., Mathematical models of gear rattle in Roots blower vacuum pumps	431
HEMSEL, T., STROOP, R., OLIVA URIBE, D. and WALLASCHEK, J., Resonant vibrating sensors for tactile tissue differentiation	441
GRIGAS, V., TOLOCKA, R.T. and ZILIUKAS, P., Dynamic interaction of fingertip skin and pin of tactile device	447
<b>Materials under Vibro-Impacting</b>	
JOHNSON, A.A. and STOREY, R.J., The impact fatigue properties of iron and steel	458
CASAS-RODRIGUEZ, J.P., ASHCROFT, I.A. and SILBERSCHMIDT, V.V., Damage evolution in adhesive joints subjected to impact fatigue	467
DUMITRU, I., MARSAVINA, L. and FAUR, N., Experimental study of torsional impact fatigue of shafts	479
SOSNOVSKIY, L.A. and SHERBAKOV, S.S., Vibro-impact in rolling contact	489
AZOUAOU, K., OUALI, N., OUROUA, Y., MESBAH, A. and BOUKHAROUBA, T., Damage characterisation of glass/polyester composite plates subjected to low-energy impact fatigue	504
AVSEC, J. and OBLAK, M., Thermal vibrational analysis for simply supported beam and clamped beam	514
DAVIS, M. and KOENDERS, M.A., Oscillated densely packed granular media immersed in a fluid	526
<b>Impact Testing and Identification</b>	
OTSUKA, T., OKADA, T., IKENO, T., SHIOMI, K. and OKUMA, M., Force identification of an outboard engine by experimental means of linear structural modeling and equivalent force transformation	541
NARABAYASHI, T., SHIBAIKE, K., ISHIZAKA, A. and OZAKI, K., Effects of key parameters on energy distribution and kinetic characteristics in collision of bar and beam	548
BOTTA, F. and CERRI, G., Shock response spectrum in plates under impulse loads	563
IWATSUBO, T., SUCIU, C.V., IKENAGAO, M. and YAGUCHIO, K., Dynamic characteristics of a new damping element based on surface extension principle in nanopore	579

ARIO, I. and WATSON, A., Dynamic folding analysis for multi-folding structures under impact loading	591
SHORR, B.F., MEL'NIKOVA, G.V. and KHANYAN, G.S., Mathematical simulation of oil fields probing using shock impulse loading	599
BARAUSKAS, R. and KRUŠINSKIENĖ, R., On parameters identification of computational models of vibrations during quiet standing of humans	612
EIDUKEVICIUTE, M. and VOLKOVAS, V., Measurement uncertainty in vibromonitoring systems and diagnostics reliability evaluation	625
<b>Control of Fast Mechanical Processes</b>	
TAHJOWIDODO, T., AL-BENDER, F., VAN BRUSSEL, H. and SYMENS, W., Friction characterization and compensation in electro-mechanical systems	632
WANG, D., NISHIMURA, H. and SHIMOGO, T., Active control of shock by gain scheduling	647
OSTASEVICIUS, V., DAUKSEVICIUS, R., GAIDYS, R. and PALEVICIUS, A., Numerical analysis of fluid-structure interaction effects on vibrations of cantilever microstructure	660
OUYANG, H. and WANG, M., A dynamic model for a rotating beam subjected to axially moving forces	674
TUMASONIENE, I., KULVIETIS, G., MAZEIKA, D. and BANSEVICIUS, R., The eigenvalue problem and its relevance to the optimal configuration of electrodes for ultrasound actuators	683
HUANG, D.G., Characteristics of torsional vibrations of a shaft with unbalance	692
OUYANG, H., Stationary and non-stationary vibration of atomising discs	699
BAKLANOV, V.S., Low-frequency vibroisolation mounting of power plants for new-generation airplanes with engines of extra-high bypass ratio	709
<b>Dynamic Friction and Precise Movement Control</b>	
RUSLI, M. and OKUMA, M., Effect of surface topography on mode-coupling model of dry contact sliding systems	721
IBRAHIM, R.A. and SOMNAY, R.J., Nonlinear dynamic analysis of an elastic beam isolator sliding on frictional supports	735
CHU, F. and LU, W., Stiffening effect of the rotor during the rotor-to-stator rub in a rotating machine	758
POPPRATH, S. and ECKER, H., Nonlinear dynamics of a rotor contacting an elastically suspended stator	767
BANAKH, L. and NIKIFOROV, A., Vibroimpact regimes and stability of system "Rotor-Sealing Ring"	785
LIM, H.S., KWON, S.H. and YOO, H.H., Impact analysis of a rotating beam due to particle mass collision	794
<b>Ultrasonic Machining</b>	
BABITSKY, V.I., ASTASHEV, V.K. and MEADOWS, A., Vibration excitation and energy transfer during ultrasonically assisted drilling	805
THOMAS, P.N.H. and BABITSKY, V.I., Experiments and simulations on ultrasonically assisted drilling	815
NEUMANN, N. and SATTEL, T., Set-oriented numerical analysis of a vibro-impact drilling system with several contact interfaces	831
AHMED, N., MITROFANOV, A.V., BABITSKY, V.I. and SILBERSCHMIDT, V.V., Analysis of forces in ultrasonically assisted turning	845
MORDYUK, B.N. and PROKOPENKO, G.I., Ultrasonic impact peening for the surface properties' management	855
VASILJEV, P., MAZEIKA, D. and KULVIETIS, G., Modelling and analysis of omni-directional piezoelectric actuator	867
Index to Volume	879