

**CONTENTS**

Organisers	iii
Scope of the Colloquium	vii
Abstracts	
Antipova T. A.: Generators of Test Matrices for Matrix Computation	1
Antoni J., Sidahmed M.: Reviewing the Basic Principles of Operational Modal Analysis Time Domain and Frequency Domain Methods	2
Argoul P., Le T. P.: Wavelet Analysis of Transient Signals. Instantaneous Indicators for Structural Modal Identification	3
Balda M.: A Method for Local Identification of Critical Speeds of Rotors	4
Bellizzi S., Collard B., Pisapia S.: Parametric Model Selection Using Bayesian Theory for Identification of Non-linear Systems - Application to Power Fuel Assembly	5
Bouazzouni, A.: Structural Damage Detection by Eigensolutions Measurements	6
Bruns J.-U., Sextro W., Panning L., Popp K.: Contact Parameter Identification of Turbine Blades with Friction Damping	7
Buchacz A.: Inverse Multi-tasks of Dynamics of Vibrating Mechanical Systems and Processes	8
Camillacci R., Ferguson N. S., White P. R.: Modal Identification of Multi-degree-of-freedom Mechanical Systems Possessing Cubic Stiffness	9
Chen G., Fotsch D., Ewins D. J.: Model Updating with Supermodels	10
Dalenbring M.: Experimental Estimation of Homogeneous Material Damping for Composite Laminate Structures with Planar Isotropy	11
Daněk O., Vaněk F., Procházka P., Kozánek J., Pešek L., Cibulka, J.: Diagnostic Magneto-Kinetic Equipment MK3	12
Gáspár T., Stépán G.: Mechanical Modelling of Electromagnetic Exciters	13

Heimann B., Grotjahn M.:	Identification and Compensation of Friction in Multibody Systems with Application to Robotics	14
Hu W., Feng N. S., Hahn E. J.:	On the Identification of the Configuration State of Statically Indeterminate Rotor Bearing Systems	15
Ickler A., Ronneberger D.:	Adaptive Stabilisation of the Jet-Edge-Flow	16
Iourtchenko D. V., Dimentberg M. F.:	Identification of Nonlinear System's Parameters from Measured Response for Deterministic and Stochastic Systems	17
Irwanto B., Hardtke H.-J.:	Identification and Model Updating of Mistuned Bladed Disk Assemblies	18
Jatsun S., Jatsun Sv., Shepoluhin V.:	Vibrodiagnostic of the Human Skin Properties	19
Juraszek J., Nowak J., Jurasz Z.:	Application of FEM Analysis to Determining of Temperature and Displacement Distribution in End-face Seal	20
Karhunen J., Niskanen J.:	On the Vibration Excitation Mechanisms of the Paper Machine Roll Presses	21
Kizilova N. N.:	Identification of Rheological Parameters in Models of Growing Continuum	22
Kłosiński J.:	The Mathematical Model of a Mobile Crane Aimed for Checking its Dynamic Stability	23
Kozánek J., Šafr M., Pavelka J., Půst, L.:	The Design Concept of Contactless Bearings and their Mathematical Models	24
Lallement G., Cogan S.:	Experimental Modal Analysis: Realities, Applications and Perspectives	25
Landa M., Kozánek J., Zolotarev I., Novák V.:	Resonant Ultrasound Spectroscopy and Dynamic System Identification	26
Lardies J.:	On the use of Pade Approximants in the Estimation of Eigenfrequencies and Damping Coefficients of a Vibrating System	27
Lepage A., Linet V., Piranda J., Foltête E.:	Appropriation and Condensed FRF Curve-fitting: Two different Approaches for Experimental Modal Analysis using Electronic Speckle Pattern Interferometry	28
Liberzon M. R., Lapir M. A.:	Electroplasticity and Mechanical Structures	29

Lindemann S., Irretier H.:		
	Finite-Element-Model Updating of Flexible Rotors	30
Maczyński A., Wojciech S.:		
	Application of the Modal Analysis to Modelling of the Crane Telescoping Jib	31
Malenovský E.:		
	Computational Modelling of Dynamic Behaviour of a Pump for Special Liquids	32
Michot S., Cogan S., Lallement G.:		
	Model Response Expansion using an a Priori Force Residual Space	33
Morassi A.:		
	Detecting Cracks in Vibrating Beams: Some New Results and Open Problems	35
Musil M.:		
	Crack Localisation and Quantification Based on Measured Vibrations	36
Myklebust L. I., Skallerud B., Rølvag T.:		
	On Deficiencies of Model Reduction Methods in Nonlinear Dynamical Problems	37
Nayroles B.:		
	Freedom Reduction and Stiffness Bounding in Structural Mechanics	38
Pešek L., Veselý J.:		
	Time-domain Identification of Non-linear Rheological Models in a Sandwich Mechanical System	39
Pietrzakowski M.:		
	Development of Active Damping of Laminated Plates Using Piezoceramic Fiber Composite Actuators	40
Platz R., Markert R., Jayesh J., Sekhar A. S.:		
	Model Based Unbalance and Fatigue Crack Identification in Rotor Systems	41
Prykarpatska N. K.:		
	On the Inf-type Extremality Solution to a Hamilton-Jacobi Equation on the Sphere S^N	42
Prykarpatsky A. K.:		
	Homology Structure of Ergodic Measures	43
Půst L.:		
	Impact Motion in Retainer Bearing	44
Pyrz M., Woznica K., Iwanow Z.:		
	Identification of Constitutive Viscoplastic Law Parameters by Evolutionary Approach	45
Radulescu A. V., Radulescu I., Savu T., Arsenoiu L.:		
	Experimental Researches Concerning the Functional Behavior of the Shaft-bearing Assembly of Centrifugal Fans	46

Safizadeh M. S., Lakis A. A.:		
	Time-frequency Algorithms and their Applications	48
Sarkisyan V. S., Movsisyan L. A., Kutuzyan N. A.:		
	New Problems of Theory of Strength, Stability and Vibrations of Elements of Constructions from Thermosensitive Composite Materials	49
Schulte H.:		
	Friction Identification and Suppression of Stick-slip Motion using Smoothed Local Linear Models	50
Sol H., De Wilde W. P.:		
	Distributed Stiffness Identification using Mode Shape Information	51
Štefan M., Valášek M., Šika Z.:		
	Time Response Prediction of Nonlinear Systems by their Nonlinear Identification	52
Teughels A., De Roeck G.:		
	Improvement of the General FEM Updating Method by the use of Damage Functions	53
Tiwari R.:		
	Conditioning of Simultaneous Imbalance and Bearing Dynamic Parameters Estimation	54
Trnka J., Landa M., Dvořáková P.:		
	Wave Phenomena in Thin-wall Structures Studied by Non-destructive Testing Methods	55
Velmisov P. A., Molgachev A. A.:		
	Dynamics Investigation of Elastic Elements of Constructions under Aerohydrodynamical Action	56
Wagner N.:		
	Estimation of Rigid Body Parameters using the Matrix Logarithm	57
Wong W. L., Ng C. F.:		
	Analytical and Experimental Evaluation of the Dynamic Response of Square Plate by Using a Newly Design Air Gap Damper	58
Yin H. P., Duhamel D.:		
	Substraction Technique and Finite Difference Formulas for Modal Parameter Estimation	59
I. Zanevskyy:		
	Lateral Vibrations in the Bow and Archer System	60
Zhengqi G., Yufeng L., Han D., Xianwei H.:		
	Investigation of the Vehicle Performance with Four Wheel Steering Control in Crosswind	61
Author's Index		62