

PROGRAMME of VIBSYS 2020

Wednesday, October 14

12:00 – 15:30 Registration
13:00 – 14:00 Lunch
14:00 – 14:30 Opening ceremony
14:30 – 15:20 **Plenary lecture 1**
15:20 – 15:40 Coffee break (dessert)
15:40 – 17:40 MS01 session 1 (8 presentations)
17:40 – 18:00 Coffee break (sandwiches)
18:00 – 19:15 Regular session 2 (6 presentations)

Thursday, October 15

09:00 – 09:50 **Plenary lecture 2**
10:00 – 11:30 Young researcher session 3 (6 presentations)
11:30 – 11:50 Coffee break (dessert)
11:50 – 13:45 Young researcher session 4 (7 presentations + 1)
13:45 – 15:00 Lunch
15:00 – 16:45 **60th Anniversary (Plenary lectures 3 and 4)**
16:45 – 17:00 Coffee break (dessert)
17:00 – 18:30 Poster session 5 (12 posters)
19:00 – ... Dinner

Friday, October 16

09:00 – 09:50 **Plenary lecture 5**
10:00 – 11:30 Regular session 6 (7 presentations)
11:30 – 11:45 Coffee break (dessert)
11:45 – 13:30 Regular session 7 (7 presentations)
13:30 – 13:45 Closing ceremony
13:45 – 15:00 Lunch

PROGRAMME of VIBSYS 2020

Wednesday, October 14

12:00 – 15:30 Registration

13:00 – 14:00 **Lunch**

14:00 – 14:30 Opening ceremony

14:30 – 15:20 **Plenary lecture 1**

Andrzej TYLIKOWSKI *NEW ASPECTS OF STOCHASTIC DYNAMICS*

15:20 – 15:40 **Coffee break (dessert)**

15:40 – 17:40 **MS01 session 1**

15:40 – 15:55	Piotr CZUBAK, Witold SURÓWKA <i>INFLUENCE OF THE EXCITATION FREQUENCY ON OPERATIONS OF VIBRATORY CONVEYOR ALLOWING FOR A SUDDEN STOP OF THE TRANSPORT</i>
15:55 – 16:10	Lukasz ŁACNY, Lukasz ŚCISŁO, Michael GUINCHARD <i>APPLICATION OF PROBABILISTIC POWER SPECTRAL DENSITY TECHNIQUE TO MONITORING THE LONG-TERM VIBRATIONAL BEHAVIOUR OF CERN SEISMIC NETWORK STATIONS</i>
16:10 – 16:25	Lukasz SCISŁO, Lukasz ŁACNY, Michael GUINCHARD <i>CORONAVIRUS PANDEMIC LOCKDOWN INFLUENCE ON THE SEISMIC AMBIENT NOISE MEASUREMENTS BY THE LHC SEISMIC STATIONS</i>
16:25 – 16:40	Waldemar ŁATAS <i>ACTIVE VIBRATION SUPPRESSION OF AXIALLY MOVING STRING VIA DISTRIBUTED FORCE</i>
16:40 – 16:55	Waldemar ŁATAS, Zygmunt DZIECHCIOWSKI <i>OPTIMAL CONFIGURATION AND PARAMETERS OF TRANSLATIONAL DYNAMIC VIBRATION ABSORBERS IN VIBROISOLATION OF MECHANICAL PRESS</i>
16:55 – 17:10	Sebastian PAKUŁA <i>OFF-AXIS ELIMINATION OF VIBRATIONS OF ROTOR MACHINES WITH THE USE OF AUTOMATIC BALL ELIMINATORS</i>
17:10 – 17:25	Daniel ZIEMIANSKI <i>DESIGN UNDULATOR SEGMENTS FOR THE FREE ELECTRON LASER PROJECT</i>
17:25 – 17:40	Grzegorz CIEPŁOK, Paweł PIEKAJ <i>MOVEMENT PROPERTIES OF ANTIRESONANCE VIBRATION MILL WITH SYMMETRICAL CONSTRUCTION</i>

17.40 – 18.00 **Coffee break (sandwiches)**

18:00 – 19:15 **Regular session 2**

18:00 – 18:15	Krzysztof KOSAŁA, Leszek MAJKUT, Ryszard OLSZEWSKI <i>EXPERIMENTAL STUDY AND PREDICTION OF INSERTION LOSS OF ACOUSTICAL ENCLOSURES</i>
18:15 – 18:30	Krzysztof KOSAŁA, Leszek MAJKUT, Dominik MLECZKO, Ryszard OLSZEWSKI, Tadeusz WSZOLEK <i>HOMOGENEOUS SINGLE SOUND INSULATION BAFFLES – THE ACCURACY OF PREDICTION METHODS</i>
18:30 – 18:45	Grzegorz ILEWICZ <i>CALCULATING EXTREME CRITERIA OF EIGENVALUE PROBLEMS OF A MEDICAL ROBOT FOR SOFT TISSUE SURGERY USING THE MULTI-OBJECTIVE OPTIMIZATION</i>
18:45 – 19:00	Adam STAWIARSKI, Marek BARSKI, Aleksander MUC <i>EXPERIMENTAL STUDY ON FATIGUE FAILURE EVOLUTION IN COMPOSITE PLATE MONITORED BY WAVE PROPAGATION METHOD</i>
19:00 – 19:15	Marek BARSKI, Aleksander MUC, Adam STAWIARSKI <i>THE INFLUENCE OF THE CONFIGURATION OF THE FIBER-METAL LAMINATES ON THE DISPERSION RELATIONS OF THE ELASTIC WAVE MODES</i>

Thursday, October 15

09:00 – 09:50 **Plenary lecture 2**

Wojciech BATKO *ALGEBRA OF DECIBEL AS A TOOL FOR ASSESSMENT OF ACOUSTIC HAZARD TO THE ENVIRONMENT - NEW RESEARCH TASKS*

10:00 – 11:30 **Young researcher session 3**

10:00 – 10:15	Grzegorz CIEPŁOK, Lukasz BEDNARSKI, Rafał SIEŃKO, Tomasz HOWIACKI <i>DISTRIBUTED FIBRE OPTIC SENSING (DFOS) FOR DYNAMIC STRAIN MEASUREMENTS OF STEEL VIBRATING CONVEYORS</i>
10:15 – 10:30	Agnieszka LENARTOWICZ, Michał GUMINIAK <i>FREE VIBRATIONS OF ISO- AND ORTHOTROPIC PLATES CONSIDERING PLATE VARIABLE THICKNESS AND INTERACTION WITH WATER</i>
10:30 – 10:45	Grzegorz CIEPŁOK, Kaja WÓJCIK, Krzysztof MICHALCZYK, Wojciech SIKORA <i>METAL-ELASTOMER SUSPENSION MODEL</i>
10:45 – 11:00	Jakub MARCZAK <i>THE VIBRATIONS OF NON-SYMETRIC PERIODIC SANDWICH BEAMS</i>

11:00 – 11:15 **Maciej OBST, Szymon RZEP CZYK, Weronika PRUS** *MOTORCYCLE HELMET PROTECTIVE PROPERTIES RESEARCH*

11:15 – 11:30 **Maciej OBST, Grażyna OLSZEWSKA, Jarosław ADAMIEC, Dariusz KURPISZ** *OPTICAL MEASUREMENT OF NON-CLASSICAL MATERIALS MECHANICAL PROPERTIES*

11:30 – 11:50 **Coffee break (dessert)**

11:50 – 13:45 **Young researcher session 4**

11:50 – 12:00 **EC TEST Systems Sp. z o.o.**

12:00 – 12:15 **Witold SURÓWKA, Piotr CZUBAK** *REVIEW OF SELECTED SOLUTIONS OF VIBRATORY FEEDERS CAPABLE OF DOSING FEED MATERIAL*

12:15 – 12:30 **Olha PAZDRIL, Nadiia BOURAOU** *VIBROACOUSTIC CONDITION MONITORING OF THE COMPLEX ROTATION SYSTEM BASED ON MULTILEVEL SIGNAL PROCESSING*

12:30 – 12:45 **Jakub MICHALSKI, Tomasz STREK** *BLAST RESISTANCE OF SANDWICH PLATE WITH AUXETIC ANTI-TETRACHIRAL CORE*

12:45 – 13:00 **Agata MATUSZEWSKA, Jacek BUŚKIEWICZ** *ANALYSIS OF THE RELATIONSHIP BETWEEN SELECTED STABILITY ASSESSMENT INDICATORS ON THE EXAMPLE OF LEANING OUT THE HUMAN BODY FROM UPRIGHT POSITION*

13:00 – 13:15 **Maciej MAJCHRZAK, Mateusz JAKUBOWSKI, Roman STAROSTA** *AI-BASED METHOD OF VORTEX CORE TRACKING AS AN ALTERNATIVE FOR LAMBDA2*

13:15 – 13:30 **Sławomir DUDA, Olaf DUDEK, Grzegorz GEMBALCZYK, Tomasz MACHOCZEK** *DEVELOPING A TEST SITE FOR TESTING THE SUSPENSION OF VEHICLES WITH OMNIDIRECTIONAL WHEELS*

13:30 – 13:45 **Filip SARBINOWSKI, Roman STAROSTA** *MINIMIZATION OF CRITICAL FLOW VELOCITY OF AEROELASTIC ENERGY HARVESTER VIA DELAYED FEEDBACK CONTROL*

13:45 – 15:00 **Lunch**

15:00 – 16:45 **60th Anniversary**

Plenary lecture 3

Marian Witalis DOBRY *SIXTY YEAR HISTORY OF THE SYMPOSIUMS ON VIBRATION IN PHYSICAL SYSTEMS*

Plenary lecture 4

Zbigniew DĄBROWSKI *THE PRACTICAL METHODS OF NONLINEAR ANALYSIS IN MECHANICAL ENGINEERING TASKS*

16:45 – 17:00 **Coffee break (dessert)**

17:00 – 18:30 **Poster session 5**

- 1) **Tomasz BARTKOWIAK, Marcin PELIC** *CHARACTERIZATION OF PIEZOELECTRIC BIMORPH ACTUATOR 3D-DEFORMATIONS CAUSED BY ELECTRIC CHARGE BY MEANS OF MULTISCALE CURVATURE ANALYSIS*
- 2) **Michał HAĆ** *INFLUENCE OF MACHINING ACCURACY OF LINKS ON DYNAMIC RESPONSE OF PLANAR MECHANISMS*
- 3) **Tomasz JEDLIŃSKI, Jacek BUŚKIEWICZ, Paweł FRITZKOWSKI** *NUMERICAL AND EXPERIMENTAL ANALYSES OF A LIGHTING POLE IN TERMS OF PASSIVE SAFETY OF 100HE3 CLASS*
- 4) **Jarosław JĘDRYSIAK** *VIBRATIONS OF MICROSTRUCTURED BEAMS WITH AXIAL FORCE*
- 5) **Ewelina KUBACKA** *EFFECT OF FLUCTUATION SHAPE FUNCTIONS ON VIBRATIONS OF LAMINATED STRUCTURE*
- 6) **Helena GEDA, Agata KULIBERDA, Tomasz STREK** *FINITE ELEMENT ANALYSIS OF NATURAL FREQUENCIES AND MODE SHAPES OF THE DA VINCI MEDICAL ROBOT ARM*
- 7) **Daria ŁĄCZNA, Filip DŁUŻNIEWSKI, Tomasz STREK** *ANALYSIS OF EIGENFREQUENCIES OF THE FOOT PROSTHESIS WITH AUXETIC COMPONENT LAYER*
- 8) **Tomasz STREK** *MODELING OF SOUND POWER TRANSMISSION WITHIN DUCT SYSTEMS*
- 9) **Anna SYGULSKA** *ACOUSTIC STUDY OF A BAROQUE CHURCH*
- 10) **Ryszard SYGULSKI** *VIBRATION OF SIMPLY SUPPORTED PLATES IN CONTACT WITH LIQUID BY USING MEMBRANE CURVILINEAR ELEMENTS*
- 11) **Artur WIROWSKI** *OPTIMALIZATION OF DYNAMIC PROPERTIES OF STRUCTURES USING VPL ON THE EXAMPLE OF TRUSS TOWERS*
- 12) **Tomasz ZEJER, Maciej OLESIŃSKI, Kacper MUSIOŁ, Tomasz OKOŃ** *SELF-REGULATING RESONANCE VIBRATION DAMPING SYSTEM FOR THE VIBRATING CONVEYOR*

19:00 – ... **Dinner**

Friday, October 16

09:00 – 09:50 **Plenary lecture 5**

Luka STARČEVIČ, Nejc NOVAK, Matej VESENJAK, Zoran REN *BAND GAPS IN AUXETIC METAMATERIALS*

10:00 – 11:30 Regular session 6

10:00 – 10:15	Krzysztof MAGNUCKI <i>FREE AXISYMMETRIC FLEXURAL VIBRATIONS OF CIRCULAR PLATE WITH SYMMETRICALLY VARYING MECHANICAL PROPERTIES SUPPORTED ON AN ELASTIC FOUNDATION</i>
10:15 – 10:30	Magdalena ŁASECKA-PLURA <i>THE SUBSPACE ITERATION METHOD FOR EIGENPROBLEMS OF FRAMES WITH VISCOELASTIC DAMPERS DESCRIBED USING INTERNAL VARIABLES</i>
10:30 – 10:45	<u>Zdzisław Mikołaj PAWLAK</u> , Roman LEWANDOWSKI <i>DYNAMIC CHARACTERISTICS OF THE STRUCTURE WITH VISCOELASTIC DAMPERS COMBINED WITH INERTERS AND SUBJECTED TO TEMPERATURE CHANGES</i>
10:45 – 11:00	<u>Mykhailo MARCHUK</u> , Taras GORIACHKO , Bohdan KINDRATSKYY , Vira PAKOSH <i>MATHEMATICAL MODEL AND METHOD OF DETERMINATION OF AMPLIFIED-FREQUENCY CHARACTERISTICS OF CORRUGATED CYLINDRICAL SHELLS FOR GEOMETRICALLY NONLINEAR VIBRATIONS</i>
11:00 – 11:15	Jakub SIMON , <u>Witold STANKIEWICZ</u> <i>NUMERICAL SIMULATIONS OF THE FLOWS PAST ROTATING GEOMETRIES</i>
11:15 – 11:30	Agata MROZEK , Martyna SOPA , Jakub MYSZKOWSKI , Aleksandra BAKIERA , Piotr BUDZISZ , Agata KULIBERDA , <u>Martyna BIAŁECKA</u> , Tomasz WALCZAK , Jakub Krzysztof GRABSKI , Monika GRYGOROWICZ <i>ASSESSMENT OF THE FUNCTIONAL MOVEMENT SCREEN TEST WITH THE USE OF MOTION CAPTURE SYSTEM BY THE EXAMPLE OF TRUNK STABILITY PUSH-UP EXERCISE AMONG ADOLESCENT FEMALE FOOTBALL PLAYERS</i>

11:30 – 11:45 **Coffee break (dessert)**

11:45 – 13:45 Regular session 7

11:45 – 12:00	Dorota PAWLUS <i>DYNAMIC STABILITY OF MECHANICALLY AND THERMALLY LOADED THREE-LAYERED ANNULAR PLATE WITH VISCOELASTIC CORE</i>
12:00 – 12:15	<u>Andrzej KABAŁA</u> , Roman BARCZEWSKI <i>VIOLIN RESONANCE BODY SHELL-SOLID FEM MODEL</i>
12:15 – 12:30	Luboš SMOLÍK , <u>Pavel POLACH</u> , Michal HAJŽMAN <i>EFFECTS OF IMPERFECT GROOVES IN FULL-FLOATING RING BEARINGS ON DYNAMICS OF A TURBOCHARGER ROTOR</i>
12:30 – 12:45	Stanisław STRZELECKI <i>STIFFNESS AND DAMPING COEFFICIENTS OF 8-LOBE JOURNAL BEARINGS</i>
12:45 – 13:00	Agnieszka LENARTOWICZ , <u>Maciej PRZYCHODZKI</u> <i>INFLUENCE OF TEMPERATURE ON DYNAMIC CHARACTERISTICS OF PLATES WITH VISCOELASTIC DAMPERS</i>
13:00 – 13:15	<u>Vadym AVRUTOV</u> , Sergiy LAKOZA , Lev RYZHKOV , Oleksandr SAPEGIN <i>INERTIAL POSITION DETERMINATION UNDER VIBRATION</i>
13:15 – 13:30	Wojciech ŁAPKA <i>VIBROACOUSTIC ANALYSIS OF THE POLISH PHARMACY ROBOT FABLOX</i>

13:30– 13:45 Closing ceremony

13:45– 15:00 **Lunch**