



58th ICMD 2017
6 - 8 September 2017, Prague, Czech Republic

Conference program
of

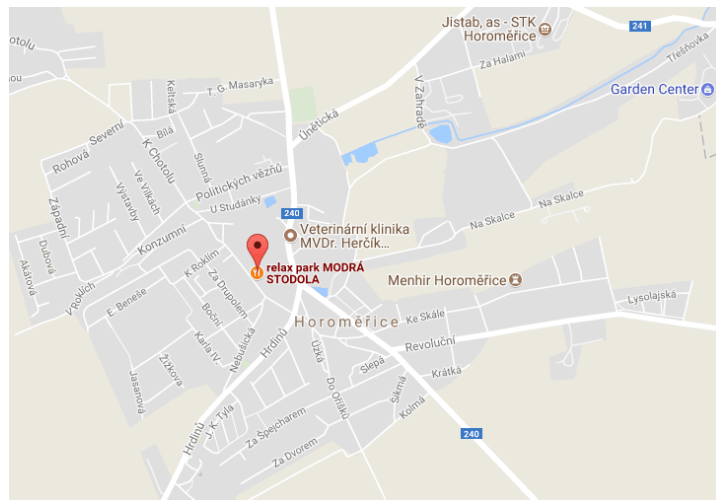
58th International Conference of Machine Design Departments
ICMD 2017

Conference ICMD 2017 will be held in Czech Republic in Hotel Modrá Stodola located on the border of Prague in small town Horoměřice (Horoměřice, Spojovací 918) from 6th September 2017 until 8th September 2017.

<http://www.modrastodola.cz/>

<http://2017.icmd.cz/>

Breakfasts, lunches and diner are included in accommodation fee. Access to all conference sessions, book of conference proceedings, coffee breaks and gala diner are included in conference fee. In the case that participant is not accommodated in Hotel Modrá Stodola he/she has to pay lunches and dinner himself/ herself in hotel restaurant.



Plenary session: Length of presentation: 15 min + 5 min discussion

Parallel session: Length of presentation: 10 min + 5 min discussion

Conference program can be slightly modified

		6.9.2017
Wednesday		Hotel Modrá Stodola
08:00-10:00	Registration	
10:00-10:30	Opening Ceremony	
Plenary Session – Congress Room		
		Chairman: prof. D. Herák
10:30-10:50	Michal PETRŮ, Ondřej NOVÁK <i>MODELING OF MECHANICAL PROPERTIES OF COMPOSITE MATERIALS UNDER MECHANICAL VIBRATIONS</i>	
10:50-11:10	Sylwester BOROWSKI, Sławomir ŻAK <i>CHEMICAL MARKER AS A SAFE METHOD IN RESEARCH</i>	
11:10-11:30	Yoshifumi YOKOI <i>THE TRIAL STUDY ABOUT THE MICRO POWER GENERATION BY USE OF VORTEX INDUCED VIBRATION</i>	
11:30-11:50	Gürkan Alp Kağan GÜRDİL, Bahadır DEMİREL <i>DESIGN AND CONSTRUCTION OF A HYDRAULIC BRIQUETTING MACHINE FOR HAZELNUT HUSK AGRICULTURAL RESIDUE</i>	
12:00 - 13:00	Lunch – Restaurant	



6.9.2017

Wednesday

Hotel Modrá Stodola

Parallel Session I - Congress Room

Chairman: doc. G. Gürdil

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- 13:00 - 13:15 **Carlos FRAJUCA, Paulo Fernandes JUNIOR**
THE BEARING SYSTEM FOR THE CALIBRATOR OF SCHENBERG DETECTOR
-
- 13:15 - 13:30 **Marcin SZCZEPANEK**
DEMAND FOR ELECTRICITY FOR HYDRAULIC POWER SYSTEMS AT FISHING CUTTERS
-
- 13:30 - 13:45 **Janusz MUSIAŁ, Marek SZCZUTKOWSKI, Robert POLASIK, Tomasz KAŁACZYŃSKI**
THE INFLUENCE OF HARDNESS OF COOPERATING ELEMENTS ON PERFORMANCE PARAMETERS OF ROLLING KINEMATIC PAIRS
-
- 13:45 - 14:00 **Yang ZHANG, Vigen ARAKELIAN, Jean-Paul LE BARON**
DESIGN CONCEPTS AND FUNCTIONAL PARTICULARITIES OF WEARABLE WALKING ASSIST DEVICES AND POWER-ASSIST SUITS
-
- 14:00 - 14:15 **Mustafa Umut KARAOĞLAN, Gökçem ÇAPAR, Zeki Can KAYNAK, Serdar AKBULUT, Nusret Sefa KURALAY**
STRUCTURAL ANALYSES OF AN AUTOMOTIVE DRY CLUTCH WITH QUARTER ASSEMBLY MODEL APPROACH
-
- 14:15 - 14:30 **Cezary BEHRENDT**
CHARACTERISTIC PARAMETERS FOR PROPULSION SYSTEMS COOPERATING WITH SHAFT GENERATOR ON FEEDER CONTAINER SHIPS
-
- 14:30 - 14:45 **Daniel MILER, Antonio LONČAR, Dragan ŽEŽELJ**
IMPACT OF DESIGN CONSTRAINTS ON THE SPUR GEAR PAIR PARAMETERS
-
- 14:45 - 15:00 **Przemysław RAJEWSKI, Oleh KLYUS**
IMPACT OF DOCKING METHOD ON LOADS IN ELEMENTS FLOATING DOCK – VESSEL UNIT
-

15:00 - 15:30

Coffee break – Restaurant

Parallel Session II – Congress Room

Chairman: dr. O. Novák

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- 15:30 - 15:45 **Andrzej ADAMKIEWICZ, Jan Bohdan DRZEWIENIECKI**
OPERATIONAL PROBLEMS IN SLOW SPEED DIESEL ENGINES CAUSED BY USE OF POOR QUALITY FUELS WITH HIGH CAT-FINES CONTENT
-
- 15:45 - 16:00 **Martin STURM, Lubomír PEŠÍK**
TWO-MASS LINEAR VIBRATORY CONVEYOR
-
- 16:00 - 16:15 **Radosław GORDON**
INFLUENCE OF CHOSEN PARAMETERS ON ELECTRICAL MACHINES BEARINGS EXPLOITATION
-
- 16:15 - 16:30 **Bartosz GŁOWACKI, Cezary BEHRENDT**
ENERGY EFFICIENCY OF OFFSHORE SUPPORT VESSEL
-
- 16:30 - 16:45 **Robert JASIEWICZ**
THE METHODS OF PREPARING PETROLEUM - DERIVED WASTE TO BURN IN MARINE BOILERS
-
- 16:45 - 17:00 **Norbert RADEK, Jozef BRONČEK, Peter FABIAN, Jacek PIETRASZEK, Agata DUDEK**
TRIBOLOGICAL PROPERTIES OF ELECTRO-SPARK DEPOSITED COATINGS AFTER LASER TREATMENT
-
- 17:00 - 17:15 **Marcin KOŁODZIEJSKI, Zbigniew MATUSZAK**
SELECTED PROBLEMS EXPLOITING THRUSTERS ON DYNAMIC POSITIONING VESSELS
-
- 17:15 - 17:30 **František LOPOT, Martin JANDA, Marek RACHAČ, Daniel HADRABA, Pavel MALÝ, Václav VACEK**
THE ASSEMBLY PROCEDURE OF THE TRACKER RAIL WELDING SUPPORT FOR ATLAS ITK AT CERN – THE SIGNIFICANCE OF THE EXPERIMENT
-
- 17:30 - 17:45 **Dariusz TARNAPOWICZ, Zbigniew MATUSZAK**
IMPACT OF THE SHIP GENERATING SETS' POWER FACTOR ON THE DETERMINATION OF THE LOAD FACTOR IN AUXILIARY ENGINE
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19:00 - 22:00

Gala Dinner – Restaurant



6.9.2017

Wednesday

Hotel Modrá Stodola

Parallel Session III – Conference Room

Chairman: prof. L. Ševčík

13:00 - 13:15	Miroslav BOŠANSKÝ, Juraj RUSNÁK <i>ASSESSMENT OF OPTIONS FOR APPLICATIONS TICN-MP + MOVIC DEPOSITED ON THE CONVEXCONCAVE GEARING WORKING IN INTERACTION WITH THE ECOLOGICAL LUBRICANT</i>
13:15 - 13:30	Jakub CHMELAR, Pavel MOSSÓCZY, Vojtěch DYNBYL <i>ROLLING ELEMENT BEARING TEST RIG DEVELOPMENT</i>
13:30 - 13:45	Marián STOPKA, Róbert KOHÁR, Peter SPIŠÁK, Ján ŠTEININGER <i>WEIGHT OPTIMIZATION OF CHAMBER FOR VACUUM CASTING TECHNOLOGY</i>
13:45 - 14:00	Ján ŠTEININGER, Slavomír HRČEK, Tomáš GAJDOŠÍK, Marián STOPKA <i>THE OPTIMIZATION PROCEDURE OF THE INNER GEOMETRY IN THE SPHERICAL ROLLER BEARINGS WITH REGARD TO THEIR DURABILITY</i>
14:00 - 14:15	Michael OELJEKLAUS, Lubomír PEŠÍK <i>KINEMATIC SIMILARITY OF ROLLING BEARINGS WITH PLANETARY GEARS</i>
14:15 - 14:30	Miloš NĚMČEK <i>GEOMETRIC AND MESHING PARAMETERS OF A PINION-RACK PAIR</i>
14:30 - 14:45	Ivo KRÍSTEK, Jiří HAVLÍK <i>DETERMINATION OF DIAGRAMS FOR DETERMINING OF SHAPE FACTOR α</i>
14:45 - 15:00	Michal BELORIT, Slavomír HRČEK, Tomáš GAJDOŠÍK, Ján ŠTEININGER <i>DESCRIPTION OF THE BEARING CHECK PROGRAM FOR COUNTERSHAFT GEARBOXES</i>

15:00 - 15:30

Coffee break – Restaurant

Parallel Session IV - Conference Room

Chairman: doc. M. Petrů

15:30 - 15:45	Marek KOVÁŘ <i>NUMERICAL ANALYSIS FOR OPTIMIZATION OF PRESSURE VESSEL</i>
15:45 - 16:00	Petr LEPŠÍK, Petr KULHAVÝ <i>DESIGN OPTIMIZATION OF COMPOSITE PARTS USING DOE METHOD</i>
16:00 - 16:15	Ivana MAZÍNOVÁ, Pavel FLORIAN, Filip HRDLÍČKA, Martin KRATOCHVÍL <i>FEM-AIDED MATERIALS SELECTION USING TOPOLOGY OPTIMIZATION</i>
16:15 - 16:30	Ha NGUYEN VAN, L. ŠEVČIK <i>THE CONTACT ANALYSIS OF DESIGNING THE CAM MECHANISM BY USING ANSYS</i>
16:30 - 16:45	František STARÝ, Karel PETR, Martin DUB, Vojtěch DYNBYL <i>COMPARISON OF DIFFERENT CONSTRUCTION HOIST MASTS BY FEM ANALYSIS</i>
16:45 - 17:00	Václav VANĚK, Roman POLÁK <i>GEOMETRIC SPECIFICATION OF COMPLEX SPATIALLY-ORIENTED AND COMPLIANT COMPONENTS I.</i>
17:00 - 17:15	Květoslav KALÁB <i>THE EFFECTS OF THE WRONG LUBRICATION METHOD OF THE GEAR TRAIN</i>
17:15 - 17:30	Josef VOSÁHLO, Martina SYROVÁTKOVÁ <i>MODELING AND MEASURING MECHANICAL DAMAGE FOR ADJUSTABLE LUMINAIRE</i>
17:30 - 17:45	Marcin ZASTEMPOWSKI, Andrzej BOCHAT <i>DYNAMICS OF THE MOVEMENT OF THE CUTTING ASSEMBLY'S CUTTER BAR</i>

19:00 - 22:00

Gala Dinner – Restaurant



7.9.2017

Thursday

Hotel Modrá Stodola

Parallel Session V – Congress Room

Chairman: prof. V. Dynybyl

09:00 – 09:15	Jiří ZAČAL, Zdeněk FOLTA, Lukáš JANČAR <i>DESIGN OF A SENSOR FOR MEASUREMENT OF BOLT PRETENSION</i>
09:15 - 09:30	Pavel BARTONÍČEK, Ivan MAŠÍN <i>MEASURING CUSTOMER COMFORT OF THE SIDE DOOR SELF- EQUIPMENT FOR THE AUTOMOBILE INDUSTRY</i>
09:30 - 09:45	Jan KANAVAL, Eliška CÉZOVÁ, Vít KLÍMA, František STARÝ <i>TESTING EQUIPMENT FOR COMPLEX ANALYSIS OF SCREW FASTENERS</i>
09:45 - 10:00	Aleš LUFINKA <i>CRASH TEST OF THE STUDENT RACING CAR IMPACT ATTENUATOR</i>
10:00 - 10:15	Pavel MALÝ, František STARÝ, Pavel MOSSÓCZY, Jan HOIDEKR, Vojtěch DYNBYL <i>TESTING MEASUREMENT DURING THE SHAFT ASSEMBLY OF THE OILSEED SCREW PRESS</i>
10:15 - 10:30	Václav MOSLER, Jiří HAVLÍK, Jan PAVLÍK, Ivo KRISTEK <i>AN APPARATUS FOR MEASUREMENT OF INCLINATION OF GEARS ON NEEDLE BEARINGS</i>

10:30 - 11:00

Coffee break – Restaurant

Parallel Session VI – Congress Room

Chairman: doc. J. Bronček

11:00 - 11:15	Marcel ČAČO, Rastislav TRIBULA, Peter ŠČERBA, Róbert KOHÁR <i>APPLICATION OF SIMULATION SOFTWARE TO OPTIMIZE CONSTRUCTION NODES OF ULTRASONIC WELDING MACHINES</i>
11:15 - 11:30	Jozef BRONČEK, Mário DRBŮL, Michal STPUPAVSKÝ, Norbert RADEK <i>THE APPLICATION OF NEW RULES OF GPS IN STRUCTURAL PRODUCT REQUIREMENT</i>
11:30 - 11:45	Vojtěch DYNBYL, Vít KLÍMA, Jiří MRÁZEK <i>APPLICATION OF LINEAR DRIVE TESTING METHODOLOGY</i>
11:45 - 12:00	Karel PETR <i>INDICATION OF FUNCTIONAL DIMENSION ACCORDING ISO GPS – HOW SHALL WE APPLY?</i>

12:00 - 13:00

Meeting of the heads of department – Lounge

13:00 - 14:00

Lunch – Restaurant

14:00 - 19:00

Optional trips (admission fee is not included in conference fee):
National Technical Museum Prague <http://www.ntm.cz/en>
ZOO Prague <https://www.zoopraha.cz/en>
Sightseeing trips to Prague, Hop on Hop off Tour, <http://www.hopon-hopoff.cz/eng/>

19:30 - 20:30

Diner – Restaurant

20:30 - 23:30

Cultural programme, bowling, wellness etc.



7.9.2017

Thursday

Hotel Modrá Stodola

Parallel Session VII – Conference Room

Chairman: dr. Č. Mizera

09:00 – 09:15	Mirosław SZUBARTOWSKI, Klaudiusz MIGAWA, Andrzej NEUBAUER, Leszek KNOPIK <i>METHOD OF DETERMINING OPTIMAL CONTROL STRATEGY</i>
09:15 - 09:30	Bogdan LANDOWSKI, Łukasz MUŚLEWSKI <i>DECISION MODEL OF AN OPERATION AND MAINTENANCE PROCESS OF CITY BUSES</i>
09:30 - 09:45	Marek Michał STAUDE <i>SYNCHRONIZATION OF DIESEL- GENERATOR UNIT AND INLAND POWER IN SHORE-TO-SHIP SYSTEMS</i>
09:45 - 10:00	Marietta MARKIEWICZ-PATALON, Ewa KASZKOWIAK, Zbyszek ZBYTEK, Marek SZYMCZAK <i>COMPARISON OF CALORIFIC VALUES OF PETROLEUM-DERIVED FUELS WITH ALTERNATIVE FUELS OF VEGETABLE ORIGIN</i>
10:00 - 10:15	Mirosław SZUBARTOWSKI, Klaudiusz MIGAWA, Leszek KNOPIK, Maciej GNIOT <i>SIMULATION MODEL OF RISK EVALUATION IN TRANSPORT SYSTEM</i>
10:15 - 10:30	Bogdan LANDOWSKI, Daniel PERCZYŃSKI, Łukasz MUŚLEWSKI, Piotr KOLBER <i>ECONOMIC ASPECTS OF A CITY TRANSPORT MEANS PURCHASE</i>

10:30 - 11:00

Coffee break – Restaurant

Parallel Session VIII – Conference Room

Chairman: doc. V. Vaněk

11:00 - 11:15	Piotr ALEKSANDROWICZ <i>VERIFYING A TRUCK COLLISION APPLYING THE SDC METHOD</i>
11:15 - 11:30	Michal TROPP, Mária TOMÁŠIKOVÁ, Ronald BAŠŤOVANSKÝ, Leszek KRZYWONOS, František BRUMERČÍK, Zbigniew KRZYŚIAK <i>TRANSIENT THERMAL SIMULATION OF WORKING COMPONENTS OF MECHATRONIC SYSTEM FOR DEEP DRAWING OF MOLYBDENUM SHEETS</i>
11:30 - 11:45	Petr SKALICKÝ, Daniel KOUTNÝ, Libor PANTĚLEJEV, David PALOUŠEK <i>PROCESSING OF ALUMINUM ALLOY EN AW 7075 USING SELECTIVE LASER MELTING: INITIAL STUDY</i>
11:45 - 12:00	Petr KULHAVÝ, Petr LEPSÍK <i>COMPARISON OF BENDING PROPERTIES FOR WINDED AND WRAPPED COMPOSITES</i>

12:00 - 13:00

Meeting of the heads of department – Lounge

13:00 - 14:00

Lunch – Restaurant

14:00 - 19:00

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Sightseeing trips to Prague, Hop on Hop off Tour, <http://www.hopon-hopoff.cz/eng/>

19:30 - 20:30

Diner – Restaurant

20:30 - 23:30

Cultural programme, bowling, wellness etc.



8.9.2017

Friday

Hotel Modrá Stodola

Parallel Session IX – Congress Room

Chairman: dr. P. Hrabě

09:00 – 09:15	Martin DUB, Martin JANDA, Jiří MRÁZEK, Martin KAVKA, Vojtěch DYNBYL <i>CORE DRILLING MACHINE FOR PERFECTLY VERTICAL DRILLS</i>
09:15 - 09:30	Martin POLÁK <i>EFFECT OF IMPELLER TUNING FOR PUMP USED IN TURBINE MODE</i>
09:30 - 09:45	Tadeusz ŻUREK <i>SPEED CHANGES ON THE SECTION OF A ROAD AND THEIR IMPACT ON THE GEARBOX OPERATION</i>
09:45 - 10:00	Ladislav ŠEVČÍK, Ha NGUYEN VAN, Michal PETRŮ <i>DESIGN OF GAS BURNER FOR THE FIRE INTEGRITY TESTING OF SEGMENTAL DOORS</i>
10:00 - 10:15	Tomáš GAJDOŠÍK, Mária TOMÁŠIKOVÁ <i>HYDROSTATIC DRIVER FOR TOOL CARRIES MT8</i>
10:15 - 10:30	Patrik SNEHOTTA <i>PNEUMATIC WRENCH GEARBOX DEVELOPMENT FOR TIGHTENING TORQUE OF 6000 NM</i>
10:30 - 10:45	Martin MAZAC <i>THE OPERATIONAL TEETH AND OIL TEMPERATURE DIFFERENCES</i>

10:45 - 11:15

Coffee break – Restaurant

12:00 - 12:30

Closing ceremony

12:30 – 13:30

Lunch – Restaurant



8.9.2017

Friday

Hotel Modrá Stodola

Parallel Session XI – Conference Room

Chairman: dr. O. Dajbych

09:00 – 09:15	Magdalena SZMUKAŁA, Robert JASIEWICZ <i>THE PYROLYSIS OIL AS AN ALTERNATIVE MARINE FUEL</i>
09:15 - 09:30	Maciej MATUSZEWSKI <i>TRANSFORMATION OF SURFACE LAYER AND SURFACE ISOTROPY CHANGES</i>
09:30 - 09:45	Pavel SRB, Petr KULHAVÝ <i>DESIGN CONCEPT OF A DEVICE FOR ALIGNING RUBBER HOSES</i>
09:45 - 10:00	Jan PAVLÍK, Jiří ZAČAL, Jaroslav PROKOP, Zdeněk FOLTA <i>THE GROWTH OF CONTACT AREA OF THE TOOTH IN DEPENDING OF INCREASING THE LOADING</i>
10:00 - 10:15	Mirosław SZUBARTOWSKI, Andrzej NEUBAUER, Klaudiusz MIGAWA, Sylwester BOROWSKI <i>REQUIRED AVAILABILITY OF THE SERVICEABILITY ASSURANCE SYSTEM</i>
10:15 - 10:30	Jerzy KASZKOWIAK, Sylwester BOROWSKI, Piotr DORSZEWSKI, Marietta MARKIEWICZ-PATALON <i>INFLUENCE OF COMPOSITION OF BIOGAS ON SELECTED ENGINE OIL VALUES</i>
10:30 - 10:45	Lukáš JANČAR, Václav MOSLER, Zdeněk FOLTA <i>EXPERIMENTAL METHODS WITH STRAIN GAUGES FOR STUDY PURPOSES</i>

10:45 - 11:15

Coffee break – Restaurant

12:00 - 12:30

Closing ceremony

12:30 – 13:30

Lunch – Restaurant