

**Tuesday, 4.09.2018**

- 10:00 - 12:30 – Registration of participants
- 12:30 - 13:30 – Lunch
- 13:45 - 14:15 – Opening Ceremony (Ballroom)
- 14:15 - 15:45 – Invited Lectures
- 15:45 - 16:15 – Official photo and Coffee break
- 16:15 - 17:45 – Lectures – Sessions A1, A2, A3
- 18:15 - 19:45 – Sightseeing of Rydzyna Castle
- 19:45 - 20:45 – Dinner

**Thursday, 6.09.2018**

- 8:00 - 9:00 – Breakfast / Registration of participants
- 9:00 - 13:00 – Presentation of the historical and cultural achievements of the Wielkopolska Province
- 14:00 - 15:00 – Lunch
- 15:30 - 17:00 – Lectures – Sessions E1, E2, E3
- 19:00 - ... – Grill party

**Wednesday, 5.09.2018**

- 8:00 - 9:00 – Breakfast / Registration of participants
- 9:00 - 10:30 – Lectures – Sessions B1, B2, B3, B4
- 10:30 - 11:00 – Coffee break
- 11:00 - 12:30 – Lectures – Sessions C1, C2, C3, C4
- 13:00 - 14:00 – Lunch
- 14:30 - 16:00 – Lectures – Sessions D1, D2, D3, D4
- 16:30 - 18:00 – Meeting of Scientific Committee (The Knight's Hall)
- 19:00 - ... – Gala dinner

**Friday, 7.09.2018**

- 8:00 - 9:00 – Breakfast
- 9:00 - 10:30 – Lectures – Sessions F1, F2, F3
- 10:30 - 11:00 – Closing of the conference
- 11:00 - 12:30 – Lunch
- 12:30 - 14:00 – XXII Seminarium "Projektowanie Mechatroniczne" (XXII Seminar „Mechatronic Design”)



**Invited Lectures: Tuesday, 04.09.2018, at 14:15 - 15:45**Chairman: Prof. Ireneusz **Malujda**, Prof. Milan **Sága**

1. Prof. Stanisław **Legutko**  
*Additive techniques of manufacturing functional products from metal material*
2. Prof. Robert **Zalewski**  
*Comparison of MR fluids and special granular structures*
3. Prof. Michał **Bartyś**  
*Electro-pneumatic actuator – from idea to industry*

**Session A1: Tuesday, 04.09.2018, at 16:15 - 17:45**Chairman: Prof. Milan **Žmindák**, PhD. Eng. Marcin **Kubiak**

1. Dominik **Wojtkowiak**, Krzysztof **Talaśka**  
*The influence of the piercing punch profile on the stress distribution on its cutting edge*
2. Dominik **Wilczyński**, Dominik **Wojtkowiak**, Maciej **Berdychowski**, Jan **Górecki**, Krzysztof **Wałęsa**  
*Experimental and numerical tests of the compaction process of loose material in the form of sawdust*
3. Milan **Vaško**, Vladislav **Baniari**, Marián **Handrik**, Alan **Vaško**, Lenka **Jakubovičová**, Peter **Kopas**  
*Comparison of FE analysis and experimentally obtained data for the identification of residual stresses in welded high-strength steels*
4. Miroslav **Blatnický**, Ján **Dižo**, Mária **Blatnická**  
*Strength reanalysis and influence line equation of rack system drive force*
5. Lukáš **Smetanka**, Pavol **Šťastniak**, Slavomír **Hrček**  
*Investigation of railway wheelset profile wear by using computer tool*
6. Marek **Macko**, Zbigniew **Szczepański**, Dariusz **Mikołajewski**, Joanna **Nowak**, Emilia **Mikołajewska**, Jacek **Furtak**  
*Design and manufacture of artificial organs made of polymers*



**Session A2: Tuesday, 04.09.2018, at 16:15 - 17:45**Chairman: Prof. Vladimír **Dekýš**, Assoc. Prof. Michał **Śledziński**

1. Łukasz **Warguła**, Piotr **Krawiec**, Konrad Jan **Waluś**  
*Innovative research method of the fuel injector that allows to evaluate the efficiency of wood chip drive control systems*
2. Krzysztof **Tyszczyk**  
*Measurement and analysis of parameters of the precise grinding system*
3. Tomáš **Lack**, Juraj **Gerlici**  
*Wheelset / rail geometric characteristics and contact forces assessment with regard to angle of attack*
4. Rafał **Gołębski**, Piotr **Boral**  
*Globoid surface shaped with turning and envelope method*
5. Michał **Kekez**  
*Application of selected computational intelligence methods to modeling of traffic intensity in thoroughfare*

**Session A3: Tuesday, 04.09.2018, at 16:15 - 17:45**Chairman: Prof. Michał **Bartyś**, Prof. Mariana **Pajtášová**

1. Jan **Górecki**, Ireneusz **Malujda**, Dominik **Wojtkowiak**, Dominik **Wilczyński**  
*Influence of the shape of the piston pressure face on the limit value of compaction stress in the process of dry ice agglomeration*
2. Mateusz **Kukla**, Ireneusz **Malujda**, Krzysztof **Talaśka**  
*Damping in magnetorheological elastomers subjected to compressive stress*
3. Piotr **Sikora**  
*Tests of properties of semi-crystalline polymeric materials produced by 3D printing method*
4. Krzysztof **Wałęsa**, Olga **Mysiukiewicz**, Michał **Pietrzak**, Jan **Górecki**, Dominik **Wilczyński**  
*Preliminary research of the thermomechanical properties of the round drive belts*
5. Marcin **Nabrdalik**, Michał **Sobociński**  
*The finite element method in the analysis of the stress and strain distribution in polyethylene elements of hip and knee joints endoprostheses*



**Session B1: Wednesday, 05.09.2018, at 9:00 - 10:30**Chairman: Prof. Alžbeta **Sapietová**, PhD. Eng. Jan **Górecki**

1. Krzysztof **Talaśka**, Dominik **Wojtkowiak**, Ireneusz **Malujda**, Mateusz **Kukla**, Krzysztof **Wałęsa**  
*Functional and construction indicator for the briquetting process of lignocellulosic materials*
2. Dominik **Wilczyński**, Ireneusz **Malujda**, Jan **Górecki**, Grzegorz **Domek**  
*Experimental research on the process of cutting transport belts*
3. Tomasz **Domański**  
*Correlation image system 3D Dantec as a modern system for measuring deformation*
4. Maciej **Bodnicki**, Wojciech **Credo**, Leszek **Wawrzyniuk**, Karol **Bagiński**, Michał **Bartyś**  
*Measuring system for testing of the drive of the scanning mirror*
5. Ladislav **Sátor**  
*Transient analysis of FGM plates bending under thermal loading: comparative study within classical and generalized thermoelasticity*
6. Milan **Žmindák**, Pavol **Novák**, Leszek **Radziszewski**, Josef **Soukup**  
*Determination of the laminate strains using discrete damage mechanics*

**Session B2: Wednesday, 05.09.2018, at 9:00 - 10:30**Chairman: Prof. Janusz **Mielniczuk**, Assoc. Prof. Milan **Vaško**

1. Jacek **Marcinkiewicz**, Jarosław **Selech**, Żaneta **Staszak**, Łukasz **Gierz**, Dariusz **Ulbrich**, Dawid **Romek**  
*DEM simulation research of selected sowing unit elements used in a mechanical seeding drill*
2. Elżbieta **Gawrońska**, Robert **Dyja**, Bartłomiej **Będkowski**, Łukasz **Cyganik**  
*Modeling of heat flow using commercial and authorial software on the example of a permanent magnet motor*
3. Pavol **Šťastniak**, Marián **Moravčík**, Lukáš **Smetanka**  
*Investigation of strength conditions of the new wagon prototype type Zans*
4. Dominik **Wojtkowiak**, Krzysztof **Talaśka**, Ireneusz **Malujda**, Jan **Górecki**, Dominik **Wilczyński**  
*Modelling and static stability analyses of the hexa-quad bimorph walking robot*
5. Maciej **Berdychowski**, Krzysztof **Talaśka**, Dominik **Wilczyński**  
*Evaluation of the possibility of using the Drucker-Prager-Cap model in simulations of the densification process of shredded natural materials*
6. Peter **Šulka**  
*Comparison of analytical and numerical solution of bearing contact analysis*



**Session B3: Wednesday, 05.09.2018, at 9:00 - 10:30**Chairman: Prof. Marek **Macko**, Prof. Kateryna **Kravchenko**

1. Petr **Hejma**, Iryna **Hren**, Jan **Sviantek**, Josef **Soukup**, Martin **Svoboda**  
*Camming design for test equipment*
2. Konrad Jan **Waluś**, Jakub **Polasik**, Janusz **Mielniczuk**, Łukasz **Warguła**  
*Experimental tests of vehicle body acceleration at selected railway crossing*
3. Andrzej **Bąkowski**  
*Assessment of variability of acoustical energy generated by traffic volume*
4. Łukasz **Warguła**, Bartosz **Wieczorek**, Mateusz **Kukła**  
*The determination of the rolling resistance coefficient of objects equipped with the wheels and suspension system – results of pilot tests*
5. Jarosław **Selech**, Dariusz **Ulbrich**, Konrad **Włodarczyk**, Żaneta **Staszak**, Jacek **Marcinkiewicz**, Dawid **Romek**, Bartosz **Baran**  
*A working design of a bulldozer blade as additional equipment of a compaction drum roller*
6. Michał **Wilczyński**, Grzegorz **Domek**  
*Analysis of reinforcement of the tooth belts*

**Session B4: Wednesday, 05.09.2018, at 9:00 - 10:30**Chairman: Prof. Marian **Dudziak**, Prof. Mariana **Pajtášová**

1. Damian **Frąckowiak**  
*Simulation study of the hydraulic transmitter – receiver system*
2. Zbigniew **Kłós**  
*Introduction of environmental aspects in designing of machines*
3. Piotr **Krawiec**, Łukasz **Warguła**, Konrad Jan **Waluś**, Jarosław **Adamiec**  
*Wear evaluation study of the multiple grooved pulleys with optical method*
4. Andrzej **Lewandowski**, Marian **Dudziak**, Michał **Śledziński**  
*Analysis of the loss of vehicle motion stability in the conditions of steering control disturbance*
5. Zdeněk **Poruba**, Pavel **Kučera**, Eva **Mazancová**, Dagmar **Ličková**  
*Damage evolution process of seamless steel pressure vessels with artificial flaws under hydrostatic burst test*



**Session C1: Wednesday, 05.09.2018, at 11:00 - 12:30**Chairman: Prof. Ján **Vavro**, Assoc. Prof. Piotr **Krawiec**

1. Krzysztof **Talaśka**, Dominik **Wojtkowiak**, Ireneusz **Malujda**, Krzysztof **Wałęsa**  
*Testing of a force sensor used to measure the parameters of the briquetting process of lignocellulosic materials*
2. Dominik **Wilczyński**, Ireneusz **Malujda**, Jan **Górecki**, Piotr **Jankowiak**  
*Research on the process of biomass compaction in the form of straw*
3. Robert **Zalewski**, Piotr **Bartkowski**  
*Prototype of a controllable damper based on granular materials subjected to partial vacuum*
4. Piotr **Bartkowski**, Robert **Zalewski**  
*Empirical determination of the mechanical properties of Vacuum Packed Particles*
5. Jan **Górecki**, Ireneusz **Malujda**, Dominik **Wilczyński**  
*Influence of geometrical parameters of the forming channels in a multichannel die on the limit value of limit force in the process of dry ice agglomeration*
6. Żaneta **Staszak**, Jacek **Marcinkiewicz**, Jarosław **Selech**, Dariusz **Ulbrich**, Dawid **Romek**  
*The laboratory stand for testing a liquid masses drying process*

**Session C2: Wednesday, 05.09.2018, at 11:00 - 12:30**Chairman: Prof. Zbigniew **Kłos**, Prof. Tomáš **Lack**

1. Lenka **Jakubovičová**, Milan **Vaško**, Peter **Kopas**, Pavol **Novák**, Marián **Handrik**  
*Strength analysis of welded wheeled compactor construction for excavator*
2. Leszek **Radziszewski**, Michał **Kekez**, Andrzej **Bąkowski**, Alžbeta **Sapietová**  
*Modeling of acoustic pressure variability at thoroughfare*
3. Wojciech **Judt**, Jarosław **Bartoszewicz**  
*Analysis of a cross-flow influence for a turbulence progress in a initial segment of axisymmetric duct*
4. Marek **Macko**, Adam **Mroziński**, Adam **Prentki**  
*Simulations CAE of wood pellet machine*
5. Jozef **Harušinec**, Andrej **Suchánek**, Mária **Loulová**, Pavol **Kurčík**  
*Design of a prototype frame of an electrically driven three- wheel vehicle*
6. Aleksandra **Fierek**, Ireneusz **Malujda**, Krzysztof **Talaśka**  
*Design of mechatronic unit for application of coats of adhesive*



**Session C3: Wednesday, 05.09.2018, at 11:00 - 12:30**Chairman: Prof. Juraj **Gerlici**, Prof. Wiesława **Piekarska**

1. Andrzej **Kołodziej**, Marian **Dudziak**, Krzysztof **Talaśka**  
*The directions of the development of the methods for designing the geometric form of the mechanical structures*
2. Marcin **Kubiak**  
*Prediction of microstructure composition in steel plate heated using high power Yb:YAG laser radiation*
3. Marián **Handrik**, Filip **Dorčiak**, Milan **Sága**, Milan **Vaško**, Peter **Kopas**  
*Modification of the optimization model for simulation of large-diameter pipes bending*
4. Piotr **Zbroja**, Ksawery **Szykiedans**, Wojciech **Credo**  
*Flexible grippers for industrial robots – comparison of features of low- cost 3D printed component*
5. František **Bárnik**, Milan **Sága**, Alžbeta **Sapietová**, Milan **Vaško**, Marian **Handrik**  
*Mechanical properties of structures produced by 3D printing from composite materials*
6. Krzysztof **Wałęsa**, Ireneusz **Malujda**, Jan **Górecki**, Dominik **Wilczyński**  
*The temperature distribution during heating in hot plate welding process*

**Session C4: Wednesday, 05.09.2018, at 11:00 - 12:30**Chairman: Prof. Czesław **Kundera**, Prof. Milan **Sága**

1. Michał **Pietrzak**, Krzysztof **Wałęsa**, Jan **Górecki**, Dominik **Wilczyński**, Maciej **Berdychowski**, Ireneusz **Malujda**  
*Analysis of the friction (spin) welding – preliminary study*
2. Oleksij **Fomin**, Juraj **Gerlici**, Alyona **Lovskaya**, Kateryna **Kravchenko**, Oleksii **Burlutski**, Vladimír **Hauser**  
*Peculiarities of the mathematical modelling of dynamic loading on containers in flat wagons transportation*
3. Leszek **Sowa**, Tomasz **Skrzypczak**, Paweł **Kwiatoń**  
*The influence of the riser dimensions on the effectiveness of feeding solidifying cast elements*
4. Krzysztof **Łukaszewicz**, Norbert **Niechoćko**  
*Dynamic simulation of a virtual prototype of a one- track vehicle in motion on uneven ground conditions*
5. Robert **Dyja**, Elzbieta **Gawrońska**, Norbert **Sczygiol**  
*Stress analysis in solid-liquid parts of solidifying castings*



**Session D1: Wednesday, 05.09.2018, at 14:30 - 16:00**Chairman: Prof. Josef **Soukup**, Prof. Robert **Zalewski**

1. Jarosław **Selech**, Dariusz **Ulbrich**, Konrad **Włodarczyk**, Żaneta **Staszak**, Jacek **Marcinkiewicz**, Dawid **Romek**, Patryk **Wietrzych**  
*Self-propelled inspection vehicle on omni wheels*
2. Tomasz **Skrzypczak**, Ewa **Węgrzyn-Skrzypczak**, Leszek **Sowa**  
*Numerical model of solidification process of Fe-C alloy taking into account the phenomenon of shrinkage cavity formation*
3. Wiesława **Piekarska**, Zbigniew **Saternus**, Milan **Sapieta**, Peter **Kopas**  
*The influence of joining technique on the deformation of laser welded T-joints*
4. Marcin **Kukuryk**, Jerzy **Winczek**, Marek **Gucwa**  
*Analysis of deformation and microstructure evolution during the cogging process of waspaloy alloy*
5. Milan **Sága**, Mária **Blatnická**, Ondrej **Štalmach**, Marian **Handrik**, Zuzana **Ságová**  
*Numerical study of the relation between chosen statistical parameters of input stresses and cumulative fatigue damage provided rainflow decomposition*
6. Leszek **Sowa**, Tomasz **Skrzypczak**, Paweł **Kwiatoń**  
*Computer evaluation of the influence of liquid metal movements on defects formation in the casting*

**Session D2: Wednesday, 05.09.2018, at 14:30 - 16:00**Chairman: Prof. Darina **Ondrušová**, Prof. Leszek **Radziszewski**

1. Michał **Bartyś**  
*Control issues of a fast piezoelectric driven positioner intended for deflection of a high power laser beam*
2. Piotr **Boral**  
*The design of the CNC milling machine*
3. Łukasz **Warguła**, Konrad Jan **Waluś**, Piotr **Krawiec**  
*The problems of measuring the temperature of the small engines (SI) on the example of a drive for non-road mobile machines*
4. Piotr **Pasza**  
*Digital possibilities of reconstruction of machine parts*
5. Piotr **Kordas**, Robert **Bęczkowski**, Marek **Gucwa**, Jerzy **Winczek**  
*Application of design of experiment to a FCAW process*
6. Łukasz **Kubaszewski**, Mikołaj **Dąbrowski**, Krzysztof **Talaśka**, Dominik **Wilczyński**  
*New model of lumbar spine biomechanics with the use of simulation analysis*





**Session D3: Wednesday, 05.09.2018, at 14:30 - 16:00**Chairman: Prof. Ireneusz **Malujda**, Prof. Ján **Vavro**

1. Vladimír **Hauser**, Juraj **Gerlici**, Kateryna **Kravchenko**, Tomáš **Lack**, Mária **Loulová**  
*Analysis of a tram car ride when passing point frog and when entering curve by specific rail geometry*
2. Vladimír **Bulej**, Juraj **Uríček**, Manfred **Eberth**, Ján **Stanček**  
*Modelling and Simulation of Mechatronic Systems in Matlab / Simulink*
3. Anna **Jaskot**, Bogdan **Posiadała**  
*Dynamics of the mobile platform with four wheel drive*
4. Ján **Dižo**, Miroslav **Blatnický**, Pavol **Kurčík**  
*Analysis of driving properties of a three-wheeled vehicle with a newly designed steering system*
5. Andrej **Suchánek**, Mária **Loulová**, Jozef **Harušinec**  
*Evaluation of passenger riding comfort of a rail vehicle by means dynamic simulations*
6. Vladimír **Sakhno**, Juraj **Gerlici**, Viktor **Poliakov**, Alexandr **Kravchenko**, Oleg **Omelnitsky**, Tomáš **Lack**  
*Road train motion stability in BRT system*

**Session D4: Wednesday, 05.09.2018, at 14:30 - 16:00**Chairman: Assoc. Prof. Jana **Petrů**, PhD. Eng. Ksawery **Szykiedans**

1. Bartłomiej **Pałasz**, Konrad Jan **Waluś**, Łukasz **Warguła**  
*The determination of the value of rolling resistance coefficient of a passenger's vehicle with the use of stationary method on a rolling road dyno*
2. Bartłomiej **Pałasz**, Konrad Jan **Waluś**, Łukasz **Warguła**  
*The determination of the value of rolling resistance coefficient of a passenger's vehicle with the use of chosen road methods*
3. Mariana **Pajtášová**, Darina **Ondrušová**, Zuzana **Mičicová**, Robert **Janik**, Ivan **Labaj**, Marcel **Kohutiar**, Beáta **Pecušová**, Katarína **Moricová**  
*Using of alternative fillers based on the waste and its effect on the rubber properties*
4. Bartosz **Ciupek**, Jarosław **Bartoszewicz**  
*The influence of geometry of primary air channels in standard retort burners on dust emission*
5. Marek **Raček**  
*Effect of wave propagation and transfer of a sensor on detected acoustic emission signal*



**Session E1: Thursday, 06.09.2012, at 15:30 - 17:00**Chairman: Prof. Andrzej **Kołodziej**, Prof. Darina **Ondrušová**

1. Krzysztof **Talaśka**, Dominik **Wojtkowiak**, Ireneusz **Malujda**, Krzysztof **Wałęsa**  
*Testing of a torque sensor used to measure the parameters of the briquetting process of lignocellulosic materials*
2. Vladimír **Dekýš**, Ondrej **Stalmach**, Josef **Soukup**, Alžbeta **Sapietová**, Lenka **Rychlikova**  
*Detection of composite damage by IR NDT using ultrasonic excitation*
3. František **Klimenda**, Josef **Soukup**, Milan **Žmindák**, Blanka **Skočilasová**  
*Dissemination of shock waves in thin plates – comparison of elastic plate – Kirchhoff and Rayleigh models*
4. Jana **Petrů**  
*Dependence of the cross section of the cut layer on the specific cutting resistance*
5. Grzegorz **Domek**  
*Modelling of the pitch of the tooth belt*

**Session E2: Thursday, 06.09.2012, at 15:30 - 17:00**Chairman: Prof. Marian **Dudziak**, Assoc. Prof. Milan **Vaško**

1. Bartosz **Wieczorek**, Łukasz **Warguła**  
*Problems of dynamometer construction for wheelchairs and simulation of push motion*
2. Rafał **Kwiatkowski**  
*The concept of vibration damping of the variable mass assembly*
3. Vladimír **Hauser**, Juraj **Gerlici**, Kateryna **Kravchenko**, Tomáš **Lack**, Mária **Loulová**, Olha **Aleksandrovna-Potapenko**  
*Defining of the variable rail geometry for vehicle dynamic simulation*
4. Josef **Soukup**, František **Klimenda**, Marian **Handrik**, Blanka **Skočilasová**  
*Investigation of vertical vibrations of solid plate space springy stored – vehicle model*
5. Piotr **Perz**, Dominik **Wilczyński**, Ireneusz **Malujda**  
*Experimental determination of electromagnetic brake parameters of the positioning system*
6. Vladimír **Tlach**, Zuzana **Ságová**, Ivan **Kuric**  
*Circular and quasi circular paths for the industrial robots measuring with the Renishaw Ballbar QC20-W*



**Session E3: Thursday, 06.09.2012, at 15:30 - 17:00**Chairman: Prof. Juraj **Gerlici**, Assoc. Prof. Piotr **Krawiec**

1. Alžbeta **Sapietová**  
*Conversion of data from the laser scanner to the Ansys Workbench*
2. Milan **Sapieta**  
*Life analysis of the bolted joint*
3. Ján **Vavro jr.**, Ján **Vavro**  
*Kinematic analysis of stirling engine*
4. Andrzej **Bąkowski**  
*Validation of traffic noise models*
5. Oleksij **Fomin**, Juraj **Gerlici**, Alyona **Lovskaya**, Kateryna **Kravchenko**, Pavlo **Prokopenko**, Tomáš **Lack**  
*Improvement of the bearing structure of the wagon–platform of the articulated type to ensure the reliability of the fixing on the deck of the railway ferry*
6. Tomasz **Skrzypczak**, Ewa **Węgrzyn-Skrzypczak**, Leszek **Sowa**  
*Investigation of the impact of geometry of the riser on the location and shape of shrinkage cavity*

**Session F1: Friday, 07.09.2018, at 9:00 - 10:30**Chairman: Prof. Grzegorz **Domek**, Prof. Alžbeta **Sapietová**

1. Michal **Šofer**, Petr **Ferfecki**, Martin **Fusek**, Pavel **Šofer**, Renata **Gnatowska**  
*The numerical analysis of the interaction between the low-order Lamb wave modes and the surface breaking cracks*
2. Ivana **Pobočíková**, Zuzana **Sedliačková**, Mária **Michalková**, Lenka **Kuchariková**  
*Monte Carlo comparison of estimation methods for the two-parameter lognormal distribution*
3. Pavol **Oršanský**  
*Parametric oscillator with perturbation and its analytical solution*
4. Zbigniew **Saturnus**, Wiesława **Piekarska**, Marcin **Kubiak**, Tomasz **Domański**, Dorota **Goszczyńska-Króliszewska**  
*Numerical modeling of cutting process of steel sheets using a laser beam*
5. Petr **Ferfecki**, Jaroslav **Zapoměl**, Marek **Gebauer**, Václav **Polreich**, Jiří **Křenek**  
*A computational fluid dynamics investigation of the segmented integral squeeze film damper*



**Session F2: Friday, 07.09.2018, at 9:00 - 10:30**Chairman: Prof. Milan **Žmindák**, PhD. Eng. Maciej **Bodnicki**

1. Mária **Blatnická**, Milan **Sága**, Miroslav **Blatnický**  
*Design and strength analysis of mechanical rack system*
2. Tomáš **Lack**, Juraj **Gerlici**  
*Profiles synthesis through radii variation of arcs profile method*
3. Juraj **Gerlici**, Tomáš **Lack**  
*Wheelset / rail geometric characteristics and contact forces assessment with regard to wheelset rolling*
4. Jozef **Harušinec**, Mária **Loulová**, Andrej **Suchánek**  
*Creation of prototype 3D models using RAPID PROTOTYPING*

**Session F3: Friday, 07.09.2018, at 9:00 - 10:30**Chairman: Prof. Josef **Soukup**, PhD. Eng. Tomasz **Domański**

1. Czesław **Kundera**, Jerzy **Bochnia**, Tomasz **Kozior**  
*Evaluation of the mechanical properties of photopolymers used in Polymer Jetting technology*
2. Peter **Kopas**, Milan **Sága**, Marián **Handrik**, Milan **Vaško**, Lenka **Jakubovičová**  
*Fatigue characteristics of welded high strength steel in the low cycle region of loading*
3. Darina **Ondrušová**, Ivan **Labaj**, Mariana **Pajtášová**, Juliana **Vršková**  
*Preparation and properties of new elastomeric systems containing alternative fillers*

**XXII Seminarium „Projektowanie Mechatroniczne” (XXII Seminar „Mechatronic Design”) – Friday, 07.09.2018, at 12:30 - 14:00**

1. Aleksandra **Fierek**  
*Design of mechatronic unit for application of coats of adhesive*
2. Mateusz **Wojtecki**  
*Mechatronic musical instrument*
3. Kajetan **Dłużyński**  
*Modeling and strength FEM analysis of the rim for a solar vehicle*
4. Jakub **Jędrzejewski**  
*Research on the response of the stabilization system to the external extortion*

