MANUFACTURING **2017** International Scientific-Technical Conference
Poznan University of Technology
24-26 October 2017, Poland

Conference Program*

* Please, pay attention to the Presentation Guidelines (at the end of the file)

Day 1, Tuesday, October 24, 2017

Time	Event	Room / Info
10:00-12:00	**Registration at Conference Office**	Hall
12:00-13:30	**Opening Ceremony** Session Chair: Olaf Ciszak - Conference Opening - Best Paper Award - **Plenary Session** - Announcements **Keynote Speakers:** **Adam Hamrol**, Poznan University of Technology *Challenges of Industry 4.0* **Jens Ocksen**, Volkswagen Poznań *Future Technologies in Production Process of Vehicles*	Aula Magna (CW4)
13:30-15:00	**Lunch**	053
15:00-16:30	**Session 1_Production Engineering I** Session Chair: Adam Hamrol 1. Adam Hamrol, Sławomir Zerbst, Mariusz Bożek, Marta Grabowska and Markus Weber, *Analysis of the Conditions for Effective Use of Numerically-Controlled Machine Tools* 2. Krzysztof Knop, Manuela Ingaldi and Marta Śmiłek-Starczynowska, *Reduction of errors of the conformity assessment during the visual inspection of electrical devices* 3. Bruno Vallarelli Guerreiro, Romulo Gonçalves Lins, Jianing Sun and Robert Schmitt, *Definition Of Smart Retrofitting: First Steps For A Company To Deploy Aspects Of Industry 4.0* 4. Tomasz Bartkowiak, Olaf Ciszak, Piotr Jabłoński, Adam Myszkowski and Marcin Wiśniewski, *A Simulative Study Approach For Improving The Efficiency Of Production Process Of Floorboard Middle Layer* 5. Ewa Dostatni, Jacek Diakun, Radosław Wichniarek, Anna Karwasz and Damian Grajewski, *Product Variants Recycling Cost Estimation With The Use Of Multi-Agent Support System*	L123

| 15:00-16:30 | **Session 2_Machines and Devices I** | L121 |

Session Chair: Grzegorz Królczyk

1. Andrzej Milecki, *Intelligent Materials Application in Mechatronic Devices*
2. Adam Jacso and Tibor Szalay, *Analyzing and optimizing 2.5D circular pocket machining strategies*
3. Arkadiusz Jakubowski, Arkadiusz Kubacki and Piotr Owczarek, *Development of Experimental Design for Hydraulic Active Heave Comensation Systems*
4. Karol Miądlicki, Mirosław Pajor and Mateusz Saków, *Loader crane working area monitoring system based on LIDAR scanner*
5. Nikodem Wróbel, Michał Rejek, Grzegorz Królczyk and Sergej Hloch, *Testing of tight crimped joint made on a prototype stand*
6. Jeremiasz Koper, *Design, manufacture and application of chamber for the magnetohydrodynamic deposition made of PP*

| 16:30-17:00 | **Coffee Break** | 053 |

| 17:00-... | **Welcome Reception** Porta Posnania (Tour) Guided Walking Tour (From Porta Posnania to Old Market Square) Brovaria at the Old Market Square (Beer and Snacks) | Meeting Point: PUT Entrance |

Day 2, Wednesday, October 25, 2017

Time	Event	Room / Info
09:00-10:00	**Plenary Session** Session Chair: Andrzej Milecki	123

Wit Grzesik, Technical University of Opole
New Concepts and Applications of Hybrid Manufacturing Processes

Aminul Islam, Technical University of Denmark
The Present and Future Perspectives of Moulded Interconnect Device (MID) Technologies

| 10:00-10:30 | **Coffee Break** | 053 |

| 10:30-12:00 | **Session 3_Production Engineering II** | L123 |

Session Chair: Marta Grabowska

1. Beatrice Monique Rich, Jane Worlitz, Stefan Peplowsky and Ralf Woll, *I spy, with my little eye: Quality standards of different target groups*
2. Maria Rosienkiewicz, Joanna Gąbka, Joanna Helman, Arkadiusz Kowalski and Sławomir Susz, *Additive Manufacturing Technologies Cost Calculation as a Crucial Factor in Industry 4.0*
3. Magdalena Graczyk-Kucharska, Maciej Szafrański, Marek Goliński, Małgorzata Spychała and Kamila Borsekova, *Model Of Competency Management In The Network Of Production Enterprises In Industry 4.0 - Assumptions*

4. Wiesław Urban and Elżbieta Krawczyk-Dembicka, *Case Studies of the Process-Oriented Approach to Technology Management*
5. Mariusz Salwin, Bartłomiej Gładysz and Krzysztof Santarek, *Technical Product-Service Systems – a Business Opportunity for Machine Industry*

| 10:30-12:00 | **Session 4_Machining and Technological Processes** | L121 |

Session Chair: Marcin Suszyński

1. Jakub Wojciechowski and Olaf Ciszak, *Spatial adjusting of the industrial robot program with matrix codes*
2. Piotr Jabłoński, Piotr Czajka, Adam Patalas, Rafał Talar and Michał Regus, *Case study of thermal stress distribution within coating applied on aluminum plain clutch plate by thermal spray coating technique*
3. Filip Górski, Radosław Wichniarek, Wiesław Kuczko, Paweł Buń and John Ahmet Erkoyuncu, *Augmented Reality in Training of 3D Printing Processes*
4. Michal Zoubek, Jan Kudlacek, Petr Chábera and Andrey Abramov, *Complex Control Method of Degreasing Process*
5. Włodzimierz Przybylski and Stefan Dzionk, *Hybrid processing by turning and burnishing of machine components*
6. Józef Kuczmaszewski, Waldemar Łogin, Paweł Pieśko and Magdalena Zawada-Michałowska, *Assessment of the Accuracy of High Speed Machining of Thin-Walled EN AW-2024 Aluminium Alloy Elements Using Carbide Milling Cutter and with PCD Blades*

| 12:00-12:30 | **Coffee Break** | 053 |

| 12:30-14:00 | **Session 5_Measuring Systems & Quality Engineering** | L123 |

Session Chair: Bartosz Gapiński

1. João Sousa, Luís Figueiredo, José Machado and João Mendonça, *Measuring the punching profile of a punch and bind machine*
2. Witold Habrat, Maciej Żak, Jolanta B. Królczyk and Paweł Turek, *Comparison of geometrical accuracy of a component manufactured using additive and conventional methods*
3. Nermina Zaimovic-Uzunovic and Samir Lemes, Cylindricity *Measurement on a Coordinate Measuring Machine*
4. Dorota Stadnicka and Katarzyna Antosz, *Overall Equipment Effectiveness: Analysis Of Different Ways Of Calculations And Improvements*
5. Beata Starzyńska, Karolina Szajkowska, Magdalena Diering, Alvaro Rocha and Luis Paulo Reis, *A study of raters agreement in an inspection with the participation of hearing disabled people*

| 12:30-14:00 | **Session 6_Materials Engineering** | L121 |

Session Chair: Mieczysław Jurczyk

1. Oleg Devojno, Eugene Feldshtein, Marharyta Kardapolava and Nikolaj Lutsko, *On the formation features and some material properties of the coating formed by laser cladding of a NiCrBSi self-fluxing alloy*

2. Joanna Krajewska-Śpiewak and Józef Gawlik, *Effect of residual stresses in surface layer of nickel based alloy – Inconel 718 on the safety factor of construction*
3. Jakub Svoboda, Jan Kudláček, Viktor Kreibich and Stanislaw Legutko, *Alternative Methods of Chemical Pre-Treatment on Hot-Dip Galvanization Surface for Adhesion of Organic Coatings*

Time	Event	Room / Info
14:00-15:00	**Lunch**	053
15:00-18:30	**Solaris Bus & Coach - Site Visit**	Meeting Point: PUT Entrance
18:30-19:30	Free Time	
19:30-23:00	**Gala Dinner**	053

Day 3, Thursday, October 26, 2017

Time	Event	Room / Info
09:00-10:30	**Poster Session and Morning Coffee** Session Chairs: Michał Rogalewicz, Magdalena Diering (see Posters List)	Hall / 053
09:00-10:30	**Coffee Break**	053
10:30-12:00	**Session 7_Production Engineering III** Session Chair: Sławomir Kłos	L123

1. Arkadiusz Kubacki and Dominik Rybarczyk, *Development of Speech System Using Bci Based On Erd/Ers for Patient Suffer on the Amyotrophic Lateral Sclerosis*
2. Andrzej Jardzioch and Bartosz Skobiej, *Job Scheduling Problem In Flow-Shop System With Simulated Hardening Algorithm*
3. Adrian Jakóbczyk, Kamil Nogaj, Jacek Diakun and Reggie Davidrajuh, *Production Process Analysis In Conditions Of Long Set-Up Times And Short-Term Raw Materials Expiration Date Using Simulation Method*
4. Przemysław Zawadzki, *Methodology of KBE System Development for Automated Design of Multi-Variant Products*
5. Grzegorz Bocewicz, Paweł Pawlewski and Zbigniew Banaszak, *Cyclic Steady State Approach to Modelling of Multimodal Processes Flow Leveling*
6. Janusz Pobozniak, *Interacting Manufacturing Features In CAPP Systems*

Time	Event	Room / Info
10:30-12:00	**Session 8_Machines and Devices II** Session Chair: Filip Górski	L121

1. Wojciech Kacalak, Zbigniew Budniak and Maciej Majewski, *Optimization of the Movement Trajectory of Mobile Crane Working Elements*

2. Dominik Rybarczyk, Piotr Owczarek and Adam Myszkowski, *Development of force feedback controller for the loader crane*
3. Grzegorz Pittner, Bartosz Minorowicz and Roman Regulski, *Study on mechanical characteristics in electroctromechanical disengaging damper*
4. Piotr Owczarek, Jarosław Gośliński, Dominik Rybarczyk, Arkadiusz Kubacki, Arkadiusz Jakubowski and Łukasz Sawicki, *Modeling and 3D simulation of an electro-hydraulic manipulator controlled by vision system with Kalman filter*
5. Mateusz Saków, Arkadiusz Parus, Mirosław Pajor and Karol Miądlicki, *Unilateral Hydraulic Telemanipulation System for Operation in Machining Work Area*
6. Paweł Herbin and Mirosław Pajor, *ExoArm 7-DOF (interactive 7-DOF motion controller of the operator arm) master device for control of loading crane*

| 12:00-12:30 | **Coffee Break** | 053 |

| 12:30-14:00 | **Session 9_Technological and Assembly Processes** | L121 |

Session Chair: Bożena Skołud

1. Sławomir Kłos and Justyna Patalas-Maliszewska, *The Impact of Buffer Allocation in Assembly-Line Manufacturing Systems on the Effectiveness of Production Processes*
2. Jan Duda, *Formal Description Of Integrated Process And Assembly System Planning*
3. Tomasz Giesko and Adam Mazurkiewicz, *Applications of optomechatronics technologies in innovative industry*
4. Waldemar Małopolski and Adam Wiercioch, *An approach to modeling and simulation of a complex conveyor system using Delmia Quest – a case study*
5. Sara Dudzińska, Michał Szydłowski, Emilia Bachtiak-Radka and Daniel Grochała, *Application of correlation function for analysis of surface structure shaping by hybrid manufacturing technology*

| 12:30-14:00 | **Session 10_Student Projects**, Session Language: Polish | L123 |

Session Chair: Ewa Dostatni

1. Mateusz Mili, Paweł Walkowiak, *Lean Tools for waste elimination* (Eliminacja marnotrawstwa przy użyciu narzędzi Lean) , PRIME
2. Martyna Michałowska, Jakub Otworowski, *How human body works – biomechanics by BTS Da Vinci* (*Jak działa ludzkie ciało – biomechanika w ujęciu BTS Da Vinci*), BTS Da Vinci
3. Kamila Tomczak, Natalia Tomaszewska, Adam Gorczyński, Maciej Słomian, *PUT Koncepcja – students for industry and industry for students* (*PUT Koncepcja – studenci dla przemysłu i przemysł dla studentów*), PUT Koncepcja
4. Marta Lewandowska, *PUT Motorsport – Poznań University of Technology Racing Team. From dreams to Silverstone – meet the engineers of future* (*PUT Motorsport – Zespół Wyścigowy Politechniki Poznańskiej. Od marzeń do Silverstone, czyli poznaj inżynierów jutra*), PUT Motorsport

| 14:00-15:00 | **Lunch** | 053 |

Posters List

Production Engineering

No	Poster Title	Authors
P1	*Fulfilling Individual Requirements Of Customers In Smart Factory Model*	Krzysztof Żywicki and Przemysław Zawadzki,
P2	*A Methodology Of Improvement Of Manufacturing Productivity Through Increasing Operational Efficiency Of The Production Process*	Justyna Trojanowska, Adam Koliński, Dariusz Galusik, Leonilde Varela and Jose Machado
P3	*The Impact Of Task Balancing And Sequencing On Production Efficiency*	Krzysztof Żywicki, Paulina Rewers, Łukasz Sobków and Dawid Antas
P4	*A Study Of Priority Rules For A Levelled Production Plan*	Paulina Rewers, Justyna Trojanowska, Jacek Diakun, Alvaro Rocha and Luis Paulo Reis
P5	*Development of an Intelligent and Automated System for Lean Industrial Production, Adding Maximum Productivity and Efficiency in the Production Process*	Adriana F. Araújo, Maria L.R. Varela, Marivan S. Gomes, Raissa C.C. Barreto, Justyna Trojanowska
P6	*The Use of Virtual Design to Accommodate a Workplace for a Hearing-Impaired Worker*	Anna Karwasz and Karolina Szajkowska
P7	*Intelligent Platform for Supervision and Production Activity Control in Real Time*	G.G. Vieira, Maria Leonilde Rocha Varela, G.D. Putnik and Jose Machado
P8	*GPenSIM for Performance Evaluation of Event Graphs*	Reggie Davidrajuh, Bożena Skołud and Damian Krenczyk,
P9	*Analysis Of The Environmental Costs In Manufacturing Companies In The SME Sector In Poland*	Łukasz Grudzień, Filip Osiński and Sabahudin Jasarevic
P10	*The Use of Machine Learning Method in Concurrent Ecodesign of Products And Technological Processes*	Ewa Dostatni, Izabela Rojek and Adam Hamrol
P11	*The Operational Validation of a Planning Process Integration Model in a Manufacturing Company*	Michał Adamczak, Piotr Cyplik and Marek Fertsch
P12	*The Benefits Of Using Computer Simulation Models To Support Decision Making*	Elżbieta Malec
P13	*Symbolic Representation Of Production Knowledge In The Development Of Knowledge Management Systems*	Alfred Paszek

Design, Building and Research of Machines and Devices

No	Poster Title	Authors
P14	*Trends in the development of rotary tables with different types of gears*	Kamil Wojtko and Piotr Frąckowiak
P15	*Survey on design and development of hexapod walking robot, automated guided vehicle and drone*	Bartosz Minorowicz, Mariusz Palubicki, Natan Stec, Jakub Bartoszek, Lukasz Antczak and Jakub Matyszczak

No	Poster Title	Authors
P16	*Development of conical face gear technology cooperation with conical worm in spiroid gear drive*	Piotr Frąckowiak and Kamil Wojtko
P17	*Effect of Different Electrolytes on Material Removal Rate, Diameter of Hole and Spark in Electrochemical Discharge Machining*	Mukund Harugade and Sachin Waigaonkar

Cutting Machining & Technological and Assembly Processes

No	Poster Title	Authors
P18	*Computer simulation of the process of regenerating the adsorbent using microwave radiation in compressed air dryers.*	Sergey Dobrotvorskiy, Ludmila Dobrovolska and Borys Aleksenko
P19	*Topology optimisation aimed at additive - SLM manufacturing of metal parts of ExoArm 7-DOF*	Paweł Herbin, Dariusz Grzesiak and Marcin A. Królikowski
P20	*Virtual reality and CAD systems integration for quick product variant design*	Przemysław Zawadzki, Filip Górski, Paweł Buń, Radosław Wichniarek and Karina Szałańska
P21	*Prediction of HPDC casting properties made of AlSi9Cu3 alloy*	Jakub Hajkowski, Paweł Popielarski and Robert Sika
P22	*Internal stresses analysis in the shrink-fitted joints of the assembled crankshafts*	Zbigniew Siemiątkowski, Mirosław Rucki, Jan Kudlacek
P23	*Investigation of heat distribution in coated indexable tool inserts*	Marta Bogdan-Chudy, Piotr Nieslony and Grzegorz Królczyk
P24	*Effect of heat treatment on mechanical properties of Inconel 625/steel P355NH bimetal clad-plate manufactured by explosive welding*	Robert Kosturek, Michał Najwer, Piotr Niesłony and Marcin Wachowski
P25	*Application of principal component analysis and decision trees in diagnostics of cylindrical plunge grinding process*	Paweł Lajmert, Małgorzata Sikora, Bogdan Kruszyński and Dariusz Ostrowski
P26	*Assessment of deformation characteristics on CW004A cooper influenced by acoustically enhanced water jet*	Dominika Lehocka, Vladimir Simkulet and Stanislaw Legutko
P27	*Influence of Machining Conditions on the Energy Consumption and Productivity in Finish Hard Turning*	Roman Chudy, Wit Grzesik and Krzysztof Żak

Measurement Systems & Quality Engineering

No	Poster Title	Authors
P28	*Influence of the inlet nozzle diameter on the air gauge dynamics*	Michał Jakubowicz, Miroslaw Rucki, Gyula Varga and Radomir Majchrowski
P29	*Accuracy of hysteresis modeling in smart actuator with MSMA*	Bartosz Minorowicz, Frederik Stefanski and Grzegorz Pittner
P30	*Application of Scanning Techniques in the Analysis of the Wear Forging Tools*	Marek Hawryluk, Jacek Ziemba and Marcin Rychlik
P31	*Studies of geometric accuracy of polygons machined by polygonal turning technique*	Michał Regus, Bartosz Gapiński, Piotr Czajka and Piotr Jabłoński

P32	*Ensuring the reliability of the car body controls by controlling the current inspection of measuring machines*	Robert Koteras, Michał Wieczorowski, Piotr Znaniecki and Lidia Marciniak-Podsadna
P33	*Application of industrial robot as a measuring system*	Ksenia Ostrowska, Robert Kupiec, Małgorzata Kowalczyk, Paweł Wojakowski, Halszka Skórska and Jerzy Sładek
P34	*Surface roughness of graphite and aluminium alloy after hydro-abrasive machining*	Jan Carach, Dominika Lechocka, Stanislaw Legutko, Sergej Hloch, Somnath Chattopadhyaya and Amit Rai Dixit
P35	*Measurement of surface topography using computed tomography*	Bartosz Gapinski, Lidia Marciniak-Podsadna, Michal Wieczorowski, Alejandro Pereira DomÍnguez, Lenka Cepova and Anton Martinez Rey
P36	*Improvement of acceptance sampling inspection for the operation of sealing packages*	Agnieszka Kujawińska, Michał Rogalewicz, Magdalena Diering, Mariusz Bożek, Marcin Łuczak and Sachin D. Waigaonkar
P37	*Possibilities and limitations of passive experiments conducted in industrial conditions*	Michał Rogalewicz, Paweł Smuśkiewicz, Adam Hamrol, Agnieszka Kujawińska and Luis Paulo Reis
P38	*Assessment of quality management system maturity*	Marta Grabowska and Josu Takala
P39	*Organization of visual inspection and its impact on the effectiveness of inspection*	Agnieszka Kujawińska, Katarzyna Vogt, Michał Rogalewicz, Magdalena Diering and Alvaro Rocha
P40	*The multi-scale analysis of ceramic surface texture formed in the precision machining process*	Magdalena Niemczewska-Wójcik and Artur Wójcik

Materials Engineering

No	Poster Title	Authors
P41	*Fracture toughness of plasma paste borided layers produced on nickel-based alloys*	Magdalena Frąckowiak, Natalia Makuch, Piotr Dziarski, Michał Kulka and Sukru Taktak
P42	*Influence of preparation conditions on final dielectric properties of pure and Ca-doped BaTiO3 ceramics*	Anna Włódarkiewicz, Ewa Markiewicz, Bożena Hilczer, Kamil Feliksik, Lucjan Kozielski and Izabela Szafraniak-Wiza
P43	*Wear of solid carbide ball nose end mill*	Iwona Łapuńka, Piotr Wittbrodt and Katarzyna Marek-Kołodziej
P44	*Influence of selected factors on static friction for association of expanded graphite-steel*	Aleksandra Rewolińska and Karolina Perz
P45	*The influence of composition chemical of nanofluids on selected proprieties of laser alloying elements*	Wojciech Gęstwa

Plenary Meeting of the Committee on Machine Building
of the Polish Academy of Sciences

During the conference, a Plenary Meeting of the Committee on Machine Building of the Polish Academy of Sciences will also take place:

Wednesday, October 25, 2017

Time	Event	Room / Info
10:45-12:15	Plenary Meeting of the **Committee on Machine Building** of the Polish Academy of Sciences	208 BM (the Faculty Council Room)
12:15-12:45	Meeting of the **Technology Section** of the Committee on Machine Building	208 BM (the Faculty Council Room)

Presentation Guidelines

The official language of the event is English.

Individual papers are grouped into thematic sessions, which usually consist of six oral presentations.
Each presentation is 15 minutes long. It is recommended to use 12 minutes to present and 3 minutes for open discussion/questions. Time limits will be insistently suggested.
The recommended file type to be used for presentations is PowerPoint or Portable Document Format (PDF).
The presentation files should be brought on a USB. Speakers are requested to upload their presentation onto the session PC and report to the session chair 10 minutes before the start of the session. All presenters will be introduced to the audience by the session Chair.

Posters should be printed and brought by each author to the conference Registration Desk. Poster presentations are grouped into thematic sessions according to the conference topics.
The dimensions of the poster should be one page of A0 sized (841 x 1189 mm).
At the appointed time, at least one of the authors is expected to be at their designated poster board(s) to answer questions and discuss their work with conference' participants during the session.

Contact:

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