

7th International Conference on  
**ENGINEERING, PROJECT  
AND PRODUCTION MANAGEMENT**  
**EPPM2016**



**Bialystok, Poland, September 21-23, 2016**



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7<sup>th</sup> International Conference

**On Engineering, Project, and Production Management  
(EPPM2016)**

**PROGRAM**

Białystok, Poland, September 21–23, 2016

## ORGANIZERS



WYDZIAŁ ZARZĄDZANIA  
POLITECHNIKI BIAŁOSTOCKIEJ



Faculty of Management, Bialystok University of Technology, Poland



Association of Engineering, Project, and Production Management (EPPM), Taiwan



Polish Academy of Sciences' Committee on Production Engineering, Poland



International Society for Manufacturing, Service and Management Engineering (ISMSME), Poland



Agency for Restructuring and Modernisation of Agriculture, Poland

## DETAILED PROGRAM

### 21 September 2016 (Wednesday)

- 08:30 – 14:40 Sightseeing Supraśl (optional, extra fee)  
 15:15 – 17:00 Sightseeing Białystok (free of charge, sponsored by the organisers)  
 18:00 – 21:00 Welcome Reception – Main Library of Białystok University of Technology  
 (16 Zwierzyniecka Street)

### 22 September 2016 (Thursday)

- 08:30 – 09:00 Registration (INNO-ECO-TECH Building, Hall)  
 09:00 – 09:45 **Opening session** (INNO-ECO-TECH Building, Conference Room)  
 09:45 – 10:45 **Plenary session I** (INNO-ECO-TECH Building, Conference Room)  
 Keynote speaker: Tomasz Kośmider, Technology Partners Foundation  
*Evolution of research structures to improve research management effectiveness*  
 10:45 – 11:00 *Coffee break*

11:00 – 12:30

Parallel sessions I (Main Library of Białystok University of Technology, 16 Zwierzyniecka Street)

	<b>Logistics and Supply Chain Management I</b>
<b>Chair: T. Chinda</b>	<b>Main Library, Room: Yellow</b>
<b>Secretary: M. Jarocka</b>	
11:00 – 11:15	U. Ryciuk, <i>Identification of factors related to trust formation in construction supply chains</i>
11:15 – 11:30	A. Baraniecka, G. Wieteska, A. Jajko-Siwiek, M. Szuster, <i>Relativism in the approach to managing supply chain maturity</i>
11:30 – 11:45	K. Dębkowska, <i>E-logistics as an element of the business model maturity in enterprises of the TFL sector</i>
11:45 – 12:30	<i>Discussion</i>

<b>Quality Management I</b>	
<b>Chair: W. Urban</b>	<b>Main Library, Room: Red</b>
<b>Secretary: A. Olszewska</b>	
11:00 – 11:15	Chien-Ho Ko, <i>Lean building design model</i>
11:15 – 11:30	M. Wyrwicka, B. Mrugalska, <i>Mirages of lean manufacturing in practice</i>
11:30 – 11:45	B. Mrugalska, M. Wyrwicka, <i>Towards Lean Production in Industry 4.0</i>
11:45 – 12:00	K. Antosz, D. Stadnicka, <i>Lean philosophy implementation in SMEs – study results</i>
12:00 – 12:15	J. Alencastro, A. Fuertes, P. de Wilde, <i>Delivering energy-efficient social housing: implications of the procurement process</i>
12:15 – 12:30	<i>Discussion</i>

<b>Project and Process Management I</b>	
<b>Chair: J. Smallwood</b>	<b>Main Library, Room: Green</b>
<b>Secretary: A. Gulc</b>	
11:00 – 11:15	J. Dumrak, B. Baroudi, N. Hadjinicolaou, <i>Exploring the association between project management knowledge areas and sustainable outcomes</i>
11:15 – 11:30	R. Gabryelczyk, A. Jurczuk, <i>Does experience matter? Factors affecting the understandability of the business process modelling notation</i>
11:30 – 11:45	C. Orłowski, A. Ziółkowski, G. Paciorkiewicz, <i>Quantitative assessment of the IT agile transformation</i>
11:45 – 12:00	D. Pimchangthong, V. Boonjing, <i>Effects of risk management practice on the success of IT projects</i>
12:00 – 12:15	N. Hadjinicolaou, J. Dumrak, <i>Investigating association of benefits and barriers in project portfolio management to project success</i>
12:15 – 12:30	<i>Discussion</i>

<b>Service Science and Engineering I</b>	
<b>Chair: E. Szymańska</b>	<b>Main Library, Room: Blue</b>
<b>Secretary: A. Daniluk</b>	
11:00 – 11:15	R. Ginevicius, D. Gedvilaitė, A.Stasiukynas, <i>Assessment of the interrelations between economic and ecological development in regions of Lithuania</i>
11:15 – 11:30	L. Ustinovicius, A. Komarovska,R. Komarovski, <i>Methods of determining the region’s investment strategy</i>
11:30 –11:45	E. Panfiluk, <i>Analysis of the efficiency of the ERDF management system in Poland</i>
11:45 – 12:00	M. Koszel, P.Bartkowiak, <i>Forms of relationships among local government units in Polish metropolitan areas</i>
12:00 – 12:30	<i>Discussion</i>

<b>Technology Management</b>	
<b>Chair: J. Kaźmierczak</b>	<b>Main Library, Room: Orange</b>
<b>Secretary: Ł. Nazarko</b>	
11:00 – 11:15	B. Poteralska, <i>Decision support system in the area of generating innovative research projects of the future</i>
11:15 – 11:30	A. E. Gudanowska, <i>Modern research trends within technology management in the light of selected publications</i>
11:30 –11:45	M. Kikolski, <i>Study of production scenarios with the use of simulation models</i>
11:45 – 12:00	E. Krawczyk-Dembicka, <i>Analysis of technology management using the example of the production enterprise from the SME sector</i>
12:00 – 12:15	K. Ejsmont, <i>Holistic assessment method of intelligent technologies used in production processes</i>
12:15 – 12:30	<i>Discussion</i>

12:30 – 13:00 Transfer to Podlasie Opera and Philharmonic – European Art Centre (1 Odeska Street)  
 13:00 – 13:45 Lunch

**13:45 – 15:15 Plenary session II** (European Art Centre, 1 Odeska Street)

**New Silk Road (Chair: J. Nazarko)**

J. Nazarko, K. Kuźmicz, *Introduction to the STEEPVL analysis of the New Silk Road initiative*

J. Ejdys, *New Silk Road – a weak or a strong signal?*

K. Czerewacz-Filipowicz, *The Russian Federation RTAs in the light of global value chains*

15:15 – 15:30 *Coffee break*

15:30 – 15:50 Transfer to the Main Library of Białystok University of Technology (16 Zwierzyniecka Street)

16:00 – 17:30

Parallel sessions II (Main Library of Białystok University of Technology, 16 Zwierzyniecka Street)

<b>Logistics and Supply Chain Management II</b>	
<b>Chair: E. Pesch</b>	<b>Main Library, Room: Yellow</b>
<b>Secretary: S. Gierej</b>	
16:00 – 16:15	T. Chinda, <i>Examination of factors influencing the successful implementation of reverse logistics in the construction industry: pilot study</i>
16:15 – 16:30	M. Jarocka, E. Glińska, <i>The state and prospects for the development of railway transport infrastructure in Eastern Poland – secondary data analysis</i>
16:30 – 16:45	B. Golden, J. Nossack, E. Pesch, R. Zhang, <i>Routing problems with time dependencies or how different are trash collection or newspaper delivery from street sweeping or winter gritting?</i>
16:45 – 17:00	A. Czech, J. Lewczuk, <i>Statistical assessment of the development of the transportation system in chosen countries – an international approach</i>
17:00 – 17:30	<i>Discussion</i>



<b>Quality Management II</b>	
<b>Chair: Chien-Ho Ko</b>	<b>Main Library, Room: Red</b>
<b>Secretary: A. Olszewska</b>	
16:00 – 16:15	A. Olszewska, <i>Research issues undertaken within quality management – the overview of selected literature and a knowledge map</i>
16:15 – 16:30	W. Urban, <i>System of amoebas as a remedy for employee engagement deficits – a conceptual deliberation</i>
16:30 – 16:45	K. Panuwatwanich, T. Tung Nguyen, <i>Influence of Total Quality Management on the performance of Vietnamese construction firms</i>
16:45 – 17:00	J. Lipiak, <i>Methodology for assessing the factors affecting the quality and efficiency of flexographic printing process</i>
17:00 – 17:15	K. Stepaniuk, <i>Quality of accommodation services. The memetic approach</i>
17:15 – 17:30	<i>Discussion</i>

<b>Project and Process Management II</b>	
<b>Chair: C. Orłowski</b>	<b>Main Library, Room: Green</b>
<b>Secretary: A. Jurczuk</b>	
16:00 – 16:15	J. Jędrzejczak-Gas, <i>Net working capital management strategies in the construction enterprises listed on the NewConnect market</i>
16:15 – 16:30	G. E. Gurcanli, H. Turkoglu, S. Bilir, <i>Heavy equipment scheduling for horizontal construction projects</i>
16:30 – 16:45	L. Peng, D. Chua, J. Yeoh, <i>Decision support for mobile crane lifting plan with Building Information Modelling (BIM)</i>
16:45 – 17:00	G. A. Niazi, N. Painting, <i>Significant factors causing cost overruns in the construction industry in Afghanistan</i>
17:00 – 17:15	J. Gawlik, J. Krajewska-Śpiewak <i>Identification of the beginning of decohesion process based on the acoustic emission signal during machining operation</i>
17:15 – 17:30	<i>Discussion</i>

<b>Service Science and Engineering II</b>	
<b>Chair: A. Daniluk</b>	<b>Main Library, Room: Blue</b>
<b>Secretary: J. Siderska</b>	
16:00 – 16:15	A. Wasiluk, <i>Pro-innovative prerequisites for establishing the cooperation between companies (in the perspective of creation and development of clusters)</i>
16:15 – 16:30	A. Daniluk, <i>Cooperation between business companies and institutions in the context of innovations implementation</i>
16:30 – 16:45	A. Tomaszuk, <i>Importance of technological factors in the creation of cooperation</i>
16:45 – 17:00	J. Kozłowska, <i>Services in the machinery manufacturing sector in Poland</i>
17:00 – 17:30	<i>Discussion</i>

<b>Technology Foresight and Management</b>	
<b>Chair: J. Ejdys</b>	<b>Main Library, Room: Orange</b>
<b>Secretary: A. Gudanowska</b>	
16:00 – 16:15	A. Pawlak, <i>The ecosystem for niche technology innovation</i>
16:15 – 16:30	A. Magruk, <i>Phenomenon of uncertainty in the process of holistic anticipation of non-deterministic reality</i>
16:30 – 16:45	A. Sacio-Szymańska, A. Kononiuk, S. Tommei, <i>Mobilizing corporate foresight potential among V4 countries – assumptions, rationales, and the methodology</i>
16:45 – 17:00	Ł. Nazarko, <i>Future-Oriented Technology Assessment</i>
17:00 – 17:15	K. Halicka, <i>Main concepts of technology analysis in the light of the literature on the subject</i>
17:15 – 17:30	<i>Discussion</i>

19:00 – 24:00 *Gala dinner (Aula Magna, Branicki Palace, 1 Kilińskiego Street)  
 (dress code: business casual)*

**23 September 2016 (Friday)**

9:30 – 11:00

Parallel sessions II (Main Library of Białystok University of Technology, 16 Zwierzyńska Street)

	<b>Agricultural Engineering</b>
<b>Chair: Z. Chomentowska</b>	<b>Main Library, Room: Yellow</b>
<b>Secretary: K. Stepaniuk</b>	
09:30 – 09:45	Agency for Restructuring and Modernisation of Agriculture, <i>Management and Agricultural Production Engineering</i>  A. Wasiak, <i>Effect of biofuel production on sustainability of agriculture</i>
09:45 – 10:00	A. Bartkowiak, P. Bartkowiak, <i>Technical and technological progress in the context of sustainable development of agriculture in Poland</i>
10:00 – 10:15	O. Orynych, <i>Influence of tillage technology on the energy efficiency of a rapeseed plantation</i>
10:15 – 10:30	L. Dragan, <i>Prospects and risks of the development of energy production using a combined heat and power system and taking into account the characteristics of the biomass economy</i>
10:30 – 10:45	M. Awtoniuk, A. Chochowski, <i>Compost temperature prediction in a mushroom production process</i>
10:45 – 11:00	<i>Discussion</i>

<b>Industrial Engineering I</b>	
<b>Chair: Ł. Nazarko</b>	<b>Main Library, Room: Red</b>
<b>Secretary: E. Krawczyk-Dębicka</b>	
09:30 – 09:45	E. Piechoczek, J. Kaźmierczak, <i>Modelling the use of alternative technical means for services by piloted flying platforms: presentation of a research project</i>
09:45 – 10:00	Y. Redutskiy, <i>Modelling and Design of Safety Instrumented Systems for Upstream Processes of Petroleum Sector</i>
10:00 – 10:15	K. Krystosiak, <i>Prediction method for winding parameters in label converting process with data mining tools</i>
10:15 – 10:30	D. Stadnicka, R.M. Chandima Ratnayake, <i>Enhancing aircraft maintenance services: a VSM-based case study</i>
10:30 – 10:45	R.M. Chandima Ratnayake, K. Antosz, <i>Development of a risk matrix and extending the risk-based maintenance analysis with fuzzy logic</i>
10:45 – 11:00	<i>Discussion</i>

<b>Project and Process Management III</b>	
<b>Chair: S. Bazlamit</b>	<b>Main Library, Room: Green</b>
<b>Secretary: J. Siderska</b>	
09:30 – 09:45	X. Jin, G. Zhang, J. Liu, Y. Feng, J. Zuo, <i>Major participants in the construction industry and their approaches to risks: a theoretical framework</i>
09:45 – 10:00	K. Dziekoński, <i>Project managers' competencies model for the construction industry in Poland</i>
10:00 – 10:15	W. Y. Ayessaki, J. Smallwood, <i>Influencing workers' performance through health and safety interventions</i>
10:15 – 10:30	T. Snyman, J. Smallwood, <i>Improving productivity in the business of construction</i>
10:30 – 10:45	S. Gieraj, <i>The framework of business model in the context of Industrial Internet of Things</i>
10:45 – 11:00	<i>Discussion</i>

<b>Service Science and Engineering III</b>	
<b>Chair: J. Tamosaitiene</b>	<b>Main Library, Room: Blue</b>
<b>Secretary: A. Kononiuk</b>	
09:30 – 09:45	E. Szymańska, <i>User-Driven Innovation – the concept and research results</i>
09:45 – 10:00	A. Barska, J. Śnihur, <i>Seniors as a challenge for innovative enterprises</i>
10:00 – 10:15	K. Tomczak-Horyń, R. Knosala, <i>Evaluation of employee creativity as a stimulator of company development</i>
10:15 – 10:30	B. Wasilewska, <i>System for stimulating the technical problem solutions</i>
10:30 – 11:00	<i>Discussion</i>

<b>Operational Management and Decision Support Systems</b>	
<b>Chair: A. Czarnigowska</b>	<b>Main Library, Room: Orange</b>
<b>Secretary: A. Magruk</b>	
09:30 – 09:45	M. Wirkus, A. Kukułka, <i>Issues of measuring the course of batch production processes</i>
09:45 – 10:00	G. Łaska, <i>Wind energy and multi-criteria analysis in making decisions on the location of wind farms</i>
10:00 – 10:15	M. Wirkus, A. Kukułka, <i>Evaluation of batch production processes based on seven criterions</i>
10:15 – 10:30	P. Rewers, A. Hamrol, K. Żywicki, M. Bożek, W. Kulus, <i>Production levelling as an effective method for production flow control – experience of Polish enterprises</i>
10:30 – 10:45	A. M. Deptuła, <i>Analysis of criteria used in the risk assessment of technical innovations</i>
10:45 – 11:00	<i>Discussion</i>

11:00 – 11:15      *Coffee break*

11:15 – 12:45

Parallel sessions IV (Main Library of Białystok University of Technology, 16 Zwierzyniecka Street)

<b>Logistics and Supply Chain Management III</b>	
<b>Chair: K. Czerewacz-Filipowicz</b>	<b>Main Library, Room: Yellow</b>
<b>Secretary: M. Jarocka</b>	
11:15 – 11:30	J. Wyrwa, A. Barska, <i>Packaging as a source of information about food products</i>
11:30 – 11:45	A. Gulc, <i>Models and methods for measuring the quality of logistic service</i>
11:45 – 12:00	E. Chodakowska, J. Nazarko, K. Żur, <i>Models evaluating courier and messenger companies in Poland</i>
12:00 – 12:15	S. Hajduk, <i>Bibliometric analysis of publications on city logistics in international scientific literature</i>
12:15 – 12:45	<i>Discussion</i>

<b>Industrial Engineering II</b>	
<b>Chair: A. Wasiak</b>	<b>Main Library, Room: Red</b>
<b>Secretary: O. Orynych</b>	
11:15 – 11:30	M. A. Sofuoğlu, S. Gürgen, F. Hayati Çakır, S. Orak, <i>Springback behaviour of AA6082T6 tubes in the three-point bending operation</i>
11:30 – 11:45	P. Maksymiuk, B. Krupicz, P. Krupicz, <i>Plasticity of flat bars in platform gratings</i>
11:45 – 12:00	W. Rakowski, <i>Wavelet approach to damage detection of mechanical systems and structures</i>
12:00 – 12:45	<i>Discussion</i>

<b>Project and Process Management IV</b>	
<b>Chair: A. Jurczuk</b>	<b>Main Library, Room: Green</b>
<b>Secretary: M. Kikolski</b>	
11:15 – 11:30	W. Matwiejczuk, T. Matwiejczuk, A. Michna, <i>Organisational and legal barriers in shaping the final value of construction contracts</i>
11:30 – 11:45	N. Hazim, Z. A. Salem, H. Ahmad, <i>Delay and cost overrun in infrastructure projects in Jordan</i>
11:45 – 12:00	H. S. Ahmad, I. M. Bazlamit, M. D. Ayoush, <i>Investigation of document management systems in small construction companies in Jordan</i>
12:00 – 12:15	S. M. Bazlamit, H. S. Ahmad, T. I. Al-Suleiman (Obaidat), <i>Pavement maintenance applications using Geographic Information Systems</i>
12:15 – 12:45	<i>Discussion</i>

<b>Service Science and Engineering IV</b>	
<b>Chair: L. Ustinovicus</b>	<b>Main Library, Room: Blue</b>
<b>Secretary: K. Kuźmicz</b>	
11:15 – 11:30	R. Ginevicius, T. Ginevicius, D. Gedvilaitė, <i>Ranking of office lease options by multi-criteria methods</i>
11:30 – 11:45	N. T. Tuan, <i>Interpretive structural modelling in action – a preliminary exploration of AIDS pandemic in South Africa</i>
11:45 – 12:00	M. Szafrąński, <i>Problem of language used to describe competences in the management of acceleration in the creation of knowledge resources in businesses</i>
12:00 – 12:15	J. Siderska, <i>Neural model for assessing the value of social capital</i>
12:15 – 12:45	<i>Discussion</i>

<b>Project and Process Management V</b>	
<b>Chair: U. Ryciuk</b>	<b>Main Library, Room: Orange</b>
<b>Secretary: J. Kozłowska</b>	
11:15 – 11:30	Q. Dupont, D. Chua, A. Tashrif, E. Abbott, <i>Potential Applications of UAV along the Construction's Value Chain</i>
11:30 – 11:45	K. Araszkievicz, <i>Application of critical chain management in construction projects schedules in a multi-project environment: a case study</i>
11:45 – 12:00	S. Biruk, P. Jaśkowski, A. Czarnigowska, <i>Modelling contractor's bidding decisions</i>
12:00 – 12:15	A. Krawczyńska-Piechna, <i>Comprehensive approach to efficient planning of formwork utilization on the construction site</i>
12:15 – 12:45	<i>Discussion</i>

12:45 – 13:30 *Lunch*

13:30– 14:15 EPPM Business Meeting (Room: Green)

**14:15 – 15:15 Closing session** (Room: Green)

17:00 – 24:00 "Open-air Session" – Feast with traditional regional music  
*dress code: casual (open air activity, warm sweater/jacket recommended)*





