



Žilinská univerzita v Žiline
Strojnícka fakulta

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V Žiline 20.03.2014

Oznámenie o konaní prednášky

Dovoľujeme si Vám oznámiť, že v zmysle ustanovení Vyhlášky MŠ SR č.6/2005 Z.z.,
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univerzity v Žiline NA 205, II.poschodie

dňa 15. apríla 2014

- verejná **h a b i l i t a č n á** prednáška od 10,30 hod.

na tému: **Dynamic classifiaction of machine's components**

a obhajoba habilitačnej práce na tému: **Manufacturing processes creating with use of dynamic
classification in conditions of unit and small-batch production,**

pána dr inž. Janusza M L E C Z K U,

zamestnanca Akadémie Techniczno-Humanistycznej v Bielsku-Bialej, Poľsko ,
v študijnom odbore **5.2.52 Priemyselné inžinierstvo.**

Konanie prednášky bude zverejnené v denníku PRAVDA do 31.03.2014.

prof. Dr. Ing. Milan S á g a
dekan fakulty

REVIEW

**SCIENTIFIC ACHIEVEMENTS,
EDUCATIONAL ACHIEVEMENTS AND ORGANISATIONAL,
REPRESENTATION OF POLISH SCIENCE AND INTERNATIONAL
COOPERATION**

**Janusz Mleczko PhD Eng.
Department of Production Engineering
Faculty of Mechanical Engineering and Computer Science
University of Bielsko-Biala**

In connection with academic degree Habilitate Doctor

Gliwice, 18.03.2014

1. Janusz Mleczko biography, career and overview of the merits

Janusz Mleczko Ph.D. was born in 7.11.1964 in Oświęcim. In 1983 was graduated from secondary school (Liceum Ogólnokształcące im. Stefana Żeromskiego) in Bielsko-Biała. In 1983-1988, he studied at the Faculty of Mechanical Engineering of Łódź Technical University branch in Bielsko-Biała. Received a master's degree at the field of Mechanics, specialty Machine Construction.

Ph D thesis under the title of "Multicriterial optimization of management of machine parts production processes" was defended in 19.04.2000, at the Organization and Management Faculty in Bielsko-Biała. Prof. Józef Matuszek was the dissertation supervisor.

Janusz Mleczko Ph D. began working professional in 1988 in OBR Redor Bielsko-Biała as a technologist and later as IT administrator. In 1998-2000, he worked in ZM Trzebinia, first as specialist for IT, then as IT manager.

In 1996 he took a job at Łódź University (branch Bielsko-Biała) as an assistant in Production Engineering Department. After PhD defending and organizational changes he was employed at University of Bielsko-Biała.

At the same time Dr Janusz Mleczko cooperated with manufacturing enterprises. Between 1998-2000 he was vice-president of GT System Poland, Polish representative of Slovak enterprise in IT industry from Detva. He was also the principal consultant for production management systems in the company Record SI.

His scientific research activity focuses on computer-aided production management in enterprises, particularly on the issue of computer-aided management of single and small-batch production. His another interests are mass customisation, ERP systems applications, and utilitarian informatics methods for manufacturing assisting.

During his work, until now, he published 59 scientific publications (56 after PhD defenses). Thereby significantly exceeds the required number of publications (40 publications have been listed in the category "minimum expectations" the rest is shown on a separate list).

13 publications were published in journals rated with a range both national and international. One publication was printed in the journal from Philadelphia list (impact factor 0,98) Janusz Mleczko is an author of 2 scientific monograph and co-author of academic handbook and 2 textbooks.

He participated in 3 projects, in one project as an expert of Cross Border Polish-Slovak Network of Innovation and New Technologies (Cezhranicna Polsko-Slovenska inovacna a novych technologii siet).

He participated in 18 scientific conferences (4 international). He is the member of Scientific Committee of Applied Computer Science.

An important aspect of his business activity is cooperation with companies in the field of implementation and training. He has conducted 9 lectures and supervised 81 engineering projects for enterprises. His practical skills were presented in the Production Manager Guide (in Polish: Poradnik Kierownika Produkcji).

Results achieved in habilitation and presented as habilitation thesis were applied in Anvis Włocławek enterprise for customized products.

He is a member of Polish Association of Production Management and Polish Society for Informatics.

2. Evaluation of scientific, didactic and organizational achievement

2.1 Research activity

Since beginning Janusz Mleczo interest were connected with computer assisting in the field of production management. He was an expert in this area and based on skills and experiences coming from a cooperation with industry he prepared and defended PhD thesis "Multicriteria optimisation of manufacturing processes of machine elements management".

After defending his PhD Janusz Mleczo continued his research in the field of computer-aided production management, focusing on companies operating under the single and small batch production.

1. *Zarządzanie produkcją w warunkach jednostkowej i małoseryjnej produkcji / Józef Matuszek, Janusz Mleczo. In: Komputerowo Zintegrowane Zarządzanie : III konferencja zbior referatów, (ed.: Ryszard Knosala). Warszawa, WNT 2000 ISBN 83-204-2513-1*
2. *Kilka aspektów modelu zarządzania produkcją jednostkową i małoseryjną -wykorzystywanych w pakiecie REKORD.ERP / Janusz Mleczo. In: Zarządzanie przedsiębiorstwem Vol.2 (2002) ISSN 1643-4773 s. 63-71*

In 2006 he was invited to develop chapters in Production Manager Guide, where his experience in the production practice are presented.

1. *Organizacja produkcji / Józef Matuszek, Janusz Mleczo. In Poradnik Kierownika Produkcji. Wydawnictwo Forum Sp. z o.o., ISBN 83-7412-426-1. Poznań 2006. pp. from. 4/1-1 to 4/6.1-2.*
2. *Realizacja procesu wytwarzania w produkcji projektowanej na zamówienie / Janusz Mleczo. In Poradnik Kierownika Produkcji. Wydawnictwo Forum Sp. z o.o., ISBN 83-7412-530-6. Poznań 2006. pp. from. 4.9.1.1-1 to 4.9.1.1-15*
3. *Realizacja procesu wytwarzania w produkcji realizowanej na zamówienie w przemyśle maszynowym / Janusz Mleczo. In Poradnik Kierownika Produkcji. Wydawnictwo Forum Sp. z o.o., ISBN 83-7412-527-6. Poznań 2006. pp. from. 4.9.1.2-1 to 4.9.2.3-18*
4. *Produkcja na zamówienie w przemyśle maszynowym / Józef Matuszek, Janusz Mleczo In Poradnik Kierownika Produkcji. Wydawnictwo Forum Sp. z o.o., ISBN 83-7412-489-X. Poznań 2006. pp. from. 4.9.1.3-1 to 4.9.1.3-21*
5. *Produkcja w partiach elementów i podzespołów u poddostawcy przemysłu samochodowego- część I / Janusz Mleczo. In Poradnik Kierownika Produkcji. Wydawnictwo Forum Sp. z o.o., ISBN 978-83-7412-715-8. Poznań 2007. pp. from 4/9.2-1 to 4/9.2-17*
6. *Produkcja w partiach elementów i podzespołów u poddostawcy przemysłu samochodowego- część II / Janusz Mleczo. In Poradnik Kierownika Produkcji. Wydawnictwo Forum Sp. z o.o., ISBN 978-83-7412-672-4. Poznań 2007. pp. from. 4/9.2.1-1 to 4/9.2.1-24*
7. *Produkcja w branży meblarskiej w małych i średnich firmach / Janusz Mleczo. In Poradnik Kierownika Produkcji. Wydawnictwo Forum Sp. z o.o., ISBN 978-83-7412-831-5. Poznań 2007. pp. from 4.9.3-1 to 4.9.3-23*
8. *Produkcja na zlecenie (MTO) czy produkcja na magazyn (MTS) a może hybryda MTO i MTS / Janusz Mleczo. In Poradnik Kierownika Produkcji. Wydawnictwo Forum Sp. z o.o., ISBN 978-83-7412-831-5. Poznań 2008. pp. from 4/9.4-1 to 4/9.4-63*

In particular the last item cited above met with great interest of managers responsible for the organization of the manufacturing process, and subsequent chapters were issued until 2008.

Since 2008, the increase in the number of his publications are observed. These scientific publications are the result of research in areas related to the production management problems in today's enterprises, such as: bottle neck identification in term of single or small batch production; dynamic classification, machine element grouping of various industries.

1. *Production control in moving bottlenecks in conditions of unit and small-batch production / Józef Matuszek, Janusz Mleczko, In: Bulletin Of The Polish Academy Of Sciences - Technical Sciences 2009. ISSN 0239-7528 Vol. 57 No. 3. - pp. 229-239. (on the Philadelphia list): IMPACT FACTOR - 2009: 0,626 in 2012: 0,980*
2. *PRODUCT FAMILY MANUFACTURING BASED ON DYNAMIC CLASSIFICATION / Janusz Mleczko In: - Management and Production Engineering Review, Kwartalnik Komitetu Inżynierii Produkcji PAN 2011, ISSN 2080-8208 Vol. 2, No. 2, pp. 29-38.*
3. *Dynamic classification of tasks in condition of unit and small batch production / Janusz Mleczko In: - Management and Production Engineering Review, Kwartalnik Komitetu Inżynierii Produkcji PAN 2010, ISSN 2080-8208 Vol.1, No. 3 pp. 41-55.*
4. *Specificity of bottlenecks in conditions of unit and small-batch production / Józef Matuszek Janusz Mleczko, In: Journal of Automation, Mobile Robotics & Intelligent Systems 2009 ISSN 1897-8649 Vol.3, No. 3. - s. 102-109.*
5. *Grupowanie zadań w operacyjnym planie produkcji wycinarki laserowej / Janusz Mleczko, In: Inżynieria Maszyn Vol. 14. No. 3. (2009) ISSN 1426-708X pp. 139-157*

In 2008, he also published two monographs as a summary of his current research in the field of computer-aided management:

1. *Komputerowe wspomaganie planowania przebiegów procesów produkcyjnych/ Janusz Mleczko. Wydawnictwo Fundacji Centrum Nowych Technologii, Bielsko-Biała 2008 - 181 p. : il. ; 24 cm. ISBN 978-83-927531-0-0.*
2. *Komputerowo wspomagane zarządzanie wytwarzaniem: (na przykładzie oprogramowania REKORD.ERP)/ Janusz Mleczko. Wydawnictwo Fundacji Centrum Nowych Technologii, Bielsko-Biała 2008 - 179 p. : il. ; 24 cm ISBN 978-83-927531-1-7.*

In 2011-2013, his research has focused on issues of mass customization, and production of a variant adjusted to customer needs. The work was carried out in a team of prof. Józef Matuszek. The study focused on both the technological, organizational and cost in enterprises where habilitation thesis were verified. Part of the publication has been developed with the participation of employees of the Department of Production Engineering at the University of Zilina.

1. *High-variety products manufacturing based on dynamic classification/ Janusz Mleczko In: Advances in Manufacturing Science and Technology 2011, ISSN 1895-9881 Vol. 35, No 3, pp.71-86.*
2. *Design method of products' processes for group technology / Janusz Mleczko In: Journal of Machine Engineering 2012 ISSN 1895-7595. Vol.12, No. 3, pp. 7-19.*
3. *Uwarunkowania kosztowe wytwarzania wyrobów dostosowanych do potrzeb klienta Cost conditions of mass customization manufacturing. Branislav Mičieta, Janusz Mleczko In: Zarządzanie przedsiębiorstwem Vol.4 (2013) ISSN 1643-4773, pp. 15-22*
4. *Distribution of information and documentation for the manufacturing processes of the high-variety products - case study / Janusz Mleczko, Pavol Podhora, Jaroslav Patka In: Applied Computer Science Lublin, Lublin University of Technology. Institute of Technological Systems of Information. ISSN 1895-3735 Vol. 9, No. 2 (2013), pp. 20-33*

5. *Cost of products manufactured in organizational similar groups - case study / Janusz Mleczo In: - Advances in Manufacturing Science and Technology = Postępy Technologii Maszyn 2013 Vol. 37 no 1. - ISSN 0137-4478 pp. 31-42.*

2.2. Didactic achievements

Dr. Janusz Mleczo lead classes of different type: laboratory lessons, seminars, projects, and also lectures after PhD thesis defenses. Currently, he teaches courses for full-time students and part-of 1st and 2nd degree in Production Engineering and Management. His subjects are:

- Computer Integration Manufacturing-lecture and lab
- Implementation of Information Systems - lecture and lab
- Management Information Systems-lecture and project
- Computer Techniques in the Production of food-lecture and lab
- Management Information Systems Business - lecture and lab
- Computer-Assisted Processes in Business Administration - lecture and lab
- Documentation in the company - project
- Integrated Management Systems-lecture and lab

Both lectures and labs were conducted based on the original program elaborated by Janusz Mleczo.

In 2011 a book: *Banaszak Z., Klos S., Mleczo J.: Integrated Management Systems (in Polish) PWE Warszawa 2011. ISBN 978-83-208-1937* has been published. The book is recommended for students majoring in Management and Production Engineering in the field of Computer-Aided Management Systems. Janusz Mleczo PhD is co-author of this book, he took part in 30% in this publication.

In 2012 two successive teaching manuals have been published:

1. *Wybrane zagadnienia zastosowania informatyki w administracji gospodarczej/ Janusz Mleczo; Wydawnictwo Naukowe ATH. Bielsko-Biala 2012. 100 s.: il. ; 24 cm. ISBN 978-83-63713-00-3.*
2. *Komputerowo wspomagane zarzadzanie procesami w organizacji/ Janusz Mleczo; Wydawnictwo Naukowe ATH. Bielsko-Biala 2012. 103 s.: il. ; 24 cm. - ISBN 978-83-62292-99-8*

During last 10 years he was a supervisor of 52 master thesis and 33 engineering projects. He was reviewer of 25 (during last 5 years) engineering projects and 3 master thesis.

The high quality of his work with students provides prizes in competitions organized by the Polish Association of Production Management and Foundation Center of New Technologies.

First one "Calculations of cost of products with versions structures" was awarded and its author was the winner of the Competition for the Scholarship. The results have been implemented in one of the large enterprises in the region. The second one "Customization ERP management system for the execution of the manufacturing process chosen product"- was awarded and its author was the winner of the Competition, and work has been implemented in one of the companies from service industry.

Dr Janusz Mleczo has also received a certificate of appreciation for the care of students involved and the work of the implementation of software for computer-aided production management of animated cartoons.

2.3. Organizational activities

Janusz Mleczo PhD actively participated in the organization work at the Department and the University. He takes an active part in the events of a promotional nature, building a positive image of the University. For many years, leads workshops in the framework of open days and festivals of the faculty of arts and sciences. I've included some examples below:

1. *Prepare and conduct workshops in the framework of the Open Days Faculty of Mechanical Engineering and Computer Science: "Integrated Production Systems - Workshop" (Bielsko-Biala 28-30.09.2011)*
2. *Prepare and conduct workshops within Beskidian IX Festival of Science and Art: "The operational management of production - Workshop" (Bielsko-Biala 2008, 2009, 2010, 2011)*
3. *Prepare and conduct workshops within Beskidian IX Festival of Science and Art: „Theory of constraints in manufacturing -Workshop" (Bielsko-Biala 18.05.2012)*
4. *Prepare and conduct lectures and workshops for classes in electrical engineering on "Applications of IT systems in manufacturing enterprises" and "Computer Integrated Manufacturing" (Bielsko-Biala 2009)*

For his achievements can also be included: the development and implementation of new specializations and participation in the construction of the laboratory of computer technology in the Department of Production Engineering, University of Bielsko-Biala. He was a co-organizer of 6 scientific conferences 3, of which were organized in collaboration with University of Zilina.

2.4. Other activity

His work also relates to collaboration with an industry. Combining theory with practice completed lectures and training for businesses (9) and up to 81 projects implemented solutions to problems in companies.

3. Habilitation thesis

In addition to the documentation provided about academic, organizational, and educational evaluation the Habilitation thesis has been submitted for evaluation. The topic is "Manufacturing processes creating with use of dynamic classification in condition of unit and small-batch production".

Author focuses on manufacturing conditions in the small and medium-sized enterprises in the tendency of mass customization. The author proposed an automatic grouping of machine parts at the level of operative planning of production flow.

The use of the dynamic classification for designing manufacturing processes for the single and small batch production is the new look at the issue of the search for savings in the production of dedicated individual needs. Therefore, brings to maximize repeatability of manufacture by grouping products into sets of a certain similarity.

Presented approach based on methodology of the Theory of Constraints is applied to the task scheduling. The unit production limits are variable in nature. Their identification, elimination or reduction is the analyzed issue. This method becomes the basis for the construction of the concept of a unique solution. It was established on the basis of ERP databases and analyzes the shortcomings in supporting enterprise management.

Built planning system uses data derived from the ERP system and provides dynamic grouping of machine parts taking into account the features of structural, technological, and organizational affecting retooling times on the bottle neck. Obtained solution has many variants. The choice of variant takes place at the operational level and is dependent on the current load.

The developed methodology has been used in conditions of real enterprises. Presented examples justify the practical suitability of the developed methodology.

The method allows for the unification of the components making up the products, and hence to reduce the manufacturing costs and delivery period. This approach is important because today, manufacturers more frequently offer products with the same high quality, and the competitiveness of products is determined by terms of delivery (timeliness).

I would like to stress that both methodology and project of computer application and its development are the original author's achievements.

4. Conclusion

Dr Janusz Mleczko professional activity in cooperation with various universities, research development centers and production companies has led to the improvement of qualification and competence in the production practice. Hence his scientific activity is characterized by very practical approach to scientific and research results. His goal is to bring research to the practical results, which find application in the industry.

Dr Janusz Mleczko has an important achievements in all areas of research activity, has rich academic achievements and teaching results. His scientific publication and elaborations are highly rated, as comprehensive elaboration, important for managers of manufacturing processes, engineers, researchers and students, postgraduate students and employees of manufacturing companies.

He is well-known in the scientific and manufacturing enterprises of different industries for their creativity in solving real problems. The achievements of Dr. Eng. Janusz Mleczko is located in Production Engineering discipline, the results of his research contribute to its development and are known in Poland and abroad. The results of his work are characterized by a high level of scientific and very high level of applications.

On the basis of the documentation, knowledge of practical achievements, implementations, based on observations of scientific development, I can say that Dr Janusz Mleczko:

- has large scientific achievements in the form of original publications, which are essential for the development of scientific research area concerning the organization of the manufacturing processes.
- has achieved a significant position in the national scientific community in research and development of production management.

It has high academic achievements and implementations in cooperation with business entities.

In conclusion, I express with conviction my opinion that Dr. Eng. Janusz Mleczko is a recognized personality in the Polish scientific community. It is characterized by large organizational abilities. Can objectively and substantially interact with other teams and

research centers. It can effectively combine creative scientific work of organizational activities and its implementation.

I wanted to point out that Dr. Janusz Mleczko willingly and effectively collaborates with industry, and it should be characterized by a modern scientist seeking applications for their new solutions.

On the basis of both presented in documentation: characteristics, professional development and research of Dr. Eng. Janusz Mleczko and my observation of his scientific progress I can conclude that a characteristic feature of his work is the focus of scientific research and the development of new methods for needs of modern industry. He uses in their implementation the latest scientific achievements. Such direction of research is possible due to the deep knowledge of the results of the current work of research centers in the country and abroad, and the current needs of manufacturing companies.

Taking all this into account, I consider that scientific achievements (theoretical and utilitarian), didactic and organizational of Dr Janusz Mleczko are significant and meet the formal and traditional requirements for candidates applying out about the degree of PhD.

I hereby request to start a procedure for giving the degree of doctor habilitate in the field of Technical Sciences, discipline Production Engineering.

I justified my decision considerable achievements as the academic teacher, developer of new solutions, organizer of research and academic employee of the personal qualities required from an academic teacher.

prof. dr. hab. inż. Bożena Skolud

Gliwice, 18.03.2014

Oponentský posudok na habilitačnú prácu

Habilitant : Ing. Janusz Mleczo, PhD.

Téma : Manufacturing processes creating with use of dynamic classification in conditions of unit and small-batch production

Listom dekana Strojníckej fakulty Žilinskej univerzity v Žiline, prof. Dr. Ing. Milana Ságu, zo dňa 22.03.2014 som bol poverený spracovať oponentský posudok na habilitačnú prácu Ing. Janusza Mlecza, PhD. Na základe tohto poverenia predkladám nasledovný posudok.

Všeobecná charakteristika

Ing. Janusz Mleczo, PhD. predložil habilitačnú prácu v anglickom jazyku s názvom Manufacturing processes creating with use of dynamic classification in conditions of unit and small-batch production “.

Habilitačná práca je spracovaná na 184 stranách. Má 15 kapitol, ktoré sú usporiadané v štyroch na seba logicky nadväzujúcich celkoch.

V práci je uvedený zoznam tabuliek a zoznam obrázkov v členení podľa jednotlivých kapitol. Grafická úprava práce je na veľmi dobrej úrovni.

Obsah

Časť I je rozdelená na dve kapitoly, v ktorých habilitant charakterizuje podmienky výroby v malých a stredných podnikoch a vývojové tendencie pri projektovaní výrobných systémov, pričom je zrejmé, že výrobné podmienky aj s využitím IT technológií sú v malých a stredných podnikoch iné ako v podnikoch veľkých. V tejto časti habilitant poukazuje aj na moderné, resp. nové metódy a technológie pri projektovaní výroby.

Časť II

V druhej časti – II (kap. 3-6) habilitant na základe literatúry a praxe , popisuje matematický model výrobného systému, s poukázaním na všeobecné podmienky pre možnosť optimalizácie výroby v malých podnikoch – cieľová funkcia, kritéria hodnotenia, možnosť merania a hodnotenia. Charakterizuje aj možnosť počítačovej podpory a využívanie IT pri klasifikácii strojných súčiastok do jednotlivých typových skupín- predstaviteľov, včítane možnosti kodifikácie týchto súčiastok.

Časť III.

Táto časť s názvom „Own research“ (Vlastný výskum) je z môjho pohľadu veľmi dôležitá, nakoľko sa zaoberá danou problematikou v praxi. V tejto časti je definovaný výskumný problém, ktorý habilitant charakterizuje ako odpoveď na otázku, voľne parafrázujúc, čo očakáva od výrobcu spotrebiteľ. V tejto časti poukazuje na využitie matematického modelu v súvislosti s možnosťou dynamického programovania pri klasifikácii strojných súčiastok(kap.10 a kap. 11). Postupne je

charakterizovaný výrobný problém a naznačuje možnosť jeho riešenia. Popisuje výrobný proces a vplyv jednotlivých parametrov, ktoré tento proces ovplyvňujú.

Pozitívne hodnotím grafické znázornenie výrobného systému a algoritmus pre využitie dynamickej klasifikácie pre „roller shutters“- žalúzie.

Časť IV.

Obsahom kapitol 12-15, ktoré sú súčasťou tejto časti, je hodnotenie prínosov a diskusia k problematike témy dizertačnej práce. Kladne hodnotím aj to, že habilitant, aj keď okrajovo, sa dotkol aj problematiky nákladov, ktoré v každej produkcii majú vplyv na využívanie nových metód a techník – o to viac v podmienkach malých a stredných podnikov.

Vyjadrenia k jednotlivým otázkam uvedeným v menovacom liste :

1. Téma habilitácie je v súlade so oblasťou priemyselného inžinierstva- odbor 5.2.52
2. Jednotlivé časti práce sú uvádzané v publikáciách habilitanta
3. Publikácie sú uvedené v rôznych vedecko-odborných časopisoch.
4. Vychádzajúc z publikačnej činnosti uchádzača je možné konštatovať, že je na požadovanej vedecko-pedagogickej úrovni.
5. Habilitačná práca má všetky atribúty kladené pre podobný druh prác – definuje problém, uvádza teoretické východiská, praktické riešenie a vlastný záver.
6. Na základe citačného ohlasu je možné konštatovať, že habilitant je známy medzi vedecko-odbornou komunitou.

Otázky.:

1. Vyžaduje si používanie dynamického programovania v malých a stredných podnikoch zvýšené personálne nároky?
2. Pre všetky podniky otázka nákladov na výrobu je dôležitá. Vie habilitant odhadnúť náklady podnikov spojené s realizáciou tejto metódy ?

Záver

Z podkladov, ktoré som mal k dispozícii ako aj predloženej habilitačnej práce, som dospel k názoru, že habilitant Ing. Janusz Mleczek, PhD. má dobrý teoretický prehľad v predmetnej oblasti a svoje vedomosti vhodným spôsobom prenáša do vedeckej, odbornej a pedagogickej činnosti. Na základe toho, že spĺňa podmienky pre habilitačné konanie, ktoré schválila Vedecká rada Strojníckej fakulty Žilinskej univerzity v Žiline odporúčam, aby po úspešnom habilitačnom konaní bol Ing. Januszovi Mleczkovi, PhD. bol podaný návrh, na udelenie vedecko – pedagogického titulu

docent

v odbore 5.2.52 Priemyselné inžinierstvo

V Prešove 25.03.2014

prof. Ing. Igor Liberko, CSc.
oponent



ZÁPADOČESKÁ
UNIVERZITA
V PLZNI

Oponentní posudek k habilitační práci

Západočeská univerzita v Plzni

Jméno: dr. inž. Janusz MLECZKO

Název: Manufacturing processes creating with use of dynamic classification in conditions of unit and small-batch production

Fakulta: Strojnicka fakulta

Studijní odbor: Priemyselné inžinierstvo

Oponent: doc. Ing. Milan EDL, Ph.D.
Katedra průmyslového inženýrství a managementu
Fakulta strojní
Západočeská univerzita v Plzni

Práce se skládá ze 183 stránek a 15 kapitol.

Aktuálnost tématu

Předložená habilitační práce je bezesporu aktuální a zabývá se problematikou, která má priority v národních programech výzkumu a vývoje, ale má oporu i ve Strategické výzkumné agendě MANUFUTURE pravidelně vydávanou a aktualizovanou European Factories of the Future Research Association. Habilitant se zde zaměřuje na klasifikaci výrobních procesů právě s důrazem na malé výrobní dávky, s využitím informačních a komunikačních technologií, s důrazem na systematickosti a modularitu. To vše má vysokou přidanou hodnotu pro evropský výzkumný a vzdělávací prostor.

Význam rozvoj vědního oboru

Přínos předložené habilitační práce má dvě jasné roviny. Za prvé vědecko-výzkumnou a za druhé pedagogickou. Oponent zda velmi oceňuje jasné metodické vedení celé práce, kde po východiscích a vymezení tématu habilitant definuje a popisuje vlastní výzkum. Z hlediska pedagogického je práce velmi dobře zpracována a je připravena také pro velmi kvalitní publikaci vzdělávacího charakteru, která bude mít bezesporu dopad nejen na slovenských, polských nebo českých univerzitách, ale také na dalších, protože práce je zpracována v anglickém jazyce.

Formální a jazyková úroveň

Formální a jazyková úroveň je velmi dobré úrovní a to dokazuje velmi dobrou vyjadřovací a prezentační úroveň autora v oblasti prezentace výsledků předložené habilitační práce. Také je třeba ocenit grafickou úroveň celé práce. V práci je použito cca. 75 obrázků, 22 tabulek a nespočetně velké množství vzorců, které jsou velmi dobře graficky zpracovány.

Publikační činnost

Publikační činnost habilitanta oponent považuje za velmi dobrou a plně dostačující k úspěšnému habilitačnímu řízení. Je bezesporu nutné vyzdvihnout autorství nebo spoluautorství na vědecké monografii ve 4 případech. Dále habilitant je autorem nebo spoluautorem mnoho vědecko-výzkumných článků publikovaných v zahraničních časopisech.

Poznámky

Oponent musí konstatovat, že se mu dostala do ruky velmi kvalitní práce, která v sobě zahrnuje jak tradiční pohled na problematiku spojenou s novými technologiemi, kvantitativní přístup k problematice je doplněn kvalitativním přístupem a zamyšlením nad souvislostmi. A to vše velmi dobře systematicky zpracované. K tomu ještě velmi dobrá formální úprava dělá z této habilitační práce velmi kvalitní publikaci.

Hodnocení

1. Předložená habilitační práce je bezesporu aktuální a zabývá se problematikou, která má priority v národních programech výzkumu a vývoje, ale má oporu i ve Strategické výzkumné agendě EFFRA. (detailněji viz. Aktuálnost tématu).
2. Publikační činnost habilitanta je na velmi dobré úrovni a podstatné části habilitační práce jsou publikovány na domácích i zahraničních časopisech a vědeckých monografiích dostatečným počtem publikací i na dostatečné vědecké úrovni.
3. Habilitant publikoval v několika renomovaných zahraničních časopisech a rovněž zaznamenal i stopu v citační databázi.
4. Podle předložených materiálů má habilitant významnou vědecko-pedagogickou erudici, což dokládá bohatou publikační činností a pedagogickou praxí.
5. Habilitační práce je z didaktického hlediska zpracována velmi dobře, což dokládá velmi

dobrou vyjadřovací a prezentační úroveň autora.

6. Habilitanta svůj předpoklad pro probíhající habilitační řízení dokazuje i citační odezvou, která několikanásobně překročila minimální hodnoty dané

Výsledky prezentované v habilitační práci dr. inž. Janusze MLECZKA, jak rozsah a kvalita jeho publikační činnosti, které potvrzují velmi dobrou odbornou a vědeckou úroveň jmenovaného. Jeho celkový vědecký přínos hodnotím kladně a na základě posuzované habilitační práce jednoznačně **doporučuji** jmenovat dr. inž. Janusze MLECZKA za **docenta** v oboru Priemyselné inženierstvo.

Doplňující otázky:

1. Jakou máte představu o dalším vývoji prezentované práce pokud jde o globalizační směr, tj. internet, "Internet of Things", síťování, apod.
2. Pokuste se vydefinovat roli člověka (zákazníka, zaměstnance, apod.) v dalších krocích Vašich výzkumných aktivit? Mám zejména na mysli "knowledge management", apod.

V Plzni, 17. 3. 2014



Milan EDL