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**List of published scientific papers or creative professional work and  
 information on educational achievements, cooperation in science and science communication**

**I. List of publications constituting a scientific achievement**

A) Title of scientific achievement: **Methods for increasing the quality of control within the feed drives of metalworking numerically controlled machine tools – mechatronic approach**

B) Publications or other work included in the scientific achievement:

1. Osypiuk R., **Pietrusewicz K.**, Skoczowski S., *Robust PID control with two degrees of freedom*, Warsaw Scientific Publishing PWN, MIKOM, ISBN 13 978-83-01-14717-4, 2006, 360 pages  
*Scientific monograph devoted to issues of control robust with many degrees of freedom. My contribution to this work was to authorship seven subsections listed in the introduction to a book, containing new in relation to the dissertation research results, in addition the composition of the book prepared for printing. My estimated percentage participation is 35 %.*
2. **Pietrusewicz K.**, Waszczuk P., Integration of machine condition monitoring within the digital control of PMSM, *Control Engineering*, Vol. 59 (2012), No. 6, p. 16 – 17 // **MNiSW – 13 pt**  
*My contribution to this work was to propose a concept presented in the control system architecture. I am also the project manager whose job was created. My estimated percentage participation is 85%.*
3. Dworak P., **Pietrusewicz K.**, A fuzzy-logic based tuning for a velocity controller of the DC servo drive, *Solid State Phenomena*, In: *Mechatronic systems and materials III* (Eds.: Gosiewski Z.; Kulesza Z.) Vols. 147 – 149 (2009), p. 179 – 184 // **MNiSW – 20 pt, paper indexed in: Web of Science, SCOPUS**  
*My contribution to this work was to propose a method of tuning fuzzy controller settings for the drive model. I am a project manager under which the work was made. I have been involved in preparing and carrying out simulation environment of the experiment described in the article. My estimated percentage participation is 60%.*
4. **Pietrusewicz K.**, CNC open architectures, *Control Engineering*, Vol. 55 (2008), no. 1, p. 17 – 18  
 // **JCR indexed journal, IF = 0.068, MNiSW – 13 pt, paper indexed in SCOPUS**
5. Skoczowski S., Domek S., **Pietrusewicz K.**, Broel-Plater B., A method for improving the robustness of PID control, *IEEE Transactions on Industrial Electronics*, Vol. 52 (2005) no. 6, p. 1669 – 1676  
 // **JCR indexed journal, IF = 5.468, MNiSW – 32 pt, paper indexed in: Web of Science, SCOPUS**  
*My contribution to this work consisted in the analysis and calculations made using prepared my own simulation environment. I took part in the discussion of results and development of selected parts of the theory contained in the work. My estimated percentage participation is 20%.*
6. **Pietrusewicz K.**, Multi-degree of freedom robust control of the CNC X-Y table PMSM-based feed-drive module, *Archives of Electrical Engineering*, Vol. 61 (2012), no. 1, p. 15 – 31 // **Quarterly journal, Polish Academy of Sciences, Electrical Engineering Committee, MNiSW – 9 pt**

7. **Pietrusewicz K., Pajor M., Urbański Ł.,** Dynamic corrections of the tooling errors possibilities within the mechatronic actuator for motors with permanent magnets, *Archives of Mechanical Technology and Automation*, Vol. 31 (2011), no. 2, p. 181 – 190 // **Quarterly journal, Polish Academy of Sciences, Committee of Mechanical Engineering, MNiSW – 9 pt**  
*My contribution to this work was to propose ways to correct on-line parameters of digital servo control system. I am a project manager, in which the work was created. My estimated percentage participation is 60%.*
  
8. Domek S., Dworak P., **Pietrusewicz K.,** Integrated condition monitoring within the motion control of the computer numerical controlled tooling machine, *Electrical Review*, no 6 (2010), p. 113 – 115 // **JCR indexed journal, IF = 0.242, MNiSW – 9 pt, paper indexed in: Web of Science, SCOPUS**  
*My contribution to this work was to develop the concept described in the control system. My estimated percentage participation is 60%.*
  
9. Domek S., **Pietrusewicz K.,** Mechatronics for the improvement of the conventional technical system purposes – Multifunctional machine tool example, *Electrical Review*, no 9 (2009), p. 81 – 87 // **JCR indexed journal, IF = 0.242, MNiSW – 9 pt, paper indexed in: Web of Science, SCOPUS**  
*My contribution to this work was to develop the concept described in the control system, as well as mechatronic approach presented describing the research. My estimated percentage participation is 50%.*
  
10. **Pietrusewicz K., Dworak P., Broel-Plater B.,** Robust Model-Following Control for the DC servo drive, *Advances in Manufacturing Science and Technology*, Vol. 31 (2007), no. 3, p. 45 – 62 // **Quarterly, Polish Academy of Sciences Committee of Mechanical Engineering, MNiSW – 9 pt**  
*My contribution to this work was to develop concepts described in it: the method of tuning the speed regulator, the use of a MFC to control the velocity. My estimated percentage participation is 60%.*
  
11. Research and development of the prototype of the machine tool feed drive with linear motors driven by the 2-axis open architecture CNC system, research and development project R03 042 02, Szczecin University of Technology, 2007 – 2010, project manager Assoc. Eng. Stefan Domek, Prof. ZUT; habilitant's tasks: **main researcher**  
*My contribution to this work consisted of:*
  - identify the principles of the structure of the open control and supervision system of the feed-drive module in CNC,
  - development of procedures for base software
  - development of procedures for the base software for the basic functions of motion control, visualization and data exchange with external devices in the machine tool control system,
  - development and implementation of basic control functions and visualisation of the base version of the open control system for machine tool feed-drive module,
  - to prepare the documentation of the interface blocks of correcting modules of the open architecture control system of the machine tool feed-drive module,
  - preparation of documentation, implement advanced control system functionalities and the pre-selection of servo parameters,
  - development and implementation of advanced operator interface of machine tool model for the exchange of data with a layer of business enterprise.*The results described in the Final Report of the project „Research and development of the prototype of the machine tool feed drive with linear motors driven by the 2-axis open architecture CNC system”, West Pomeranian University of Technology, Szczecin, 2010, 176 pages. Architecture of the system is also described in [4, 8, 9].*  
*My estimated percentage participation is 45%*
  
12. Development of construction and experimental research work on mechatronic machine tool feed drive with the intelligent modular actuator, research project, N N502 336936, West Pomeranian University of Technology, Szczecin, 6/25/2009 – 6/24/2012, **project manager: Krzysztof Pietrusewicz**  
*My contribution to this work consisted of:*
  - development of the „hardware-in-the-loop simulation” test stand of the motion control of feed-drives in X-Y machine tool table,
  - preparation of documentation of software-hardware architecture of the digital control module of the feed-drive system,
  - synthesis of the 2-DOF hybrid robust predictive controller and its implementation in the Matlab/Simulink environment,
  - creating the concept of integration of the feed-drive module within the control functions of open CNC system,
  - development of the electrical part of mathematical model of the system „feed-drive – motion control - motor”,
  - theoretical analysis of the possibilities of introduction of robust control algorithms for the control within digital servodrives,
  - development of simulational models of the feed-drive modules in X-Y axes with the use of SimMechanics for Matlab/Simulink,
  - development of the robust control algorithm for velocity control of PMSM based on artificial intelligence utilization,
  - development of concept of identification and verification of the proposed velocity control algorithms in the motion feed-drive module.*Previous research results described in the annual reports of the project and included in publications [2, 3, 6, 7, 10].*  
*My estimated percentage participation is 65%.*



## II. List of other (not part of the achievements listed in Section I), published scientific papers and the indicators of academic achievement

### A) Scientific publications in scientific journals in the Journal Citation Reports (JCR) database

1. **Pietrusewicz K.**, Open modular architecture diagnostic system for machine tool condition monitoring, *Control Engineering*, Vol. 58, no.10 (2011), p. 28 // **JCR indexed journal**, IF = 0.026, MNiSW – 13 pt
2. **Pietrusewicz K.**, Modeling hybrid control systems, *Control Engineering*, Vol. 55 (2008), no. 6, p. M6 – M11 // **JCR indexed journal**, IF = 0.068, MNiSW – 13 pt, paper indexed in: *Web of Science*, *SCOPUS*
3. **Pietrusewicz K.**, Model-Following Control – Robustness and quality at the same time? Is it possible?, *Control Engineering*, December 2006, 4 p. (*Control Engineering Resource Center White Paper*) // **JCR indexed journal**, IF = 0.068, MNiSW – 13 pt
4. Dworak P., **Pietrusewicz K.**, A variable structure controller for the MIMO Thermal Plant, *Electrical Review*, no. 6 (2010), p. 116 – 119 // **JCR indexed journal**, IF = 0.242, MNiSW – 9 pt, paper indexed in *Web of Science*  
*My contribution to this work was to conduct described in the simulation studies. My estimated percentage participation is 50%.*
5. Dworak P., **Pietrusewicz K.**, Misztal H., A robust controller for the MIMO thermal plant, *Electrical Review*, no. 5 (2010), p. 301 – 303 // **JCR indexed journal**, IF = 0.242, MNiSW – 9 pt, paper indexed in: *Web of Science*, *SCOPUS*  
*My contribution to this work was to discuss the presented concept and feasibility of the hardware and software tools. My estimated percentage participation is 10%.*
6. Misztal H., Dworak P., **Pietrusewicz K.**, A study on a temperature control system with a universal variable structure PID controller designed for start-up, programmed and fixed set-point control, *Electrical Review*, no. 5 (2010), p. 313 – 315 // **JCR indexed journal**, IF = 0.242, MNiSW – 9 pt, paper indexed in: *Web of Science*, *SCOPUS*  
*My contribution to this work was to discuss ways of volatility structures described in the work of the PID controller and the preparation of a piece of work. My estimated percentage participation is 10%.*
7. **Pietrusewicz K.**, Dworak P., Misztal H., Rapid prototyping of the temperature control algorithms within the PLCs, *Electrical Review*, no. 5 (2010), p. 304 – 306 // **JCR indexed journal**, IF = 0.242, MNiSW – 9 pt, paper indexed in: *Web of Science*, *SCOPUS*  
*My contribution to this work was to propose a methodology for prototyping algorithms in industrial target control systems. My estimated percentage participation is 80%.*
8. **Pietrusewicz K.**, Dworak P., A fuzzy-logic based tuning for a velocity controller of the DC servo drive, *Electrical Review*, no. 2 (2009), p. 112 – 114 // **JCR indexed journal**, IF = 0.242, MNiSW – 9 pt, paper indexed in: *Web of Science*, *SCOPUS*  
*My contribution to this work was to propose a method of tuning fuzzy controller settings for the drive model. I am a project manager under which the work was made. I have been involved in preparing and carrying out simulation environment of the experiment described in the article and the article. My estimated percentage participation is 50%.*

### B) Implemented original designing, constructional and technological achievements

1. **Pietrusewicz K.**, Development of concept design of machine tools for micromachining and control system and visualization of its work. (project II.J.2)
2. **Pietrusewicz K.**, Development of concept of hardware and software data acquisition system and the choice of hardware and software components for control and visualization of the prototype machine tool control system for micromachining. (project II.J.2)
3. **Pietrusewicz K.**, Development of hardware and software concept of a comprehensive monitoring process micro milling. (project II.J.2)

4. **Pietrusewicz K.**, The formulation of piecewise linear dynamical models ranges of the axis machine tool (project II.J.5)
5. **Pietrusewicz K.**, Development of the configuration of the thermal state monitoring system including feedback for open architecture CNC system (project II.J.12)
6. **Pietrusewicz K.**, Development of the project for communication interface within the CNC kernel for implementation of the thermal correction for the ball-screw driven feed-drive module (project II.J.12)

C) International and national patents granted  
*Not relevant*

(Pajor M., Stateczny K., **Pietrusewicz K.**, „The method of manual control and programming of technical devices, which include linear guidance systems”, **The patent application** No. 4-s-11 12.01.2011, West Pomeranian University of Technology, Szczecin – participation 33%)

D) Inventions and utility models and industrial products that have been protected and have been exposed to international and national exhibitions or fairs  
*Not relevant*

E) Monographs, scientific publications in international or national journals other than those at the base, referred to in paragraph II A:

1. **Pietrusewicz K.**, Simplified identification for the PID controller synthesis, *Napędy i Sterowanie*, no. 10 (2005), p. 92 – 97 // **MNiSW – 2 pt**
2. **Pietrusewicz K.**, Sensitivity of the two simple robust two degrees of freedom control structures, *Pomiary Automatyka Kontrola*, no. 11 (2005), p. 31 – 34 // **MNiSW – 9 pt**
3. Skoczowski S., Domek S., **Pietrusewicz K.**, Robust PID model following control, *Control and Intelligent Systems*, Vol. 34 (2006), no. 3, p. 186 – 193 // **paper indexed in SCOPUS**  
*My contribution to this work was to conduct a series of simulations and study the results of these studies in terms of editorial article. My estimated percentage participation is 20%.*
4. Domek S., Parus A., **Pietrusewicz K.**, Model based chatter suppression in machining, *Advances in Manufacturing Science and Technology*, Vol. 30 (2006), no. 4, p. 5 – 17 // **Quarterly, Polish Academy of Sciences Committee of Mechanical Engineering, MNiSW – 9 pt**  
*My contribution to this work was to study the applicability of approach, Model-Following Control for chatter vibration eliminator system for machine tools. My estimated percentage participation is 20%.*
5. Dworak P., **Pietrusewicz K.**, On possibility of applying the MFC idea to control the MIMO processes, *Pomiary Automatyka Kontrola*, no. 11 (2006), p. 25 – 29 // **MNiSW – 9 pt**  
*My contribution to this work was to discuss ideas contained therein, and conducting simulation studies. My estimated percentage participation is 20%.*
6. Domek S., Pajor M., **Pietrusewicz K.**, Urbański Ł., Experimental system O.C.E.A.N. of the open control for linear drives, *Inżynieria Maszyn*, Vol. 16 (2011), no. 1-2, 2011, p. 40 – 49 // **MNiSW – 9 pt**  
*My contribution to this work was to create the concept of the control system described in the work. I have been involved in the development of the text itself work and presented the test bench. My estimated percentage participation is 70%.*
7. **Pietrusewicz K.**, Dworak P., Programmable Automation Controllers, NAKOM Publishing House, Poznań, ISBN 978-83-89529-35-0, 2007, 562 pages // **book on advanced solutions in the area of digital industrial control systems**  
*My contribution to this work was to write 11 chapters, the composition of printing books, as well as gathering materials for the book accompanying the DVD. My estimated percentage participation is 80%.*
8. **Pietrusewicz K.**, Robust MFC-V system in velocity control of DC motor, *Wiadomości Elektrotechniczne*, no. 4 (2008), p. 8 – 9 // **MNiSW – 9 pt**



9. Plewik D., **Pietrusewicz K.**, From simulation to implementation – is it possible the shorter way? AR4Matlab – automatic code generation for PLC, *Napędy i Sterowanie*, no. 3 (2009), p. 66 – 68 // **MNiSW – 2 pt**  
*My contribution to this work was to describe the concept of rapid prototyping using industrial control systems. My estimated percentage participation is 90%.*
10. Domek S., Pajor M., **Pietrusewicz K.**, Urbański Ł., The open modular control system for CNC machine tools, *Modelowanie Inżynierskie*, T. 6, No. 37 (2009), p. 77 – 82 // **MNiSW – 9 pt**  
*My contribution to this work was to develop the concept of the control system described above. I was involved in the construction described in the article of the test. My estimated percentage participation is 60%.*
11. Urbański Ł., **Pietrusewicz K.**, Majda P., Experimental study of dynamic properties of CNC feed drive, *Mechanik*, no. 3 (2010), p. 162 – 168 // **MNiSW – 9 pt**  
*My contribution to this work was to develop a plan described experiments. Leading the project, under which the work was created. My estimated percentage participation is 60%.*
12. Domek S., Dworak P., Okarma K., **Pietrusewicz K.**, Vision technique to automate the process of positioning the workpiece on CNC milling machine, *Wiadomości Elektrotechniczne*, no. 4 (2010), p. 37 – 39 // **MNiSW – 9 pt**  
*My contribution to this work was to consult possibilities of implementation of described here concept. My estimated percentage participation is 10%.*
13. Domek S., **Pietrusewicz K.**, Urbański Ł., Hybrid robust control of the feed drive within the numerically controlled machine tools, *Inżynieria Maszyn*, Vol. 16 (2011), no. 1-2, p. 50 – 66 // **MNiSW – 9 pt**  
*My contribution to this work was to study the work outlined in the concept of robust speed control algorithm. I conducted/presented simulation studies. My estimated percentage participation is 70%.*
14. **Pietrusewicz K.**, Method for increasing the control robustness of the permanent magnet machine tool feed-drive, *Maszyny Elektryczne: zeszyty problemowe*, No. 93 (2011), p. 31 – 36 // **MNiSW – 9 pt**
15. Pajor M., Stateczny K., **Pietrusewicz K.**, Urbański Ł., Virtual models utilization for the control of the machine tools, *Modelowanie Inżynierskie*, Vol. 11, No. 42, XII/2011, p. 311 – 317 // **MNiSW – 9 pt**  
*My contribution to this work consisted in assessing the practical implementation of concepts described in the article. My estimated percentage participation is 20%.*

F) Collective studies, catalogs of studies, documentation of research work, expertises, tracks and works of art

Collective studies

1. Kaszyński R., **Pietrusewicz K.** (Editors), Proceedings of the 14th International Conference on Methods and Models in Automation and Robotics, **IEEE, IFAC, Automation and Robotics Committee of the Polish Academy of Sciences**, West Pomeranian University of Technology, Szczecin, Poland; ISBN: 978-3-902661-55-5, 2009  
*My contribution to this material was to design and composition, and dealing with the publishing house. My estimated percentage participation is 50%.*

Selected documentation of research work

2. **Pietrusewicz K.**, Development of the concept for modification of working of the feed drive module of 5-axis milling centre within the iTNC530 control system from Heidenhain (project II.J.1)
3. **Pietrusewicz K.**, Development of identification experiment for evaluation of dynamical models of the machine tool feed drive modules for the servodrives parameters optimization purposes (project II.J.1)
4. **Pietrusewicz K.**, Configuration, starting-up and the development of the final documentation of the control system for micromilling machine, including local visualization and data acquisition subsystems (project II.J.2)

5. **Pietrusewicz K.**, Selection of the measurement algorithms and signal processing in the system diagnostic tools and machinery for micromilling (project II.J.2)
  6. **Pietrusewicz K.**, Development of recommendations for fusion diagnostic information available in the micro milling process. (project II.J.2)
  7. **Pietrusewicz K.**, Implementation of the selected control and diagnostic procedures micro cutting process. (project II.J.2)
  8. **Pietrusewicz K.**, Implementation of selected diagnostic functions for micro milling process (project II.J.2)
  9. **Pietrusewicz K.**, Selection of the servodrive configuration to test within the simulation research work (project II.J.5)
  10. **Pietrusewicz K.**, Verification and optimization of the computer models of machine tool feed-drive module (project II.J.5)
  11. **Pietrusewicz K.**, Adjustment and testing of the test stand for research on digital servodrive of machine tool feed-drives (project II.J.5)
  12. **Pietrusewicz K.**, Modeling of the machine tool feed-drive modules with the use of simulational environments (project II.J.5)
  13. **Pietrusewicz K.**, Verification and optimization of the obtained from identification dynamical models (project II.J.5)
  14. **Pietrusewicz K.**, Implementation of the modified thermal corrections within the open architecture CNC system (project II.J.12)
  15. **Pietrusewicz K.**, Verification of the assumptions of the method for correcting the motion trajectory (project II.J.12)
- G) Summarized *impact factor* by a Journal Citation Reports (JCR), according to year of publication for all publications of the IF: **8.008**
- H) The number of publications citations by the database Web of Science (WoS): **33 citations (22 without auto citations)** for **19** items indexed in the database
- I) *Hirsch* index according to Web of Science (WoS) database: **2**
- J) Managing international and national research projects and participation in such projects
1. Family of high-performance, universal 5-axis machining centers type X-5, 2012 – 2013, project NCBiR financed by the Innotech In-Tech No. 158356 (AVIA S.A., West Pomeranian University of Technology, Szczecin, Poznań University of Technology); habilitant's role: **co-author of the proposal, main researcher**
  2. Construction of a prototype system for testing micro-machining – research and modeling, research and development project R03 0050 06, 2009 – 2012, NCBiR, West Pomeranian University of Technology, Szczecin, project manager Broel-Plater B.; habilitant's role: **co-author of the proposal, main researcher**
  3. Special test stand for testing of cutting forces within rotating tools, research and development project R03 008 03, 2008 – 2011, MNiSW, Szczecin University of Technology, project manager Pajor M.; habilitant's role: **main researcher**
  4. Methodology of design calculations and test the guide of modern systems of machine tools, research and development project R03 026 01, 2007 – 2010, MNiSW, Szczecin University of Technology, project manager Jastrzębski D.; habilitant's role: **researcher**



5. Comparative studies of digital servodriven axis in machine tool with conventional and modern drive in the form of linear motors, research grant N N504 643940, 2011 – 2014, NCN, Westpomeranian University of Technology, Szczecin, project manager Broel-Plater B.; habilitant's role: **co-author of the proposal, main researcher**
6. The use of vision techniques for positioning workpieces on CNC machines, research grant N N502 147238, 2010 – 2013, NCN, Westpomeranian University of Technology, Szczecin, project manager Domek S.; habilitant's role: **co-author of the proposal, main researcher**
7. Project development and experimental studies of the prototype system for manual programming of CNC machine tools, research grant N N503 243138, 2010 – 2013, NCN, Westpomeranian University of Technology, Szczecin, project manager Pajor M.; habilitant's role: **co-author of the proposal, main researcher**
8. Effect of hydrostatic pressure on the properties of underwater concrete repair, research grant N N506 233139, 2010 – 2013, NCN, Westpomeranian University of Technology, Szczecin, project manager Horszczaruk E. K.; habilitant's role: **co-author of the proposal, main researcher**
9. Modeling the dynamics of electromechanical microsystems, research grant N N503 319039, 2010 – 2013, NCN, Westpomeranian University of Technology, Szczecin, project manager Powalka B. S.; habilitant's role: **researcher**
10. Research and correcting influence of the geometrical properties of the cutting machine for precision shaping of workpieces, research grant N N503 147634, 2009 – 2012, NCN, Szczecin University of Technology, project manager Majda P. Z.; habilitant's role: **researcher**
11. Koncepcja i opracowanie konstrukcji mechatronicznej obrabiarki mobilnej, research grant N N503 186036, 2009 – 2012, NCN, Westpomeranian University of Technology, Szczecin, project manager Pawelko P.; habilitant's role: **additional researcher**
12. Testing and correcting influence of thermal properties on the accuracy of machine tools shape workpieces, research grant N N502 280737, 2009 – 2012, NCN, Westpomeranian University of Technology, Szczecin, project manager Maćkowiak H.; habilitant's role: **co-author of the proposal, main researcher**
13. Design, modeling and experimental studies provide a web-based production capacity – eProduction, research grant N N503 193237, 2009 – 2012, NCN, Westpomeranian University of Technology, Szczecin, project manager Jarczoch A. J.; habilitant's role: **co-author of the proposal, main researcher**
14. The development of vibroacoustic diagnostics module for intelligent machines, research grant N N504 282337, 2009 – 2012, NCN, Westpomeranian University of Technology, Szczecin, project manager Bodnar A. J.; habilitant's role: **main researcher**
15. Test methods for active elimination of vibration in the cutting process, research grant MNil 4 T07D 016 29, 2006 – 2009, MNil, Szczecin University of Technology, project manager Brykalski A.; habilitant's role: **additional researcher**
16. Effect of ripening conditions on the properties of self compacting concrete and light self-compacting concrete, research grant 4 T07E 003 30, 2006 – 2009, MNiSW, Szczecin University of Technology, project manager Kaszyńska M.; habilitant's role: **main researcher**

- K) International and national awards for scientific or artistic activity
1. Award of the Scientific Committee of the i-Mitel 2012 Conference for Young Researcher for the paper "Prototyping of control algorithms for digital PMSM servo motor" // **Conference under auspices of Electrical Engineering Committee Polish Academy of Sciences**
  2. Gold Medal of The International Poznań Fair for project entitled „Thermal deformation compensation system propeller axis CNC machine tools”, 2012. System under industrial implementation within the project projektu II.J.1, **research team member**
  3. Gold Medal of The International Poznań Fair for project entitled „Digitally Controlled 3-Axis Micromilling Machine SNTM-CM-ZUT-1”, 2011, **research team member**
  4. Gold Medal of The International Poznań Fair for project entitled „O.C.E.A.N. – open modular CNC control system for linear motion drive”, 2009, **research team member**
- L) Present of papers at international and national thematic conferences
1. Domek S., Parus A., **Pietrusewicz K.**, *Hierarchical control of the self-excited vibrations absorber*, Annals of DAAAM for 2006 & Proceedings of the 17th International DAAAM Symposium "Intelligent manufacturing and automation: focus on mechatronics and robotics" ed. B. Katalinic Vienna: DAAAM International, 2006, p. 105 – 106 // **conference proceedings indexed in Web of Science**  
*My contribution to this work consisted of assessing the application of the type of MFC in the control of vibration suppression. My estimated percentage participation is 33%.*
  2. **Pietrusewicz K.**, Okulik T., Hoffman M., Parus A., *Laser-based structural vibration analysis of a car body*, Annals of DAAAM for 2006 & Proceedings of the 17th International DAAAM Symposium "Intelligent manufacturing and automation: focus on mechatronics and robotics" ed. B. Katalinic Vienna: DAAAM International, 2006, p. 305 – 306 // **conference proceedings indexed in Web of Science**  
*My contribution to this work was to conduct described in the article, research, and partly to prepare the work. My estimated percentage participation is 25%.*
  3. **Pietrusewicz K.**, Dworak P., *A fuzzy-based tuning of the PID controller for the DC servodrive*, Materiały i technologie w elektrotechnice: V Lubuska Konferencja Naukowo-Techniczna MITEL-2008 Gorzów Wlkp.: Oddział Gorzowski SEP, 2008, p. 188 – 191 // **Conference under auspices of Electrical Engineering Committee Polish Academy of Sciences**  
*My contribution to this work was to propose a method of tuning fuzzy controller settings for the drive model. I am a project manager under which the work was made. My estimated percentage participation is 60%.*
  4. **Pietrusewicz K.**, Dworak P., *Robust Model-Following Control for the DC servo drive*, In: Proceedings of the IEEE International Conference on Industrial Technology (ICIT'2008), art. no. 4608599 – 6 pp. // **paper indexed in: Web of Science, SCOPUS**  
*My contribution to this work was to create a concept opsanego algorithm at work, carrying out the simulation studies, discussion of results and most of the editing work. My estimated percentage participation is 80%.*
  5. Dworak P., **Pietrusewicz K.**, Misztal H., *Hybrid robust controller for the MIMO thermal plant*, Zeszyty Naukowe Politechniki Łódzkiej. Elektryka, No. 1046, Z. 118 (2009), p. 55 – 62 // **MNiSW – 2 pt**  
*My contribution to this work was to discuss the presented concept and feasibility of the hardware and software tools. My estimated percentage participation is 10%.*
  6. Misztal H., Dworak P., **Pietrusewicz K.**, *The study of the control of the thermal plant with the use of universal variable structure PID controller*, Zeszyty Naukowe Politechniki Łódzkiej. Elektryka, No. 1046, Z. 118 (2009), p. 85 – 92 // **MNiSW – 2 pt**  
*My contribution to this work was to discuss ways of volatility structures described in the work of the PID controller and the preparation of a piece of work. My estimated percentage participation is 10%.*



7. **Pietrusewicz K.**, Dworak P., Misztal H., Rapid prototyping of complex structures of temperature control systems within the programmable controllers – implementation of the robust Model-Following Control system, *Zeszyty Naukowe Politechniki Łódzkiej. Elektryka*, No. 1046, Z. 118 (2009), p. 63 – 70 // **MNiSW – 2 pt**  
*My contribution to this work was to propose a methodology for prototyping algorithms in industrial automatic control, target control systems. My estimated percentage participation is 80%.*
8. Dworak P., **Pietrusewicz K.**, Domek S., *Improving stability and regulation quality of nonlinear MIMO processes*, Proceedings of the 14th International Conference on Methods and Models in Automation and Robotics – MMAR 2009, IFAC Proceedings Volumes (*IFAC-PapersOnline*) 14 (PART 1), p. 180 – 185 // **paper indexed in SCOPUS**  
*My contribution to this work was to discuss the approach presented algorithm and partial conduct of the simulation. My estimated percentage participation is 20%.*
9. Mikołajczyk G., **Pietrusewicz K.**, *Hybrid predictive control systems for servo drives used in CNC machines*, II International Interdisciplinary Technical Conference of Young Scientists: InterTech 2009: proceedings, p. 184 – 188  
*My contribution to this work was to propose and the theoretical analysis presented in the work of the algorithm. I have also prepared a simulation environment. My estimated percentage participation is 75%.*
10. **Pietrusewicz K.**, Dworak P., *Implementation of modern control algorithms in PLCs*, 7th Conference Computer Methods and Systems: CMS '09 ed. by Ryszard Tadeusiewicz [i in.] Kraków: Oprogramowanie Naukowo-Techniczne, 2009, p. 369 – 374  
*My contribution to this work was to prepare the code of the program presented (1 of 2), and presentation methods for rapid prototyping in target industrial control systems. My estimated percentage participation is 60%.*
11. Domek S., Dworak P., **Pietrusewicz K.**, *Hybrid Model-Following Control algorithm within the motion control system*, IEEE International Symposium on Industrial Electronics: ISIE 2009, 2009, p. 1476 – 1481 // **paper indexed in: Web of Science, SCOPUS**  
*My contribution to this work was to propose and the theoretical analysis presented in the work of the algorithm. I have also prepared a simulation environment. My estimated percentage participation is 60%.*
12. **Pietrusewicz K.**, *Implementation of the hybrid MFC algorithm with the use of the IEC 61131-3 ST language*, Proceedings of 10th International Carpathian Control Conference: ICC'C'2009 Kraków: AGH – University of Science and Technology. Faculty of Mechanical Engineering and Robotics, 2009, p. 167 – 170
13. **Pietrusewicz K.**, Urbański Ł., *Adaptive parameter tuning within the DC motion control system for the CNCs*, 12th International Symposium of Students and Young Mechanical Engineers "Advances in Mechanical Engineering" Gdansk : Faculty of Mechanical Engineering. Gdansk University of Technology, 2009, p. 79 – 86  
*My contribution to this work was to develop the concept described in the algorithm. I consulted performed in an environment that I created a simulation study. My estimated percentage participation is 80%.*
14. Domek S., Dworak P., **Pietrusewicz K.**, *Integrated condition monitoring of the numerically controlled machine tool motion system*, In: Innovative materials and technologies in electrical engineering, VI Scientific-Technical Conference i-MITEL 2010, 2010, p. 107 – 112 // **under auspices of Electrical Engineering Committee Polish Academy of Sciences**  
*My contribution to this work was to develop the concept of described here control system. My estimated percentage participation is 60%.*
15. Domek S., Dworak P., Okarma K., **Pietrusewicz K.**, *Vision technique to automate the process of positioning the workpiece on CNC milling machine*, In: Innovative materials and technologies in electrical engineering, VI Scientific-Technical Conference i-MITEL 2010 2010, p. 101 – 106 // **under auspices of Electrical Engineering Committee Polish Academy of Sciences**  
*My contribution to this work was to implement a practical consulting capabilities described in the article the concept. My estimated percentage participation is 10%.*

16. Dworak P., **Pietrusewicz K.**, *Variable structure controller for controlling a multi-dimensional thermal object*, In: Innovative materials and technologies in electrical engineering, VI Scientific-Technical Conference i-MITEL 2010, 2010, p. 121 – 129 // **under auspices of Electrical Engineering Committee Polish Academy of Sciences**  
*My contribution to this work was to conduct described in the simulation studies. My estimated percentage participation is 40%.*
17. **Pietrusewicz K.**, *Prototyping of control algorithms for digital PMSM servo motor*, In: Innovative materials and technologies in electrical engineering, VII Scientific-Technical Conference i-MITEL 2012, 2012, p. 113 – 114 (article awarded by the Scientific Committee of the Conference) // **under auspices of Electrical Engineering Committee Polish Academy of Sciences**

### III. Teaching and popularizing achievements and information on international cooperation of the habilitant

#### A) Participation in European programs and other international and national programs

1. Human Capital Operational Programme, Priority IV Higher Education and Science, Measure 4.1 Strengthening and developing the potential of university teaching and increasing the number of graduates in critical knowledge-based economy, Division 4.1.2 Increasing the number of graduates in critical knowledge-based economy , National Research and Development Center, 1/10/2009 - 6/30/2013, "Making learning more attractive and ensuring higher the quality the following disciplines: automatics and robotics, materials engineering, mechanical engineering and mechatronics ZUT in Szczecin", no . UDA contract - POKL.04.01.02-00-135/09-00, West Pomeranian University of Technology, the project budget 8 318 883.22 PLN, habilitant's role: **project manager**
2. Human Capital Operational Programme, Priority IV Higher Education and Science, Measure 4.1 Strengthening and developing the potential of university teaching and increasing the number of graduates in critical knowledge-based economy, Division 4.1.2 Increasing the number of graduates in critical knowledge-based economy , Ministry of Science and Higher Education, 2008 - 2011, "Order of training for technical, mathematical and natural sciences – a pilot", contract no. 35/DSW/4.1.2/2008, West Pomeranian University of Technology, Szczecin, the project budget 1 695 900,00 zł, head: Biedunkiewicz W., role: **coordinator at the Faculty of Electrical Engineering**
3. Human Capital Operational Programme, Priority III High-quality education system, openness of Measure 3.4 of the education system in the context of learning throughout life, Measure 3.4.3 Dissemination of learning throughout life, the Education Development Centre, 2012 - 2014, "The Teacher of the profession in practice" a pilot project, the European Integration School in Szczecin, implemented in partnership with the city of Bydgoszcz, the role of habilitant: **moderator and chairman of the committee preparing an opinion on the teaching profession of mechanical and mechatronics at the secondary level**
4. Human Capital Operational Programme, Priority IV Higher Education and Science, Measure 4.1 Strengthening and developing the potential of university teaching and increasing the number of graduates in critical knowledge-based economy, Division 4.1.2 Increasing the number of graduates in critical knowledge-based economy , National Center for Research and Development, 01/09/2012 - 12/31/2015, "Providing a greater number of graduates in Automation and Robotics and ICT Faculty of Electrical Engineering ZUT response in Szczecin for the labor market", West Pomeranian University of Technology, the project budget 3 096 554.61 zł, habilitant's role: **project manager**



- B) Active participation in national and international scientific conferences
1. in 2011, 2012 **member of Young Experts Committee** (scientific committee) during International Workshop of PhD students OWD, Silesian University of Technology, under auspices of **Institution of Engineering and Technology IET**
  2. According to II.L, positions: II.L.{1-3, 7, 10, 12, 17}
- C) Participation in the organizing committee for international and national conferences
1. XLVII International Symposium on Electrical Machines, Electrical Engineering Committee Polish Academy of Sciences, PTETIS, Faculty of Electrical Engineering, Westpomeranian University of Technology, Szczecin, 2011, Szczecin, **member of the Organizing Committee**
  2. International Conference on Methods and Models in Automation and Robotics, IEEE, IFAC, KAIR PAN, Faculty of Electrical Engineering, Westpomeranian University of Technology, Szczecin, 2007 – 2011, **member of the Organizing Committee**
  3. International Conference on Methods and Models in Automation and Robotics, IEEE, IFAC, KAIR PAN, Faculty of Electrical Engineering, Westpomeranian University of Technology, Szczecin, 2002 – 2007, **organizational works before and during the Conference**
  4. Conference on structural failures „Awarie”, Faculty of Civil Engineering and Architecture, Westpomeranian University of Technology, Szczecin, 2003, 2005, 2007, **works of Organizing Committee**, i.e. for companies cooperation
- D) Received awards and distinctions other than those listed in paragraph II K
1. 2nd Award nationwide Contest from Bosch Rexroth „Control systems based on modern Rexroth drives”, 2010, for the project of didactic programme on the topic of programming digital servodrives for PMSM motors
  2. doctoral thesis entitled „Application of Model-Following Control algorithm within the Programmable Automation Controller” qualified to the final (50 best works) of the ABB company Contest in 2005

Rector of the ZUT, Szczecin awards for scientific activity

3. 2nd degree award – for 2010
4. 1st degree award – for 2009
5. 2nd degree award – for 2008
6. 2nd degree award for Young Scientists – for 2006
7. 2nd degree award – for 2005
8. 2nd degree award for Young Scientists – for 2005, for doctoral thesis

Rector of the ZUT, Szczecin awards for organizational activity

9. Team award of Rector of ZUT for organizational activity (in 2002 – 2007), for organizing the MMAR Conference in 2002 – 2007, 2007
10. Award of Rector of ZUT for organizational activities for obtaining financing of project “Making learning more attractive and ensuring higher the quality the following disciplines: automatics and robotics, materials engineering, mechanical engineering and mechatronics Westpomeranian University of Technology, Szczecin”, Priority IV Operation 4.1.2 Operational Programme Human Capital, 2010
11. Award of Rector of ZUT for organizational activities for obtaining financing of apparatus investment no. 529/FNiTP/3908/2010 entitled „The universal integrated system for dynamic testing and diagnostics of machines and microelectromechanical systems”. The project is

financed entirely from the Fund for Polish Science and Technology within the apparatus investment, 2011

- E) Participation in consortia and research networks
1. Consortium AviaTech (for project II.J.1), **one of the authors of the proposal, the main researcher**
  2. from 2007 **member (co-founder)** The Westpomeranian Cluster Association of Chemistry "Green Chemistry" under the auspices of the Marshal
- F) Management of projects carried out in collaboration with researchers from other centers of Polish and foreign, in cooperation with business, other than those listed in paragraph II J  
*Not relevant*
- G) Participation in committees and editorial boards of scientific journals
1. from 2012 member of Programme Council of the journal *Napędy i Sterowanie*
  2. from 2007 member of Scientific Editorial board of the journal *Advances in Fuzzy Systems (open access journal)*
- H) Membership in international and national organizations and scientific societies
1. from 2012 member of Polish Society of Theoretical and Applied Electrical Engineering
- I) Educational achievements and the popularization of science or art

Articles of opinion, indicating the directions of development of automation systems, commenting on the situation in the automation market, popular in foreign journals:

1. **Pietrusewicz K.**, Dworak P., Programmable automation controllers (PACs), *Control Engineering*, Vol. 53 (2006), no. 12, p. 72 // **JCR indexed journal, IF = 0.068, MNiSW – 13 pt**  
*My estimated percentage participation is 85%.*
2. **Pietrusewicz K.**, Growth of PLCs in Poland, *Control Engineering*, Vol. 54 (2007), no. 9, p. 26, 28 // **JCR indexed journal, IF = 0.068, MNiSW – 13 pt, paper indexed in Web of Science**
3. **Pietrusewicz K.**, Manufacturing in Poland: creating a "mini-China" in Europe, *Control Engineering*, Vol. 55 (2008), no. 3, p. G6 // **JCR indexed journal, IF = 0.068, MNiSW – 13 pt**
4. **Pietrusewicz K.**, PADs aid understanding of PLC evolution, *Control Engineering*, Vol. 55 (2008), no. 5, p. 42, 45 // **JCR indexed journal, IF = 0.068, MNiSW – 13 pt**
5. **Pietrusewicz K.**, Polish automation trends mirror global interests, *Control Engineering*, Vol. 56 (2009), no. 2, p. 14 // **JCR indexed journal, IF = 0.024, MNiSW – 13 pt, paper indexed in Web of Science**
6. **Pietrusewicz K.**, Urbański Ł., Engineering Poland, *Control Engineering*, Vol. 57 (2010), no. 7, p. 22 – 24 // **JCR indexed journal, IF = 0.026, MNiSW – 13 pt, paper indexed in: Web of Science, SCOPUS**  
*My estimated percentage participation is 90%.*
7. **Pietrusewicz K.**, Postół M., Control systems, HMI change management, security, *Control Engineering*, Vol. 57 (2010), no. 9, p. 34 – 36 // **JCR indexed journal, IF = 0.026, MNiSW – 13 pt, paper indexed in: Web of Science, SCOPUS**  
*My estimated percentage participation is 50%.*
8. **Pietrusewicz K.**, Automatic code generation as a key for innovative algorithms, *automation (Bernecker & Rainer journal)*, No. 7 (2011), p. 42 – 44



9. **Pietrusewicz K.**, Urbański Ł., Balancing PLCs, PACs and IPCs. What controller fits your application?, *Control Engineering*, Vol. 58 (2011), no.1, p. 28 – 32 // **JCR indexed journal, IF = 0.026, MNiSW – 13 pt, paper indexed in SCOPUS**  
*My estimated percentage participation is 90%.*
10. **Pietrusewicz K.**, Urbański Ł., Control system software programming, *Control Engineering*, Vol. 59 (2012), no. 1, p. 32 – 33 // **MNiSW – 13 pt**  
*My estimated percentage participation is 90%.*

Articles of opinion, indicating the directions of development of automation systems, commenting on the situation in the automation market, popular in Polish periodicals:

11. **Pietrusewicz K.**, The largest study of the Polish market PLC. According to users, the expectations of market, development forecasts, *Control Engineering Polska*, no. 1 (2007), p. 26 – 38
12. **Pietrusewicz K.**, Programmable automation controllers, *Control Engineering Polska*, no. 2 (2007), p. 107 – 108
13. **Pietrusewicz K.**, Model-following control, *Control Engineering Polska*, no. 3 (2007), p. 10 – 12
14. **Pietrusewicz K.**, Report: user-machine interfaces - now and in the future, *Control Engineering Polska*, no. 5 (2007), p. 30 – 46
15. **Pietrusewicz K.**, The universal integrated system for dynamic testing and diagnostics of machines and microelectromechanical systems, *Aktualności Targowe ITM*, 2012
16. **Pietrusewicz K.**, Urbański Ł., PLC, PAC or IPC – what to choose? Controllers in 2011, *Control Engineering Polska*, no. 4 (2011), p. 38 – 42  
*My estimated percentage participation is 90%.*
17. **Pietrusewicz K.**, Centre of Mechatronics, power of Innovation, step in 22nd Century, *Aktualności Targowe ITM*, 2011
18. **Pietrusewicz K.**, Engineer of tomorrow – Scientific research, collaboration with industry, attractive teaching, *Aktualności Targowe ITM*, 2010 // **paper financed by EFS within PO KL**
19. **Pietrusewicz K.**, Faculty of Electrical Engineering and Faculty of Mechanical Engineering and Mechatronics from the West Pomeranian University of Technology at the Innovations-Technologies-Machines International Fair, *Aktualności Targowe ITM*, 2009
20. **Pietrusewicz K.**, Mini golf – mechatronic didactic test stand, *drive and control* (Bosch Rexroth journal), No. 2 (2009), p. 4 – 5
21. **Pietrusewicz K.**, Program, open yourself. Open architecture CNC control systems, *Control Engineering Polska*, no. 6 (2008), p. 16 – 19
22. **Pietrusewicz K.**, A step in evolution of PLC. Programmable Automation Devices (PAD) – a new class of industrial controllers, *Control Engineering Polska*, no. 5 (2008), p. 46 – 49
23. **Pietrusewicz K.**, Hybrid control systems in practice. *Control Engineering Polska*, no. 5 (2008), p. 12 – 17
24. Pajor M., **Pietrusewicz K.**, Promotional material of Centre of Mechatronics, ed. 2 (2012), 40 pages  
*My contribution to this work was to study the material and partial participation in the preparatory work for printing. My estimated percentage participation is 50%.*
25. Faculty opened for business, Serwis [szczecinbiznes.pl](http://www.szczecinbiznes.pl) (2012), [http://www.szczecinbiznes.pl/wydarzenia/1357-Wydzial\\_otwarty\\_na\\_biznes.html](http://www.szczecinbiznes.pl/wydarzenia/1357-Wydzial_otwarty_na_biznes.html)
26. Pajor M., **Pietrusewicz K.**, Promotional material of Centre of Mechatronics, ed. 1 (2009), 12 pages  
*My contribution to this work was to study the material and partial participation in the preparatory work for printing. My estimated percentage participation is 50%.*

Invited lectures, delivered at seminars branch automation and robotics, and editors of trade magazines, organizing regular exhibitions industry:

27. **Pietrusewicz K.**, Designing control systems using Matlab/Simulink, Wrocław, 24.06.2008, Wrocław University of Technology (ONT, Kraków)
28. **Pietrusewicz K.**, Seminar at the Automaticon 2009 Fair. Title: Automatic code generation for the mechatronic systems control design purposes. Automaticon, Warsaw, 2009, 2.04.2009
29. **Pietrusewicz K.**, Seminar at the Protech 2009 Fair. Title: Rapid prototyping of the control systems and digital signal processing in mechatronics. Wrocław, Protech Fair, Robotech, 18.11.2009
30. **Pietrusewicz K.**, Programming PLCs and implementation of control algorithms according to ST language of IEC 61131-3, logi.cals POWER DAYS Seminar, Szczecin, 5.11.2009
31. **Pietrusewicz K.**, Mechatronics for specialized control equipment. – project O.C.E.A.N. – open architecture control system, 30/09/2009, Licheń Stary, B&R User's meeting

J) The scientific care for students and doctors during the specialization

1. The scientific care for students at the Faculty of Electrical Engineering. Student's prepared in 2009 master's thesis from the area of mechatronics and digital control systems. It was a part of contest "Control systems based on modern Rexroth drives".

K) The scientific care for PhD students as academic supervisor or supervisor support

*Not relevant*

L) Internships in foreign and national research and academic centers

*Not relevant*

M) Expert reports, or other publications on request

1. **Pietrusewicz K.**, Technological line for production of multilayer pipes polyethylene-aluminum-polyethylene with the equipment company's R&D laboratory as an essential element of the project, review of project innovation, Twestop, Szczecin, 12/20/2006
2. **Pietrusewicz K.**, Training materials preparation „Introduction to PLC programming – practical Workshop”, MPL Technology/IDC Technologies, 2007
3. **Pietrusewicz K.**, Training materials preparation „PLC programming according to IEC 61131-3 – practical Workshop”, MPL Technology/IDC Technologies, 2007
4. **Pietrusewicz K.**, Training materials preparation „OPC – OLE for Process Control – practical Workshop”, MPL Technology/IDC Technologies, 2007
5. **Pietrusewicz K.**, Folding-gluing Jagenberg Diana 104-1 to multi-point gluing and folding, and the cardboard cup, review of product innovation, Tekmar, 05/15/2008
6. **Pietrusewicz K.**, High-performance printing machine HM-1206FP-OD-1200, review of product innovation, Papirus II, 05/15/2008
7. **Pietrusewicz K.**, The use of solar collectors for water heating assistance used during the car wash, review of project innovation, Petroinvest Bud, 05/20/2009
8. **Pietrusewicz K.**, Control system functionality as INVERTER SOFT TOUCH control system in the cabins and the varnishing SKYLINE CAMEOLINE, review of product innovation Kaczyński Service, 05/20/2009



9. **Pietrusewicz K.**, The functionality of the control system INVERTER SOFT TOUCH for use in paint booths, review of product innovation, Kaczyński Service, 05/20/2009
10. **Pietrusewicz K.**, 6-points folding-gluing machine HZH1380 with the cutting press ML2500, review of product innovation, Tekmar, 05/22/2009
11. **Pietrusewicz K.**, Technological audit of Kaczyński Service company, Enterprise Europe Network, 07/2009
12. **Pietrusewicz K.**, Technological audit of db.net soft company, Enterprise Europe Network, 07/2009
13. **Pietrusewicz K.**, Improving the competitiveness BITERMO COMPLEX SC by creating a specialized laboratory and implement a comprehensive system to manage the company, review of project innovation, Szczecin, Bitermo, 05/19/2010
14. **Pietrusewicz K.**, IT Lab as part of streamlining the process of customer service, review of project innovation, IT Serwis, 05/19/2010
15. **Pietrusewicz K.**, Computer system for managing a car wash with the software, review of project innovation, FHU Katarzyna Trepanowska, 06/17/2010
16. **Pietrusewicz K.**, Intelligent energy-efficient buildings, review of investment innovation, Prospective, 06/17/2010
17. **Pietrusewicz K.**, State of the art of the mechatronic approach for design and development of the hydraulic actuators and digital control systems for them, Cargotec, 04/2012 (for 7PR proposal; Cargotec Sweden, Cargotec Netherlands, Lulea Tekniska Universitat, Westpomeranian University of Technology, Szczecin, Silesian University of Technology, Partnership for developing energy efficient intelligent load handling system "iLOAD", Marie Curie Industry-Academia Partnerships and Pathways (IAPP). Call: FP7-PEOPLE-2012-IAPP, in the case of financing habilitant will be coordinator of WP1 – Control systems)

N) Participation in expert and competition groups

1. 2007 – 2012 Jury within Contest on Product of the Year of Control Engineering Polska magazine
2. 2008, 2010 Juror in „The International Automation Scholarship Competition”, organized by Mitsubishi Electric
3. 2009 member of Jury for funding the scholarships for students; Association of Polish Electrical Engineers, reviewer of proposals

O) Reviewing national and international projects

Ministry of Science and Higher Education, 2009, a review of the research and development project

P) Reviewing publications in international journals and national

1. Control Engineering (USA), 2006 – 2012, **8 reviews**
2. International Journal of Robotics and Automation, 2010 – 2012, **3 reviews**
3. Advances in Fuzzy Systems, 2007 – 2012, **14 reviews of Special Issues** (Modeling Uncertainty using Fuzzy-based Methods for Decision Making, Fuzzy Logic Applications in Control Engineering and Systems Biology, Fuzzy Inference Systems for Medical Diagnosis, Theory and Applications in Fuzzy System Identification, Applications of Multi-Objective Fuzzy Optimization, High Performance Fuzzy Systems for Real World Problems, Multi Criteria Decision Making, Fuzzy Logic and its Applications and others)

4. Napędy i Sterowanie, 2006 – 2012, **4 reviews**
5. Control Engineering Polska, 2006 – 2012, **12 reviews**

Q) Other achievements, not specified in paragraph III A – III P

1. **Pietrusewicz K.**, Domek S., The universal integrated system for dynamic testing and diagnostics of machines and microelectromechanical systems, apparatus investment grant no. 529/FNiTP/3908/2010, West Pomeranian University of Technology, Szczecin, Faculty of Electrical Engineering, 2010 – 2011, amount of funding 4 530 000 PLN, **co-author of the proposal, the investment manager.**

*My role in the preparation of the proposal was to develop the concept and design of control and measurement system. My estimated percentage participation is 90%. By financing the purchase of which I designed measuring equipment it is possible to undertake research with the wider area of active diagnostics of technological equipment, including used for micromachining applications and MEMS (microelectromechanical systems). Research teams from Departments: Electrical and Mechanical Engineering and Mechatronics, in addition to the projects implemented so far been able to develop an apparatus purchased by another research directions related to the wider improvement of quality machine tools for metal working CNC*

2. from 2009 Vice Director of Centre of Mechatronics
3. from 2008 Dean Representative for cooperation with industry, a member of Industry Council of Faculty of Electrical Engineering from 2009
4. organizer and chairman of Robotech Seminar during Protech Fair in 2006, 2007
5. 2007 – 2011 main organizer of International Innovations-Technologies-Machines Fair in Poznań participation of team from West Pomeranian University of Technology
6. from 2006 member of the Association of Polish Electrical Engineers (SEP), SEP expert in the field of automation and measurement
7. 2005 – 2009 trainer of control systems and visualization in IDC-Technologies, Australia

