Short biography

Arkadiusz Mystkowski (born 1 Dec. 1978, Poland), received his M.S.M.E degree with high distinction in Industrial Process Automation in 2003 from Bialystok University of Technology. He graduated the Ph.D. degree in Automatic Control and Robotics with high distinction in 2007 and D.Sc. degree in Automatic Control and Robotics in 2016 from University of Science and Technology in Cracow. From 2003 to 2007: assistant and since 2007-present: postdoctoral researcher at Faculty of Mechanical Engineering, Bialystok University of Technology.

He has published over 80 papers in the area of robust optimal control applications: magnetic bearings, dynamics of rotating machinery and unmanned aerial vehicles. His research interests include: robust control methods: $\mathcal{H}_\infty$, $\mathcal{H}_\infty/\mathcal{H}_2$, μ-Synthesis and loop-shaping, structured and parametric uncertainty design, feedback linearization, control Lyapunov functions, sliding-mode controller and observers.

Current research on rotor active magnetic bearing (AMB) control systems including: robust control, nonlinear zero-bias flux-based control and feedback dynamic linearization, AMB rotor vibration energy harvesting using smart materials and piezoelectronics, and fractional-order control systems.

Summary of professional accomplishments

1. Name and surname

Arkadiusz Mystkowski

2. Diplomas, academic degrees held – including their name, place, and year of attainment, as well as the title of the doctoral dissertation

1998: Mechanical technician – *motor vehicle repair and operation,* Technical High School for Mechanical Studies in Lapy.

2003: Master of science Engineer – speciality: *automation of industrial processes*, course of studies: *automatic control and robotics*, Faculty of Mechanical Engineering, Bialystok University of Technology, topic of Master's thesis: *Design of a PROFIBUS network in a didactic laboratory using PLC controllers*, (original title: *Projekt sieci PROFIBUS w laboratorium dydaktycznym z wykorzystaniem sterowników PLC*), supervisor: *Prof. Franciszek Siemieniako*, **Diploma with high distinction.**

2007: Doctor of technical sciences – scientific discipline: *automatic control and robotics*, specialty: *mechatronics*, Faculty of Mechanical Engineering and Robotics, AGH University of Science and Technology in Cracow, subject of dissertation: *Robust vibration control of rotor with active magnetic suspension*, (original title: *Sterowanie odporne drganiami wirnika łożyskowanego magnetycznie*), supervisor: *Prof. Zdzislaw Gosiewski* (Bialystok University of Technology), reviewers: *Prof. Janusz Kowal* (AGH University of Science and Technology in Cracow) and *Prof. Dariusz Janecki* (Kielce University of Technology). **Dissertation awarded a distinction by the decision of the Council of the Faculty of Mechanical Engineering and Robotics at AGH University of Science and Technology in Cracow.**

2016: D.Sc. Degree – scientific discipline: *automatic control and robotics*, University of Science and Technology in Cracow, scientific achievements: constitute a series of monothematic publications under the common title: *Application of robust control methods for stabilization of mechanical systems* (original title: *Zastosowanie metod sterowania odpornego do stabilizacji obiektów mechanicznych*).

3. Scientific publications and conference papers (after obtaining the Ph.D. degree)

Table 1. List of publications – summary

Type of publication	**Number of publications**
Authored or co-authored scientific publications in journals referenced in the Journal Citation Reports (JCR) database	19
Authored or co-authored monographs	8
Authored or co-authored scientific publications in other Polish/International journals not referenced in the Journal Citation Reports (JCR) database	17
Polish conferences	17
International conferences/Web of science	24

Cumulative Impact Factor: **26,601**

Number of citations according to the Web of Science (WoS) database
Total number of citations: **127**
Number of citations without self-citations: **81**

ReseacherID: http://www.researcherid.com/rid/D-3429-2011
ORCID: http://orcid.org/0000-0002-5742-7609
ResearchGate: http://www.researchgate.net/profile/Arkadiusz_Mystkowski

Hirsch index: **7**

4. Information concerning employment in research units until present

- 2002-2003, assistant intern, Department of Automation Technology, Faculty of Mechanical Engineering, Bialystok University of Technology
- 2003-2004, assistant, Department of Automation Technology, Faculty of Mechanical Engineering, Bialystok University of Technology
- 2004-2007, assistant, Department of Automatic Control and Robotics, Faculty of Mechanical Engineering, Bialystok University of Technology
- 2005-2013, academic teacher, (The Academy of Agrobusiness in Lomza), Faculty of Information Science, conducting didactic classes according to original curricula on subjects: *programmable control systems, internet applications – PHP, website creation – HTML, exploring the internet*
- since 2008, adjunct lecturer, Department of Automatic Control and Robotics, Faculty of Mechanical Engineering, Bialystok University of Technology.

5. Project Manager / Assistant in Polish/International research projects

After receiving my Ph.D., I took part in eight research projects:

Project name/character	Project number/type	Period of execution	Character of involvement
Autonomous Vessel with Air Look (AVAL), R&D project conducted by the Polish multidisciplinary Science & Business consortium: Bialystok University of Technology, Sup4Nav, UPLOGIC, Ship Handling Research And Training Centre of IŁawa	POIR.04.01.04 -00-0025/16 development project, NCRD	2017-2020	Project Assistant
Research on sensors and actuators used in automatic control systems, robotics and diagnostics – executed	S/WM/1/2012: statutory work	2012-2015	Project Assistant

at Bialystok University of Technology, Faculty of Mechanical Engineering			
Development of an automation design of the control system of front-mounted mower lateral motion as a function of tractor trajectory and terrain relief – ordered by SAMASZ Sp. z o.o., executed at Bialystok University of Technology, Faculty of Mechanical Engineering	U/WM/4/2014: contracted work	2014-2014	Project Manager
Network-centric support system for reconnaissance and command of crisis situations in urban areas with autonomous unmanned aerial vehicles – executed by consortium: Wroclaw University of Technology, Bialystok University of Technology, Rzeszow University of Technology, ITWL, Dolam Sp. z o.o., Bumar Sp. z o.o.	OR00002911: development project, NCRD	2013-2010	Project Assistant
Autonomous, integrated reconnaissance system based on autonomous micro aero vehicles – executed by consortium: ITWL, Bialystok University of Technology, Rzeszow University of Technology, Wroclaw University of Technology, Bumar Sp. z o.o.	0059/R/T00/2008/06: ordered project, NCRD	2012-2008	Project Assistant
Development and implementation of methods for verification of MES model of magnetically suspended flexible rotor – executed at Bialystok University of Technology, Faculty of Mechanical Engineering	W/WM/10/2010: original research	2011-2010	Project Manager
Electromechanical, high-speed, stationary energy store – executed by consortium: AGH University of Science and Technology in Cracow, Bialystok University of Technology, Institute of Aviation	PBZ-KBN-109/T-10/2004: ordered project, NCRD	2010-2005	Project Assistant
Design and analysis of mechatronic components for automatic control systems, robotics and diagnostics – executed at Bialystok University of Technology, Faculty of Mechanical Engineering	S/WM/1/08: statutory work	2009-2008	Project Assistant
Active methods of motion and vibration control of mechanical and electromechanical systems – executed at Bialystok University of Technology, Faculty of Mechanical Engineering	W/WM/15/06: original research	2009-2006	Project Assistant

6. Involvement in European programmes and other international or national programmes

1. STT Erasmus, 26-30.06.2017, Helmholtz Zentrum Dresden Rossendorf (HZDR), Dresen, Germany (Erasmus + staff mobility for training).
2. LLP Erasmus, 13-17.02.2017, Kaunas University of Technology, Faculty of Mechanical Engineering and Design, Kaunas, Lithuania. Giving lectures totaling 8h. Establishment of cooperation in scientific research with Prof. Egidijus Dragasius.
3. LLP Erasmus, 19.09-23.09.2016, University of Castilla-La Mancha, Faculty of Mechanical Engineering, Albacete, Spain. Giving lectures totaling 8h. Establishment of cooperation in scientific research with Prof. Valentin Miguel Eguia and Prof. Francisco Garcia Sevilla.
4. LLP Erasmus, 17-23.04.2016, Kaunas University of Technology, Faculty of Mechanical Engineering and Design, Kaunas, Lithuania.

5. LLP Erasmus, 11-15.05.2015, Universita Degli Studi Di Salerno, Salerno, Italy. Giving lectures totaling 8h. Establishment of cooperation in scientific research with Prof. Alessandro Ruggiero, Department of Industrial Engineering.
6. LLP Erasmus, 25-31.01.2015, Pamukkale University, Denizli, Turkey. Giving lectures totaling 8h. Establishment of cooperation in scientific research with Prof. E. Sahin Conkur, Department of Mechanical Engineering, Machine Theory and Dynamics Laboratory.
7. LLP Erasmus, 25-31.05.2014, Université de Bordeaux, France. Giving lectures totaling 5h. Establishment of cooperation in scientific research with Prof. Ali Zolghadri, IMS, Equipe ARIA - Approche Robuste et Intégrée de l'Automatique.
8. Staff for Training (STT), LLP Erasmus, 09-27.09.2013, LUT Energy, Lappeenranta University of Technology, Lappeenranta, Finland. Conducting scientific research, including development of nonlinear control algorithms for the mathematical model of the magnetic suspension of a high-speed fuel cell blower rotor.
9. Study visit within the framework of the programme titled *Scientists closer to industry*, conducted in the Human Capital Operational Programme and financed by EU funds, 12-15.03.2014, VTT Technical Research Centre, Oulu, Finland. Establishment of scientific cooperation, resulting in jointly submitted applications for research projects.
10. LLP Erasmus, 4-12.02.2012, Universidad de Las Palmas de Gran Canaria, Spain. Giving lectures totaling 10h. Establishment of cooperation in scientific research with Prof. Elizabeth Florez Vázquez.
11. LLP Erasmus, 20-29.09.2012, *Firat* Üniversitesi, Elazig, Turkey. Giving lectures totaling 15h. Establishment of cooperation in scientific research with Prof. Doç. Dr. Servet Soygüder.
12. LLP Erasmus, 9-15.05.2011, Université de Picardie Jules Verne, Amiens, France. Giving lectures totaling 10h. Establishment of cooperation in scientific research with Prof. Didier Pascault, Institut Universitaire de Technologie d'Amiens, University of Picardy Jules Verne.