

Curriculum Vitae

Personal Information	Name	Marek Placzek	Gender	Male	
	Academic Title	associate professor, PhD Eng.			
	College	Silesian University of Technology, Faculty of Mechanical Engineering			
	Discipline	Mechanical engineering			
	Email	marek.placzek@polsl.pl			
	Mail Add.	Konarskiego 18A, 44-100 Gliwice, Poland			
Educational Background	<p>2020 Postdoctoral degree in technical sciences Place of obtaining the academic degree: Silesian University of Technology Domain: Engineering and technical sciences Scientific discipline: Mechanical engineering Date of posting: February 26, 2020</p> <p>2011 Doctor of technical sciences degree Place of obtaining the degree: Faculty of Mechanical Engineering of the Silesian University of Technology Scientific discipline: Mechanics PhD thesis topic: Modeling and testing of one-dimensional vibrating mechatronic systems Doctoral dissertation awarded by the resolution of the Council of the Faculty of Mechanical Engineering of the Silesian University of Technology</p> <p>2007 The professional title of Master of Science in Engineering Place of obtaining the degree: Faculty of Mechanical Engineering of the Silesian University of Technology Field of study: Mechanical Engineering Specialty: Design, automation and robotization of technological processes and design and modeling of mechatronic systems Studies conducted according to an individual study program, completed with honors.</p>				
Working Experience	<p>01.10.2020 - until now: Associate Professor Department of Automation of Technological Processes and Integrated Manufacturing Systems, Faculty of Mechanical Engineering, Silesian University of Technology</p> <p>01.01.2012 - 30.09.2020: Assistant Professor</p>				

	<p>Department of Automation of Technological Processes and Integrated Manufacturing Systems, Faculty of Mechanical Engineering, Silesian University of Technology</p> <p>01.10.2011 - 31.12.2011: Assistant</p> <p>Institute of Automation of Technological Processes and Integrated Manufacturing Systems, Faculty of Mechanical Engineering, Silesian University of Technology</p> <p>01.10.2010 - 30.05.2011: Senior technical clerk</p> <p>Institute of Automation of Technological Processes and Integrated Manufacturing Systems, Faculty of Mechanical Engineering, Silesian University of Technology</p> <p>20.02.2010 30.09.2010: Didactic worker, tutor of student internships</p> <p>University of Silesia in Katowice</p>
<p>Research Interests</p>	<p>Research on intelligent materials and their applications, work on modeling vibrational systems containing piezoelectric transducers used both as vibration inductors and sensors. The considered systems include technical measures in the field of passive and active vibration damping, electrical energy recovery systems from mechanical vibrations or technical condition control systems of technical measures, the operation of which is based on the measurement of their dynamic characteristics with the use of integrated piezoelectric sensors.</p>
<p>Major Publications*</p>	<ol style="list-style-type: none"> 1. Płaczek M.: Modelling and production process of the energy harvesting system based on MFC piezoelectric transducers, International Journal of Modern Manufacturing Technologies, 2020, Vol. 12 (3), pp.106-114. 2. Płaczek M., Kokot G.: Modelling and Laboratory Tests of the Temperature Influence on the Efficiency of the Energy Harvesting System Based on MFC Piezoelectric Transducers, Sensors, 2019, 19 (7), 1558, ISSN 1424-8220 3. Płaczek M, Piszczek Ł. Testing of an industrial robot's accuracy and repeatability in off and online environment. Eksploatacja i Niezawodność – Maintenance and Reliability 2018; 20 (3): 455–464. 4. Buchacz A., Baier A., Płaczek M., Herbuś K., Ociepka P., Majzner M.: Development and analysis of a new technology of freight cars modernization, Journal of Vibroengineering. 2018, Vol. 20, Issue 8, pp. 2978-2997 5. Płaczek M, Buchacz A, Wróbel A. Use of piezoelectric foils as tools for structural health monitoring of freight cars during exploitation. Eksploatacja i Niezawodność – Maintenance and Reliability 2015; 17 (3): 443–449. 6. Wróbel A., Płaczek M., Buchacz A., Majzner M.: Study of mechanical properties and computer simulation of composite materials reinforced by metal, Int. J. Materials and Product Technology, Vol. 50, Nos. 3/4, 2015, pp. 259-275. ISSN 0268-1900. 7. Płaczek M.: Modelling and investigation of a piezo composite actuator

	<p>application, Int. J. Materials and Product Technology, Vol. 50, Nos. 3/4, 2015, pp. 244-258. ISSN 0268-1900.</p>
<p>Research Projects*</p>	<ul style="list-style-type: none"> • Research stand for interactive rehabilitation of children under three years of age, with musculoskeletal disorders. • Modeling and testing of piezoelectric stacks using classical and non-classical methods with damping. • Synthesis of active mechanical and mechatronic systems • Development of innovative technology for honing cylinders of truck engines. Analysis of the possibilities and conceptions of controlling the honing head using smart materials • Development of an innovative composite housing for power steering with electrical assistance • Analytical and experimental research as well as determination of constructional features of components and assemblies in innovative constructions of renovated freight wagons • Research stand for interactive rehabilitation of children under three years of age with musculoskeletal disorders • Modeling and testing of piezoelectric stacks in classical and non-classical terms with damping • Synthesis of active mechanical and mechatronic systems
<p>Professional Membership</p>	<p>I have been an active member of the international scientific association "ModTech Professional Association in Modern Manufacturing Technologies" Iasi-Romania since 2013, and since 2016, the President of the Polish branch of this association, elected during the vote of its members. I am also a member of the Polish Society of Theoretical and Applied Mechanics and "International Union of Machine Builders", Donetsk, Ukraine</p>
<p>Potential Research Projects**</p>	<ul style="list-style-type: none"> • Intelligent materials and their applications, • Vibrational systems containing piezoelectric transducers used both as vibration inductors and sensors, • Passive and active vibration damping, • Electrical energy recovery systems from mechanical vibrations, • Technical condition control systems of technical measures,

* Please list achievements of recent 5 years

** This CV is intended to match Chinese and Polish Scientists within SPUC member universities, and Potential Research Projects is intended to apply for Sino-Polish or EU scientific cooperation projects.