

Curriculum Vitae

Personal Information	Name	Piotr	Gender	Male	
	Academic Title	Professor			
	College	AGH University of Science and Technology Faculty of Mining and Geoengineering			
	Discipline	Mining Engineering (Geomechanics)			
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Educational Background	<p>1993 M. Sc., Eng. in Mining Engineering, AGH University of Science and Technology in Krakow, Faculty of Mining Thesis topic: „The waste rock storage in shaft protection pillar and its influence on the shaft and workings stability”</p> <p>2001 Ph. D., Eng. in Mining Geomechanics, AGH University of Science and Technology in Krakow, Faculty of Mining Thesis topic: „The influence of geomechanical parameters and roadways size on the state of stress in the vicinity of roadways’ junctions”</p> <p>2013 D. Sc., Eng. in Mining and Geology AGH University of Science and Technology in Krakow, Faculty of Mining and Geoengineering Title of achievement: „ The role of cracks in the assessment of workings stability in underground hard coal mines”</p>				
Working Experience	<p>1993-2001 AGH UST, Faculty of Mining - assistant</p> <p>2001-2013 AGH UST, Faculty of Mining – lecturer</p> <p>2011 internship in Geocontrol S.A., Madrid, Spain</p> <p>2013-16 AGH UST, Faculty of Mining – associate professor</p> <p>2016-now AGH UST, Faculty of Mining – professor</p> <p>2017 Anhui UST, Hefei, China – Erasmus+ education programme</p> <p>2018 CUMT UST, Xuzhou, China – Erasmus+ education programme</p> <p>2019 CUMT UST, Xuzhou, China – visiting professor (research and lectures)</p> <p>2019 USTB, Beijing, China – visiting professor</p>				
Research Interests	<ul style="list-style-type: none"> • support for underground mines (especially bolting), • rock properties, • rock mass properties, 				

	<ul style="list-style-type: none"> • rockburst hazards, • ground control, • monitoring of underground structures, • the influence of mining exploitation on the surface and buildings
<p style="text-align: center;">Major Publications*</p>	<ol style="list-style-type: none"> 1. Małkowski, P., Niedbalski, Z.: A comprehensive geomechanical method for the assessment of rockburst hazards in underground mining. International Journal of Mining Science and Technology, 2020, 30(3), pp. 345–355. 2. Małkowski, P., Niedbalski, Z., Majcherczyk, T., Bednarek, Ł.: Underground monitoring as the best way of roadways support design validation in a long time period. Mining of Mineral Deposits, 2020, 14(3), pp. 1–14. 3. Malkowski, P., Ostrowski, L.: Convergence monitoring as a basis for numerical analysis of changes of rock-mass quality and hoek-brown failure criterion parameters due to longwall excavation. Archives of Mining Sciences, 2019, 64(1), pp. 93–118. 4. Niedbalski, Z., Małkowski, P., Majcherczyk, T.: Application of the NATM method in the road tunneling works in difficult geological conditions – The Carpathian flysch. Tunnelling and Underground Space Technology, 2018, 74, pp. 41–59. 5. Małkowski, P., Ostrowski, L., Brodny, J.: Analysis of Young's modulus for Carboniferous sedimentary rocks and its relationship with uniaxial compressive strength using different methods of modulus determination. Journal of Sustainable Mining, 2018, 17(3), pp. 145–157. 6. Małkowski, P., Ostrowski, L., Bachanek, P.: Modelling the small throw fault effect on the stability of a mining roadway and its verification by in situ investigation. Energies, 2017, 10(12), 2082. 7. Małkowski, P., Ostrowski, L.: The Methodology for the Young Modulus Derivation for Rocks and Its Value. Procedia Engineering, 2017, 191, pp. 134–141. 8. Małkowski, P., Niedbalski, Z., Majcherczyk, T.: Roadway design efficiency indices for hard coal mines. Acta Geodynamica et Geomaterialia, 2016, 13(2), pp. 201–211. 9. Małkowski, P.: The impact of the physical model selection and rock mass stratification on the results of numerical calculations of the state of rock mass deformation around the roadways. Tunnelling and Underground Space Technology, 2015, 50, pp. 365–375. 10. Małkowski, P.: Behaviour of joints in sandstones during the shear test. Acta Geodynamica et Geomaterialia, 2015, 12(4), pp. 399–410, A006.
<p style="text-align: center;">Research Projects*</p>	<p>2017 – State of stress analysis for the planned mining in "Knurów-Szczygłowice" mine for years 2020-2040</p> <p>2017 – Analysis of the reasons the support deformation and loss of stability in face entry 2/I/385 in “Bogdanka” mine</p> <p>2018 – Analysis of state of stress and rockburst hazard risk in block E of seam 209 after planned changes in mining operations in „Piast-Ziemowit” mine for 2016-2020</p>

	<p>2018 – Analysis of mining operational time for roadway on level 960 in “Bogdanka” mine</p> <p>2018 – The designing of optimal support schemes for roadways on the depths higher than 1000 m for geological and mining conditions of JSW Ltd. Mines.</p> <p>2018-now - The optimization of support systems for roadways in mines of Jastrzebie Coal Company</p> <p>2019 – The design of cross-roads support on 530 level, „Bolesław Śmiały” mine</p> <p>2019 – Verification of the longwall panel 830 gobs reconsolidation over roadway 1az in 405/2 seam in "Marcel" mine</p> <p>2019 – research on rocks from the vicinity of designed tunnel on S-3 expressway</p> <p>2020 – Research on waste and cement mixtures in the light of their applications in underground mines</p> <p>2020 – The measurements and analysis of loads on roadway support in “Bogdanka” mine</p> <p><i>and others</i></p>
<p>Professional Membership</p>	<p>From 1990 Society of Mining Engineers & Technicians</p> <p>From 2005 Polish Committee of Geotechnics</p> <p>From 2006 Polish Society of Rock Mechanics</p> <p>From 2007 International Society of Rock Mechanics</p> <p>From 2009 expert of State Mining Authority (WUG) for bolting, support and geotechnical research</p> <p>From 2009 Polish Committee of Standardization</p> <p>From 2014 expert of State Mining Authority (WUG) for shaft lining design and its monitoring</p> <p>From 2015 expert of State Mining Authority (WUG) for rockburst hazard</p> <p>From 2019 Section of Mining Technologies, Polish Academy of Science</p> <p>From 2020 Section Editor of Archives of Mining Science</p>
<p>Potential Research Projects**</p>	<ol style="list-style-type: none"> 1. Ground control in underground mines 2. Rock mass quality evaluation – using different rock mass classifications (relationships and parameters) 3. Tomography on rocks or binds and mixtures using in mining and civil engineering 4. Investigations on rocks. 5. Support (incl. rockbolts) construction investigations (tunnels, mining roadways) 6. Research on space resources

* 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.