

Data of Supervisors of the Doctoral School at WPUT

Supervisor: (academic titles and degrees, name and surname)	Prof. dr hab. inż. Jolanta Baranowska
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Scientific Discipline(s):	Mechanical Engineering Materials Engineering
Research Areas (max. 2000 characters):	<p>1. Production of thin coatings for applications in medicine, machine industry and electronics:</p> <p>a) techniques used for physical production of thin coatings: reactive magnetron sputtering, pulsed laser beam deposition, pulsed electron beam deposition;</p> <p>b) coating materials: polymers, metals, ceramics and composites.</p> <p>2. Increasing the service life of structural materials by thermochemical treatment:</p> <p>a) thermochemical treatment of steel, i.e. nitriding, nitrocarburizing and carburizing;</p> <p>b) expected properties: increased resistance to friction wear, corrosion resistance and hardness.</p> <p>3. Material welding processes.</p> <p>4. Research on the properties and structure of materials (wear testing, corrosion resistance, hardness, fatigue testing), microstructure and structure of materials, physical and chemical structure of materials; surface topography.</p>
Keywords (max. 10):	Surface engineering, thin coatings, physical deposition methods, corrosive and tribological wear of materials, thermochemical treatment, welding.