



**PROPOZYCJE TEMATÓW PRAC DYPLOMOWYCH dla studentów I stopnia kierunku budownictwo**

<b>Jednostka:</b>	<b>Instytut Dróg i Mostów</b>
	<b>Department of Theoretical Mechanics, Pavement Mechanics and Railroad Engineering</b>
<b>Supervisor's Name and Surname</b>	<b>TITLE OF THE DIPLOMA THESIS</b>
Prof. Artur Zbiciak, PhD, DSc	Civil engineering applications and computer simulations of selected smart materials.
	Finite element analysis and design of asphalt pavements applying mechanistic-empirical procedures.
	Comparative analysis of various pavement design methods.
	Mechanical modeling of railway track: analytical and FEM approach.
	Identification of rheological models of asphalt-aggregate mixes and vibroisolators using optimization algorithms.
Dr. Karol Brzeziński, PhD	Analysis of the impact of the assumed reliability of the road pavement structure on the construction cost.
	Review of methods for strengthening embankments, with particular emphasis on one of the methods (selected).
	Review of modern solutions for quality control of earthworks.
	Numerical simulations of technological processes in the construction of the pavement structure (asphalt aggregate mixture compaction, aggregate layer compaction, ballast bedding).
	Numerical simulations of field/laboratory soil testing methods.