

**PROPOSALS FOR TOPICS OF DIPLOMA THESES for graduate students of the Civil Engineering Structures course**

**Unit:**

**Institute of Building Engineering**  
**Department of Concrete and Metal Structures**  
**Division of Metal Structures**

**NOTE: In the Division of Metal Structures, there is a possibility to arrange a topic of the thesis with a supervisor, taking into account the specified interests of a diploma student.**

Supervisor	Thesis topic	Thesis scope	Speciality
prof. dr hab. inż. Marian Gizejowski  dr inż. Wioleta Barcewicz  dr inż. Mirosław Siennicki  The selected topic of MSc thesis needs the consultation with the supervisor for further details.	Credibility of the finite element simulations of lateral-torsional buckling problems of steel beams using Abaqus and Consteel software.		CES
	Indirect validation of Eurocode 3 beam-column elastic resistance evaluation procedures using finite element solutions by Consteel software.		
	Modelling of lateral-torsional buckling of beam-columns using Abaqus and Consteel software.		
	Overall in-plane and out-of-plane instability of semi-rigid planar frames using Consteel software.		
	Design of steel structure of high bay warehouse		
	Design of steel structure of commercial pavilion with a grid roof.		
	Design of a steel structure of swimming pool with double-layer grid roof.		
	Design of steel structure of an exhibition hall with a single-layer grid roof.		
	Design of steel structure of an exhibition hall with area $\sim 8000-10000\text{m}^2$ .		
	Design of steel framed structure of sports hall.		
	Design of steel framed structure of shopping mall.		
	Design of steel structure of hypermarket with highly adaptable interior.		
	Design project of steel two-bay industrial building.		
	Design of a steel two-bay single-storey building intended for hypermarket.		
	Design project of the three-bay industrial hall steel structure.		
	Design project of steel one-bay industrial building with two outhouses.		
Design project of steel one-bay industrial building with internal mezzanine.			
Design of the steel industrial building with a possibility of application of the internal transport.			

<p>prof. dr hab. inż. Marian Giżejowski dr inż. Wioleta Barcewicz</p> <p>dr inż. Mirosław Siennicki</p> <p>The selected topic of MSc thesis needs the consultation with the supervisor for further details.</p>	Design of steel structure of hangar for sport aircraft.		CES
	Design of steel structure of hangar for military aircraft.		
	Steel structure of a multi-storey office building with a parking lot.		
	Steel structure of a multi-storey office building with a green roof and terraces.		
	Design of steel framed structure of multi-storey building with semi-rigid joints.		
	Multi-storey building with composite steel-concrete floors.		
	Design of a steel skeletal structure of a school with internal gym hall.		
	Design of steel structure of a library with a conference room.		
	Design of steel structure of a multi-storey parking lot.		
	Design of steel roof of a multi-purpose sports hall for ~15000 spectators.		
	Design project of a steel structure of hotel with a concert hall and conference rooms.		
	Design project of a steel lattice telecommunication tower of a specified height.		
	Design project of a steel observation tower of a specified height.		
	Comparative analysis of steel skeletal structures with different static schemes.		
	Comparative analysis of steel skeletal structures with different types of joints.		
Comparative analysis of a skeletal building designed alternatively as steel or composite steel-concrete structure.			