The seminar on differential geometry will continue with this lecture:

June 7, **10am**, **online on MS Teams and the seminar room on the second floor**

Join via this **LINK.**

Radek Suchanek (Masaryk University):

Some remarks on variational nature of Monge-Ampère equations in dimension four

Abstract:

I will present a necessary condition for the local solvability of the strong inverse variational problem in the context of Monge-Ampère partial differential equations and first-order Lagrangians. In contrast with the previous talk by Marcus Dafinger, this condition is given by comparing differential forms on the first jet bundle and is valid only for the aforementioned PDEs. To illustrate how this approach can be applied, we will examine the linear Klein-Gordon equation, first and second heavenly equations of Plebanski, Grant equation, and Husain equation.
I will also speak about the drawbacks of the method when trying to generalize it to a system of equations.