

Tytuł: **Periodic solutions of the Whitney's inverted pendulum**
Referent: **Roman Srzednicki**
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In the book “What is Mathematics?” Richard Courant and Herbert Robbins presented a solution of a Whitney's problem of an inverted pendulum on a railway carriage moving on a straight line. Since the appearance of the book in 1941 the solution was contested by several distinguished mathematicians. In the talk I present the history of the problem until its first formal solution published by Ivan Polekhin in 2014. Polekhin also proved a theorem on the existence of a periodic solution of the problem provided the motion of the carriage on the line is periodic. I indicate we how to obtain a similar result if the carriage moves periodically on the plane.