Title: Binary pulsars - astrophysical laboratories of general relativity
Author: Zuzana Beňová
Department: Institute of Theoretical Physics
Supervisor: Mgr. David Kofroň, PhD
Supervisor's e-mail address: d.kofron@gmail.com

The mail concern of this work are tests of relativistic theories of gravitation (mainly GR) that are made by employing compact double-pulsars. The first part is devoted to basic tests and effects of relativistic theories: gravitational redshift, orbital period decay due to the emission of gravitational waves, periastron shift, Shapiro effect and precession of rotation axis. A brief description of pulsars (in general) and double-pulsars follows. We describe the orbital parameters and their post-Keplerian corrections. Finally, the theory is demonstrated on the unique double-pulsar PSR J037-3039 A/B which was discovered only 7 years ago.
Keywords: relativistic theories, double pulsar, tests of GR