## Black Holes, Neutron Stars, and Gravitational Waves @ Black Sea



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## Black holes and spacetime energy in teleparallel gravity

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Teleparallel gravity employs independent connection that is curvature free but can be characterised by torsion and nonmetricity. While it is possible to formulate families of teleparallel theories that have field equations equivalent to general relativity and only differ from it by the boundary term in the action, the extensions like scalar-tensor start to stand apart from their respective counterparts already at the level of the field equations. The talk will provide an overview of the search for nontrivial black hole solutions in extended teleparallel gravities, relevant methods and results. The last part of the presentation will briefly report the definition and calculation of quasi-local spacetime energy for Kerr spacetimes in general parallel relativity.

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