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Black hole accretion discs

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A monograph lecture course in the spring term of 2015

Accretion discs are central to our understanding of a broad range of important phenomena in various astrophysical systems, including protostellar/protoplanetary discs, cataclysmic variables, X-ray binaries, and active galactic nuclei and quasars. Because black holes are extremely compact, accretion discs around them span many orders of magnitude in size and a large range of physical regimes. Studying black hole accretion discs requires therefore learning about accretion processes in other astrophysical systems.

The lectures will present the basics of accretion disc theory in the Newtonian and generalrelativistic contexts and will address the latest observational and theoretical discoveries in this topical and rapidly evolving subject.

Lecture notes (to be published by Springer) will be available to students.

The first lecture will be given on March 2nd (Monday), at 2:00pm in the small seminar room at the Nicolaus Copernicus Astronomical Center, Bartycka 18, Warsaw.