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## The universe evolution and modified gravity: an introduction.

*Thursday 3 March 2022 10:00 (1h 30m)*

**Abstract:** A basic introduction to modified gravity is presented. Special attention is paid to  $F(R)$  gravity. The realistic, “exponential  $F(R)$ ” gravity is also discussed. It is shown how it may describe the whole universe evolution from inflation to dark epoch. Ghost-free extended  $F(R)$  and  $F(G)$  gravities are briefly introduced. The reconstruction of  $F(R)$  gravity from inflationary indices is discussed. This seminar is aimed at young people and is based on the review: “Modified Gravity Theories on a Nutshell: Inflation, Bounce and Late-time Evolution” by S. Nojiri, V. K. Oikonomou and S. Odintsov, e-Print: 1705.11098 [gr-qc] Phys Rept 692 (2017) 1.

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