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Scalar field DM search in GW (and not only) experiments

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The nature of dark matter remains unknown to date, although several candidate particles are being considered in a dynamically changing research landscape. Scalar field dark matter is a prominent option that is being explored with precision instruments, such as atomic clocks and optical cavities.
In particular, low-mass (sub-eV) scalar field dark matter may induce apparent oscillations of fundamental constants, resulting in corresponding oscillations of the size and the index of refraction of solids. Laser interferometers are highly sensitive to changes in the size and index of refraction of the main beam splitter.
In this talk, I will focus on the experimental search for scalar field dark matter signature and what results have been obtained so far searching in different laser interferometric detectors.

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