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Type: **Oral presentation**

One ring to rule them all: line-of-sight shear as a new cosmological probe

mercredi 2 novembre 2022 11:30 (15 minutes)

Strong lensing – the effect of light being bent by massive objects such as galaxies and forming circular ring-like images – is one of the most striking phenomena in observational cosmology. If multiple images are observed, they be used to measure cosmological distances and the expansion rate of the Universe. However, strong lensing images are often distorted by other nearby galaxies or clumps of dark matter, which shears them away from perfect circles. In this talk, I will present a new formalism to describe this so-called line-of-sight shear, showing how it can be measured directly from strong lensing images without being spoilt by the degeneracies commonly present between other lens-related quantities, thus revealing a powerful new probe of the distribution of dark matter in our Universe.

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Classification de Session: Oral Presentations (second in the morning)