



量子物理学・ナノサイエンス第 319 回セミナー

## Intrinsic alignment of Galaxies as a novel probe of cosmology

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**場所** : Zoom\*

### 概 要

Mapping the large-scale structure of the universe with galaxy surveys is one of the main science drivers for cosmology. In doing so, the spatial distribution of galaxies has been the major observable, ignoring the individual shapes and orientations. In this talk, I will consider the intrinsic alignment (IA) of galaxies as a novel cosmological probe. The IA has been treated as a contaminant against weak gravitational lensing experiments. Here, based on cosmological N-body simulations, we show that the spatial correlation of IAs exhibits characteristic anisotropies, in which the baryon acoustic oscillation feature can be detected. Making use of these features, we show that in combination with the conventional galaxy clustering statistics, the large-scale IA correlations help to improve the measurements of the geometric distances and growth of structure.

\*本 ZOOM セミナーに参加されます場合には、事前に下記より登録を済ませてください。

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