

Exploring the Potential of 3D Scene Reconstruction Techniques in Astronomy

Tuesday, 5 March 2024 15:00 (1 hour)

In recent years, technologies for reconstructing 3D scenes from limited 2D image data, such as Neural Radiance Fields (NeRF) and 3D Gaussian Splatting, have been actively developed. These technologies have gained attention in a wide range of applications, including VR/AR and Simultaneous Localization and Mapping (SLAM). This study explores the potential application of these technologies in the field of astronomy. Specifically, we focus on the possibility of reconstructing 3D dark matter distributions from 2D gravitational lensing data, discussing the feasibility and challenges of this approach. Our research presents new possibilities in the analysis of astronomical data and is expected to contribute to the advancement of related technologies.

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Session Classification: Chair: Hayato Shimabukuro