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Generative Topographic Mapping for tomographic redshift estimates

Friday, December 1, 2023 4:45 PM (15 minutes)

In this talk, we explore the use of Generative Topographic Mapping (GTM) as an alternative to self-organizing maps (SOM) for deriving accurate mean redshift estimates for cosmic shear surveys. We delve into the advantages of the GTM probabilistic modeling of the complex relationships within the data, enabling robust estimation of redshifts. Through comparative analysis, we showcase the effectiveness of GTM in producing tomographic redshift estimates, thereby contributing to the advancement of cosmological studies. Our findings underscore GTM's potential as a powerful tool for redshift inference in large-scale astronomical surveys.

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