

# Recovering the Real-Space Correlation Function from Photometric Redshift Surveys

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**Abstract** The error on the redshift determination associated to photometric redshift surveys produces a smaller correlation and a loss of isotropy in the observed galaxy distribution. We present a method to recover the real-space correlation function,  $\xi(r)$  from this kind of observations. The method is similar to that used in spectroscopic surveys to avoid the effects of peculiar velocities, and uses the fact that correlations are conserved in the plane perpendicular to the line-of-sight. We apply this method to mock photometric surveys with errors  $\Delta z/(1+z) = 0.05 - 0.005$  obtained from the cosmological simulation of Heinämäki et al. (2005, arXiv:astro-ph/0507197). Our method allows to recover  $\xi(r)$ , within the error, for the cases with smaller  $\Delta z$ . For  $\Delta z/(1+z) = 0.05$ , the need to integrate a long range in the line-of-sight direction makes the method fail for  $r > 2 h^{-1}$  Mpc.

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