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The Implementation of the Shear Correlation Function and the Matter Power Spectrum in R[1] ALLISON SCHEPPELMANN, California Polytechnic State University, San Luis Obispo, DEBORAH BARD, SLAC National Accelerator Laboratory — Weak gravitational lensing is an important tool in understanding the large-scale structure of the universe. One component in understanding the effect of weak gravitational lensing is the shear correlation function and matter power spectrum. The calculation of these values is often complicated and time consuming. In order to decrease the cost of these calculations the implementation uses parallel computing in the language R. This results in the calculations completing faster and a process that is easily changed in order to fit the need of each researcher using the algorithms created in R.

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