Studying Dark Matter using Weak Gravitational Lensing

From Galaxies to the Cosmic Web

Proefschrift

ter verkrijging van
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Margot M. Brouwer
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"When a man sits with a pretty girl for an hour, it seems like a minute. But let him sit on a hot stove for a minute and it's longer than any hour. That's relativity." – Albert Einstein

"The greatest good is the knowledge of the union which the mind has with the whole nature." – Baruch Spinoza

To Jasper, my brand new husband, who did not only show me the true meaning of relativity, but also helped me discover that the heavens can be found both above and inside.

Cover: Designed by Tineke Brouwer.

The background represents the cosmic structure of galaxies. Based on research by Coutinho et al. (2016) a set of 24,000 galaxies is connected to its closest neighbours, enabling a visualization (created by Kim Albrecht) of the cosmic web (see `http://cosmicweb.barabasilab.com`).

The looking glass on the back cover contains a Hubble Space Telescope composite image of dark matter (observed through weak gravitational lensing) in the galaxy cluster Cl 0024+17.
Credit: NASA, ESA, M.J. Jee and H. Ford (Johns Hopkins University)

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