

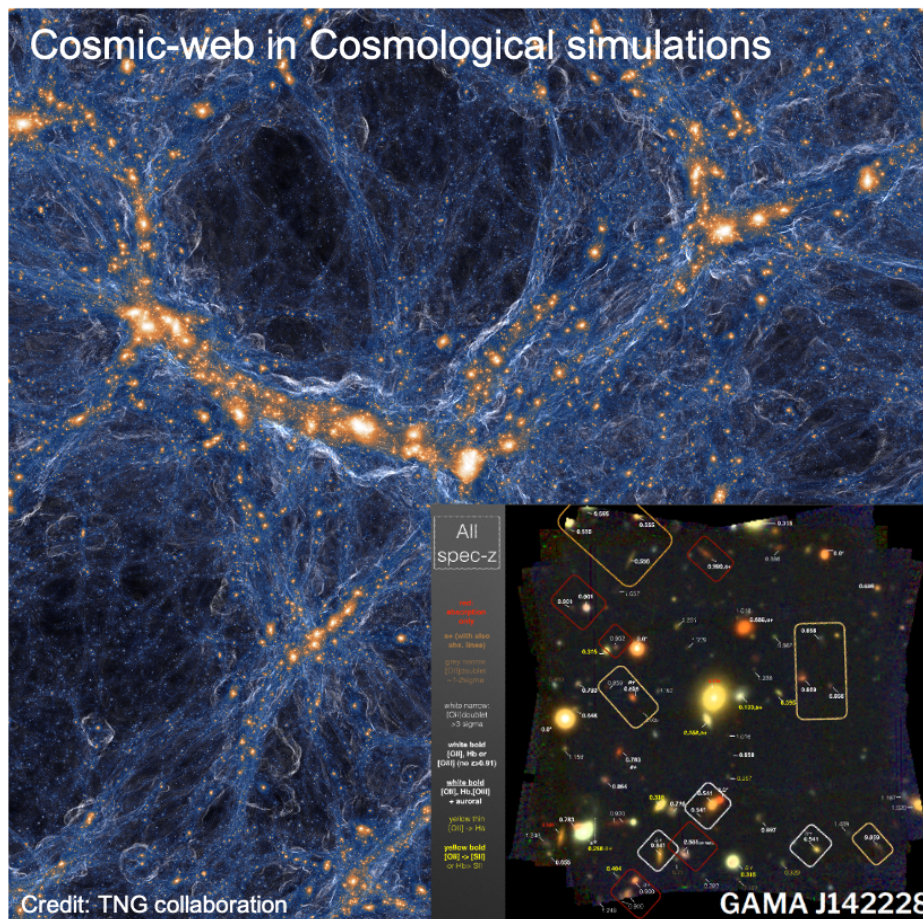
# Detecting Cosmic Web in emission using the MAGPI Survey

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**Description:** The cosmic web is a filamentary structure composed of dark matter, gas and galaxies, connecting everything in our Universe. Galaxies are commonly used to illuminate the nodes (consisting of thousands of galaxies), filaments (long channels connecting galaxies and gas), and holes (maybe a single or no galaxies) within the cosmic web. Cosmological models make very specific predictions about the growth of the cosmic web throughout time. However, our understanding of the cosmic web at high redshifts remains limited due to the lack of large spectroscopic datasets covering space in-between galaxies.

The data from the new Australia-led [MAGPI survey](#) on the 8-meter Very Large Telescope in Chile could revolutionise this field by detecting faint emission from gas connecting galaxies and groups of galaxies beyond the local Universe. This study will leverage the integral field spectroscopic capability of the MUSE spectrograph to systematically investigate the presence of diffuse ionised gas surrounding groups of galaxies.

The project is suited to students from a broad range of backgrounds in Physics/Math and an interest in Astronomy. Experience with Python or other programming language is highly desirable.



Click [here](#) for more information.