

Light-field imaging from a tomography perspective

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For the last decade, "Light-field Imaging" has been an emerging technology, that allows to record directional information about the captured light, through what is called "Plenoptic Photography". As a result, using light-field images (acquired with plenoptic cameras), it is possible to perform image refocusing after acquisition, and create extended depth-of-field images, which present different scenes from different distances from the camera, all well in focus. Thanks to these properties, plenoptic imaging is being investigated for the possibility to retrieve depth information from one single acquisition. In this talk we will be introducing and developing the interesting similarity between plenoptic imaging and Computed Tomography, with consequent use of the traditional formalism and tools derived from tomography, to extract higher quality information from light-field images.