Scattered light observations of the dust in debris disks systems

Julien Milli¹, Anthony Boccaletti², Anne-Marie Lagrange³, Zahed Wahhaj¹, Arthur Vigan⁴, Jean-Charles Augereau³, David Mouillet³, Dimitri Mawet⁵, Jean-Luc Beuzit³

¹European Southern Observatory (ESO), Chile, ²LESIA, Observatoire de Paris, *France*, ³Université Grenoble Alpes, France, ⁴Aix-Marseille Université, France, ⁵Department of astronomy, Caltech, USA

Debris disks consist of populations of planetesimals releasing through collisions smaller dust particles that are blown away on wider orbits or expelled by the radiation pressure of the star. Despite the large occurrence rate of debris disks (17% to 33%), their detection in scattered light is still scarce because they are faint extended structures, often hidden in the glare of their host star. Through a few well-focused examples of disks recently imaged with high-contrast instruments such as VLT/SPHERE, we will review the new insight on the dust properties brought by the measurements of their scattering phase function, reflectance, polarized light or surface brightness.