The talk aims to give a broad panoramic on the main presenter’s research activities, which all share the use of rheology as a tool to detect morphology and microstructural properties. The research description will particularly focus on mixtures of amphiphilic molecules and water, which are recent topics of the speaker and her co-workers.

In the vast class of molecules having both hydrophobic and hydrophilic moieties, classical ionic surfactants and copolymers are particularly interesting as they can produce a rich variety of morphologies, ranging from spherical and cylindrical micelles, to hexagonal and lamellar structures. Amphiphilic Molecules can arrange in different shapes, according to several parameters such as surfactant type (ionic or non-ionic) and concentration, pH, temperature, salinity.