- Project and Innovation Manager, NANOPAT project Coordinator

- MSc in advanced industrial and manufacturing systems. Ioannis has more than 10 years of experience in the field of industrial automation with applications in packaging, infrastructure, machinery, waste water treatment and R&D.

- Nano-scaled materials are abundant in different stages of industrial manufacturing and increasingly used in a number of applications from biomedical to packaging, automotive or energy. Physical and chemical properties of these materials are strongly dependent on their size, making the characterisation of mean size, size distribution, and shape of nano-scaled particles a major critical aspect for the quality and efficiency of manufacturing processes. Yet, conventional characterisation technologies still display manifold shortcomings which represents a major innovation obstacle for manufacturers of nanoparticles. In particular, in most cases, they have to be performed via offline testing of sampled materials, which results in very high characterisation times, impossibility of controlling product quality and reliability during the process, as well as higher costs derived from resource-consuming laboratory procedures

While focusing on the most representative chemical production of nano-scaled particles in suspensions, the NanoPAT project bridges this gap using three novel, complementary real-time in situ particle size characterisation technologies – Photon Density Wave spectroscopy (PDW), OptoFluidic force induction (OF2i) and Turbidity spectrometry (TUS).