Thesis subject

Kalasagarreddi Kottakota

The doctoral research will focus on 3D and quantitative microphone-array techniques and sound-source-separation techniques for a sound-source-contribution assessment of the powertrain components. The approach is to firstly to build a sequential response by associating sequentially blind or quasi-blind signal separation and then localize and quantify the sources on a 3D powertrain mesh for each separated signal component. Secondly, the scientific objective will consist of integrating the signal processing step into the microphone-array step by considering the signal/source properties in the Bayesian technique leading into a multidimensional Bayesian technique, taking advantage of the spatial, temporal, frequency, and statistical properties at the same time, for an efficient sound separation of the powertrain components.