Machines capable of displaying social, affective behaviour are becoming increasingly essential for systems involved in direct interaction with human users across a variety of application domains. For example, affect sensitivity and social perception are of the utmost importance for robot companions to be able to display socially intelligent behaviour, a key requirement for sustaining long-term interactions with humans.

This talk will explore some of the issues arising from the design of an affect recognition and social perception framework for artificial companions investigated in the EU FP7 LIREC (LIving with Robots and intEractive Companions) project. An example of design in a real-world scenario is provided and a robotic companion capable of inferring users' affective states and generate empathic behaviour is presented.