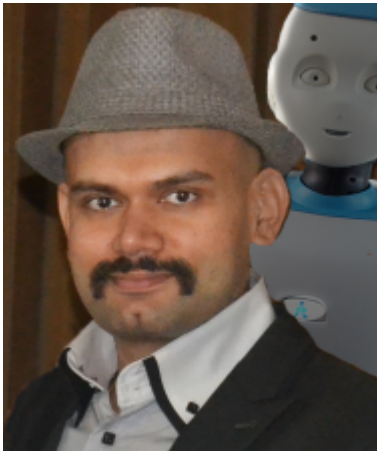


The Social Robotics Revolution: Robots from labs to society. How to be an active player in this?

Abstract: We are evolving, so as our society, lifestyle and the needs. AI has been with us for decades, and now penetrating more in our day-to-day life so as the robots. But, where are all these converging together? Towards creating a smarter eco-system of living, where robots will coexist with us in harmony, for a smarter, healthier, safer and happier life. How? Social Intelligence (SI) of such consumer Robots will be the key technology and the next big R&D challenge. SI will enable such robots to behave in socially expected and accepted manners. The talk will reinforce that robots have a range of potential societal applications, and that as a robotics industry, SoftBank Robotics' R&D and Innovation is around the centrality of wellbeing of people. The time has arrived, when social robots have started to be deployed, evaluated and available for practical purposes outside automation industry. For example, *Pepper* robot from SoftBank Robotics, which is mass produced and already being used in thousands of homes, and at public places; the *Romeo* humanoid robot companion for everyday life of people needing assistance; the *Nao* robot as teaching assistant. The first part of the talk will illustrate some of the use cases, market analysis and potential applications for such intelligent humanoid robots, grounded with some key European Union Projects. The second part will present the feedback and needs from the real users. This will help to highlight some of the immediate R&D challenges from industrial perspective in the third part of the talk. Hence the young graduates will know the must/should have skills to be the part of this next generation of robotics revolution: the socially intelligent robots. The talk will conclude with some open and grand challenges ahead, including social and ethical issues.



Short Bio: Dr. [Amit Kumar Pandey](#) is Head Principal Scientist (Chief Scientist) at [SoftBank Robotics](#) (formerly Aldebaran Robotics), Paris, France, also serving as the scientific coordinator (R&D) of its various collaborative projects. Earlier for 6 years he worked as researcher in Robotics and AI at [LAAS-CNRS \(French National Center for Scientific Research\)](#), Toulouse, France. His Ph.D. thesis in Robotics (title: Towards Socially Intelligent Robots in Human Centered Environment), is the *second prize winner (tie)* of the prestigious [Georges Giralt Award for the best Ph.D. Thesis in Robotics in Europe](#), awarded by [euRobotics](#) (the European Union Robotics Community). His current research interest includes *Socially Intelligent Robots, Human Robot Interaction (HRI), Robot's Cognitive Architecture and Lifelong Learning*. On these aspects, he has been actively contributing as principal investigator, researcher,

and industrial scientific coordinator in various national and European Union (EU) projects, as well as involved in their design and proposal. Among other responsibilities, he is the founding coordinator of *Socially Intelligent Robots and Societal Applications (SIRO-SA) Topic Group (TG)* of [euRobotics](#), and an active contributor in the [Multi-Annual Roadmap \(MAR\)](#) and [Strategic Research Agenda \(SRA\)](#) of [euRobotics](#), which aim to shape the future of robotics in Europe in collaboration with [European Commission \(EC\)](#) through [PPP SPARC](#) (the largest civilian-funded robotics innovation programme in the world). He is also the recipient of [Pravashi Bihari Samman Puruskar 2014 \(Non Residential Bihari Honour Award\)](#), for Science, Technology and Education, one of the highest level civilian honors, awarded by the state of Bihar, India.