Can I be of Assistance?: Socially Assistive Robots as the Next Generation of Health Care Helpers

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Now more than ever, robots are seen as a unique strategic technology that will become an important part of society. One main motivation for incorporating intelligent robots into society is our increasing elderly population. Globally we are facing severe demographic challenges due to a low population growth rate coupled with an aging population. This scenario is quickly worsening as baby boomers are beginning to retire, increasing the demands put on health care professionals. This talk will present some of our recent research efforts in developing intelligent assistive robots for the elderly and their integration into health monitoring, and social and cognitive interventions. The ability of such robots to autonomously provide cognitive and social stimuli, guidance, and support, and serve as general assistance to individuals as well as groups of users will be discussed. Socially assistive robots can assist in therapeutic interventions and provide assistance with activities of daily living for people suffering from cognitive impairments, and they can also aid in preventing depression and improving vital signs via their social interaction capabilities. Studies conducted during human-robot interaction scenarios with our autonomous human-like assistive robots Brian, Tangy and Casper will also be discussed.