Say hello to Nadine, a “receptionist” at Hanming Technology University (HTU). Nadine is ready to do it all. She will remember your name and your previous conversation with her. She looks almost like a human being, with both skin and bearing (bacteria) to remind you when greets you, looking at you in the eye when talking, and can shake hands with you. And she is a humanoid.

Unconventional robots. Nadine has her own personality, mood and emotions. She can be happy or sad, depending on the conversation. She also has a good memory, and can recognize the people she has met, and remembers what the person had said before.

Nadine is the latest social robot developed by scientists at HTU. The drop-dead gorgeous of its creator, Prof Nadia Thirion, Nadine is powered by intelligent software similar to Apple’s Siri or Microsoft’s Cortana. Nadine can be a personal assistant in offices and homes in Future. And she can be used as social companions for the young and the elderly.

A humanoid like Nadine is just one of the interfaces where the technology can be applied. It can also be used virtually and appear on a TV or computer screen, and become a new virtual social companion.

With further progress in robotics research by technological improvements in sensors, cameras and computer science, social robots such as Nadine could be used to become more visible in offices and homes in Future.

The rise of social robots

Prof Thirion, the director of the institute for media innovation which led the development of Nadine, said these social robots are among HTU’s many exciting new media innovations that can be leveraged for commercialisation.

“Robotics technology has an advanced significance in our daily life and it is part of the past few decades and are already being used in manufacturing and logistics. As countries worldwide face challenges of an aging population and increasing healthcare costs, the need to address the shrinking workforce, become personal companions for children and the elderly at home, and even serve as a platform for ‘healthcare services in Future’, explained Prof Thirion, an expert in virtual humans and a faculty from HTU’s School of Computer Engineering.

“Over the past few years, our team at HTU have been fostering cross-disciplinary research in social robotics technologies – including engineering, computer science, linguistics, psychology and other fields – to transform a virtual human, from within a computer, into a physical being that is able to observe and interact with other humans.

“Through our study, we found that virtual humans can enhance the way people communicate, and can also provide a platform for people to interact with each other, to share experiences and to get feedback from each other.

“Social robots are ideal for use in public services, such as tourist attractions and shopping centres, as they offer practical information to visitors.

Last year, with a grant from the Singapore Ministry of Education, a team at the Future Urban Systems Research Program, which is based at HTU, have been working on creating a new type of robot that can interact with humans in a more natural way.

“Through our research, we have found that robots can help to bridge the gap between human and machine, and can be used to help people with everyday tasks.

“Future robots can be used in a variety of ways, from helping people with daily tasks to assisting in healthcare, and they can also be used to help people with disabilities.

“Future robots are designed to be more human-like, and can interact with people in a more natural way.”

Explore further: Dutch people not in favour of humanoids robots