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Meet Nadine, Singapore's New Android Receptionist



*Prof. Nadia Thalmann posing with Nadine, her robotic doppelganger.
(Photo courtesy Nanyang Technological University)*

The support staff at Nanyang Technological University's Singapore campus recently gained one very special employee. Modeled after NTU Professor Nadia Magnenat Thalmann, "Nadine" is a sophisticated and (almost) lifelike android that can shake hands and remember visitors, has her own personality and emotional range, and may soon be ready to welcome clients at reception desks everywhere.

[Thalmann](#), the director of NTU's [Institute for Media Innovation](#) and a long-time expert in all things 'virtual human,' led the development of the next-gen android, and [explained](#) that 'social robots' like Nadine might well be poised to take on service roles throughout the commercial world, and even in the home. Thanks to ongoing advances in robotics, Thalmann suggests, automatons may move beyond their behind-the-scenes jobs in manufacturing and logistics and into the realm of face-to-humanoid-face support roles in the near future. She added,

“ As countries worldwide face challenges of an aging population, social robots can be one solution 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.

Nadine at NTU



While her realistic styling and different moods give her an edge over much of the mechanical crowd, Nadine is just one member of an ongoing wave of interactive service bots that've powered up in the past few years. Aldebaran's petite and friendly [Pepper](#) robot, for example, has reportedly been charming consumers in Japan, while international toy-maker Hasbro proposes that its snuggly [Joy for All](#) could offer “comfort, companionship and fun for [our] elder loved ones.”

The recently opened [Henn-Na Hotel](#) at Japan's Huis Ten Bosch resort, too, aims to leverage robots for maximum efficiency without a big sacrifice in customer service: its growing group of humanoid, more traditional, and even dinosaur-shaped robotic 'employees' may eventually make up 90% of hotel staff (as of August 2015, however, the automatons still require a fair amount of human assistance, [The Guardian](#) reports). Like Thalmann, the renowned roboticist [Hiroshi Ishiguro](#) has also been hard at work creating lifelike humanoids—his [doppelganger](#) included—that are capable of displaying emotion and other person-able traits.



For her part, Thalmann has been working to make "virtual humans" ever more realistic for several decades, and using a range of mediums. In 1987, Thalmann and her frequent collaborator-slash-husband Daniel Thalmann premiered the short film "[Rendez-vous in Montreal](#)," which sees [3D-rendered versions of Humphrey Bogart and Marilyn Monroe](#) spark a digital fling, to festival audiences and fellow computer animators around the world. A defining work in computer animation's early years, the film was developed using the Thalmanns' [Human Factory](#) software, which utilized a style of behavior mapping that's since influenced generations of virtual characters and their creators.

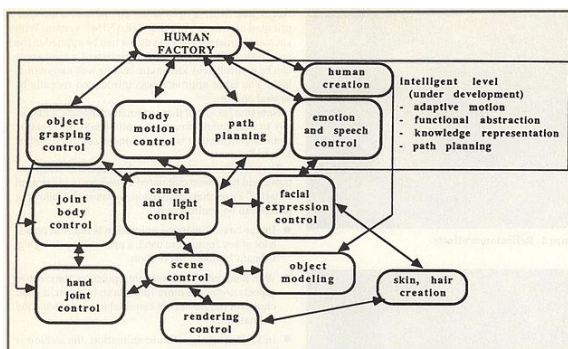


Diagram of Human Factory software protocol developed by Nadia Magnenat and Daniel Thalmann. (CC BY-SA 4.0 courtesy Daniel Thalmann via [Wikimedia Commons](#))

More recently, Ms. Thalmann's been fine-tuning much more advanced technology for use with Nadine—specifically, the kind that powers artificial intelligence programs like Siri and Cortana, Apple and Microsoft respective virtual assistants, and which can 'learn' about serving users while doing so with an almost personal flare. According to Thalmann, this technology is bringing humankind ever closer to a future in which we might choose to be flanked by robot pals a la science fiction's finest. She noted,

“ This is somewhat like a real companion that is always with you and conscious of what is happening. So in future, these socially intelligent robots could be like C-3PO, the iconic golden droid from [Star Wars](#), with knowledge of language and etiquette.

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