

# Waseda University: Building unique opportunities for your career

Join Waseda University as it becomes a world-class academic center

When Shigenobu Okuma founded Waseda University in 1882, it is unlikely that he imagined it growing into multiple campuses across Tokyo and Japan, with the second-largest student body in the country. Nor did he anticipate the university graduating award-winning author Haruki Murakami; United Nations Under-Secretary-General and High Representative for Disarmament Affairs Izumi Nakamitsu; Olympic gold medalist Shizuka Arakawa; Uniqlo founder and CEO Tadashi Yanai; or seven future prime ministers. Time after time, Waseda has proven itself one of Japan's strongest universities in terms of education, research, and alumni.

In 2014, Japan's Ministry of Education, Culture, Sports, Science and Technology chose Waseda for the Top Global University Project. One of the project's objectives is for selected schools to rank among the top 100 universities in the world by March 2024. This goal can only be achieved through world-class education and high-impact research, one of the benchmarks being the number of foreigners working and studying at these universities. In this regard, Waseda has a tremendous advantage.

Waseda boasts 13 undergraduate and 22 graduate schools, and the largest number of international students among any of Japan's 780 universities. Moreover, Waseda aims to increase its percentage of international students from 10% to 20% by its sesquicentennial in 2032.

Because of its status in Japan, Waseda has no difficulty attracting exceptional students at home. But university president Aiji Tanaka wants that attraction to become global. Speaking at his inauguration in November 2018, he observed how in the 1930s, all the best universities were in Europe, but by the 1970s they were in the United States, a change resulting from a policy that was implemented to hire the best people. "We must recruit people better than ourselves," he says.

## From researcher to entrepreneur

People who come to Waseda find that even their highest expectations are surpassed. This was the case for two robotics engineers, Sophon Somlor from Thailand and Alexander Schmitz from Austria, who have accomplished things they never imagined before arriving at Waseda.

"I did my bachelor's in Austria, my Master's in Austria and Zurich, and my Ph.D. in Italy and England. I was making robot skin for iCub," says Schmitz.

iCub is an open-source humanoid robot used in human-cognition and artificial-intelligence research. While doing his Ph.D., Schmitz was convinced that nothing could match iCub's quality in his specialized field.

"I was writing my thesis, and I wanted to write that [iCub] has the best robot skin. But then I found one professor in Japan, Professor Sugano, who changed my mind," he says.

That would be Professor Shigeki Sugano, leader of the Information and Communications Technology (ICT) and Robotics unit at Waseda, whose work in cognitive robots both amazed and humbled Schmitz. Eventually he joined Sugano's lab without ever visiting Japan. "I didn't come because of the amazing anime or manga," says Schmitz. "I came because of the amazing robots."

Schmitz's original contract in 2011 was for two years. When the contract neared its end, he had to make a decision.

"My plan was to go home, [but] the research environment was really good. Then they offered me the position and I stayed. Now I'm an associate professor," he says.



PHOTO: TWENDY-ONE ROBOT EQUIPPED WITH TACTILE SENSOR TECHNOLOGIES, SUGANO LAB (TOP); ALEXANDER SCHMITZ

Now Schmitz has even stronger ties to Japan. In August 2018, he founded a company, Xela Robotics, which sells tactile sensor technologies.

Somlor joined the Sugano Lab a year after Schmitz. Initially, his plan was to earn his degrees and return home, but like Schmitz, he got caught up in the intriguing entrepreneurial atmosphere at Waseda.

"I came here and I never expected to start a company," says Somlor. "But we saw an opportunity. Take the Amazon Picking Challenge, for example. They use people all the time. But now they want to use robots. Without tactile sensors, robots have problems with grabbing objects."

It took less than a year for Schmitz and Somlor, along with Sugano and Tito Pradhono Tomo, another member of the laboratory, to go from deciding to start Xela to actually registering the company. Neither Schmitz nor Somlor speak more than rudimentary Japanese, but found that the university gave them more than enough support for their innovative ideas—including one called Waseda-Edge.

The Waseda-Edge program was established at the university with special government funding to educate researchers on translating laboratory technology into commercial products. It offers a "microMBA," and all training is in English.

"Waseda-Edge helps you start a company. They teach you to speak with customers," explains Schmitz. "[Waseda-Edge] tells you early on that you need market studies to get feedback from real customers."

Schmitz is now setting up a second company.

"There's way too much going on for me to leave. Everything is going very well. I would never leave this behind," he says.

## Back to the bench

Unlike Schmitz and Somlor, Edgar Simo-Serra wants nothing more than to do research. At 31, the Spanish native is already a fully tenured faculty member in Waseda's School of Fundamental Science and Engineering.

"I'm very academic. I'm not interested in starting companies," he says.

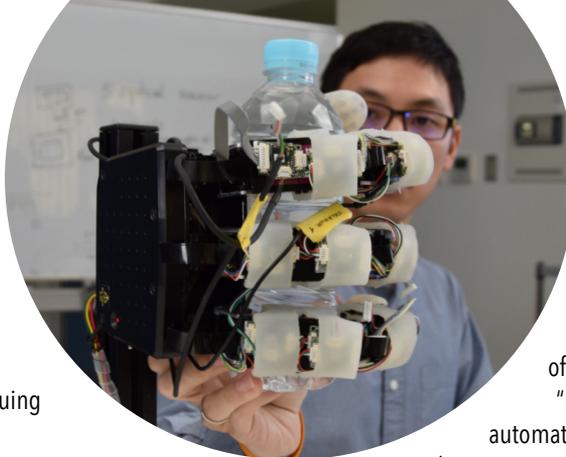
Waseda gives him ample space to pursue his research. While Schmitz and Somlor benefit from special programs to establish and grow their companies, Simo-Serra benefits in other ways.

"There are many awards and grants [that Waseda gives] to increase diversity. Funding here is very good. I've been self-funded the entire time," he notes.

The result? "I don't think I could grab as good a position at a university elsewhere in Japan or abroad," he says.

Even though Simo-Serra is happy being an academic, that does not mean he is locked in the laboratory all day. Being in Japan, and specifically Tokyo, gives him unique opportunities to promote his work.

"One of the developments we have is the automatic colorization of black and white photos. That got a lot of press and television coverage," he says. "The media attention came because we published in SIGGRAPH."



SIGGRAPH (Special Interest Group on Computer GRAPHics and Interactive Techniques), an annual conference on computer graphics, has grown since its inaugural event in 1974 into two conferences attended by tens of thousands of scientists, artists, filmmakers, and others.

"If you publish in SIGGRAPH, you are automatically invited to present at the world's largest computer graphics conference," he adds.

Simo-Serra also points out that as a private university, Waseda has a flexibility that is not seen at many of Japan's other top universities. "They can create new positions very easily," he says.

This flexibility has benefited Somlor, too. He had his tuition fees reduced in half when his graduate studies extended longer than expected. He also took advantage of the [Waseda Goes Global](#) plan, a program funded by the Top Global University Project for innovative research and global education.

"I got the opportunity to go for three months to the Gordon Cheng Lab at the Technical University of Munich. He is respected in the field of humanoid robotics and skin sensors. Last year he came to Waseda for two months," Somlor says.

Now that Somlor has graduated, the Waseda Goes Global plan is funding for his research activities.

## Providing a path to the future

Japan has a reputation for being wary of accepting immigrants. The Organisation for Economic Cooperation and Development reported that the number of foreign-

born residents living in the country in 2016 was less than 2% of the population. At the same time, the absolute number was a record high of 2.3 million. This slow but consistent increase is because of a policy change in 2012, when Japan introduced new immigration rules intended to expedite permanent residency for highly skilled residents.

"If you have a Ph.D., it would be easier for you to qualify for permanent residency," says Simo-Serra about the newly revised immigration policy.

Schmitz and Somlor agree. Simo-Serra adds, "I have 39 years ahead of me. I'm here for life," he says. "If you want to be an academic, I think Waseda is one of the best places. I'm really happy I got a position here. I would not trade it."

