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From underdog to genius: Yale computer scientist Sun Huanbo returns to China

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Story by Shi Huang
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A rising star in robotics has returned to his roots, taking up a post as the new head of a key laboratory

From a former community college student to a Yale-affiliated researcher, Sun Huanbo's academic journey defies convention. Now, the computer scientist has made another unexpected leap: returning to China as a rising star in robotics and haptics.

In March 2025, Peking University's school of engineering proudly announced his appointment as assistant professor, doctoral mentor and head of the Haptic Perception Laboratory - a hub open to talent at all levels, from undergraduates to visiting scholars.

"We don't care where you are from - we value where we plan to go; we explore unforeseeable potential together," Sun said in a statement on the lab's official website.

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Sun's story began at Chengxian College, an institution comparable to a US community college, where he designed award-winning rescue robots as an undergraduate.

Despite his college not being prestigious, Sun quickly found a love of robotics and dedicated himself to the field.

He spent two years designing and manufacturing a snake-shaped robot, taking part in a college student competition and winning an award.

"Most robots are powerless when encountering obstacles. If there were robots capable of traversing rubble, perhaps they could detect survivors under earthquake debris, potentially saving lives," Sun said in a 2013 interview with the Yangtze Evening Post.

His work on the robot did not affect his study performance; he received the National Scholarship, the highest scholarship in Chinese universities, awarded to the top 0.2 per cent of undergraduates.

In 2016, he earned a master's degree in mechanical engineering from the RWTH Aachen University in Germany. Four years later, he received his doctorate in computer science from the Max Planck Institute for Intelligent Systems.

His research focuses on deciphering the tactile sensing mechanisms of biological organisms and developing advanced haptic technologies to improve robotic dexterity and human-machine interaction. It is similar to what he did during his undergraduate studies, but more professional and complex.

He then conducted postdoctoral research for two years at the Max Planck Institute and Yale University. During this period, he published several papers in top academic journals, such as Science Robotics and Nature Machine Intelligence.

China's top universities have been recruiting outstanding young scientists from around the world, placing greater emphasis on their professional abilities rather than their backgrounds.