

Haircutting Robots: from Idea to Practice

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Abstract: This talk envisions the imminent arrival of fully robotic haircutting systems with commercial practicality, driven by advancements in technologies such as 3D printing, CNC machining, artificial intelligence, and robotics. The evolution of haircutting has reached significant milestones, from manual cutting to self-cutting devices, yet, as of today, no commercially available haircutting robots exist. Offering a pioneering exploration of the theoretical foundations for these innovations with the review of existing attempts to haircutting robots, this talk integrates insights from robotics, AI, and aesthetic design to address challenges like precision, safety, and customization.

Short CV: Shuai (Steven) Li received the B.E. degree in precision mechanical engineering from the Hefei University of Technology, Hefei, China, in 2005, the M.E. degree in automatic control engineering from the University of Science and Technology of China, Hefei, in 2008, and the Ph.D. degree in electrical and computer engineering from the Stevens Institute of Technology, Hoboken, NJ, USA, in 2014. He is currently a full Professor with University of Oulu, Finland. His main research is on robot manipulation and impedance control, computational intelligence, intelligent optimization and control.

