Winners of Youth Innovation Awards of the Faculty of Information Technology, ZJU, 2021

Winner Guo Xin

The researcher focuses on micro-/nanophotonic structures and devices. In terms of the novel micro-/nanofibers, her team has successfully developed high quality single-crystal ice micro-/nanofiber, demonstrated broadband low-loss optical wave guiding within the visible spectral range, as well as discovered large elastic bending and bending-induced phase transition. In terms of the nanowire lasers, she has developed technologies such as fast wavelength tuning and on-chip single-mode integration of nanowire lasers. She has published more than 20 papers as first/corresponding author，including SCIENCE and LIGHT. The research work has been reported by Xinhua News, New York Times and so on, and selected as "China's Top 10 Scientific and Technological Breakthroughs 2021" by Science and Technology Daily. She has also won the first prize of Zhejiang Provincial Natural Science Award.

Winner Gao Fei

He Mainly engaged in research related to the field of aerial robots (UAVs). Aiming at the forefront of science issues and practical social development needs, he proposes theoretical and technical difficulties in the autonomy, light weight and robustness of UAV single aircraft, and the synergy, intelligence and scale of UAV swarm, and proposes methods for autonomous navigation and rapid obstacle avoidance of single aircraft and UAV swarm in complex environments, also promotes the miniaturization and intelligence of UAVs. He has published 14 papers as first/corresponding author in Science Robotics, IEEE Transactions on Robotics etc.; other 23 papers were published in ICRA, IROS etc. The research work was reported on the front page of Science and by IEEE Spectrum. He has received IEEE-SSRR 2016 best paper award，IEEE/RSJ IROS 2021 best Application Paper Finalist，IEEE-TRO 2020 King-Sun Fu Best Paper Award Honorable Mention.

Winner Lin Xiao

Researcher Lin focuses on the realm of free-electron radiation nanophotonics. Recently, his group revealed the interface Cherenkov radiation induced by the resonance transition radiation, drastically different from the bulky Cherenkov radiation awarded as the Nobel prize in Physics in 1958. Moreover, his prediction of superlight inverse Doppler effect breaks the long-held tenet that the inverse Doppler frequency shift is impossible in a homogeneous positive-index system; correspondingly, his paper has been selected as the editors' favorite paper in the area of optics, from all papers published between 2005-2020 in Nature Physics. He is the recipient of the Excellent Young Scientists Fund Program (Overseas) of China in 2021 and a member of the Young Scientists Committee of the World Laureates Forum. Currently, he has published 37 papers as the first or corresponding author, including Nature Physics, Nature Materials, PRL, PNAS, Science Advances, and Nature Communications.