



List of Staff Awards for Biomedical Engineering



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**1 Excellent courses (first-class courses, key courses, etc.)**

Serial Number	Level	Course Name	Person in Charge	Team Members	Approval Time
1	National first-class undergraduate courses	Application Technology of Single Chip Microcomputer	Li Xiaou	Wang Yan, Si Boyu, Fan Chengcheng, Jiang Shumin	2023
2	Top tier undergraduate courses in Shanghai	Signal and System	Yan Jiayong	Wang Xuan, Zhang Xin, Bai Baodan, Li Xiaou	2023
3	Shanghai Curriculum Ideological and Political Demonstration Course	digital signal processing	Li Xiaou	Li Xiaou	2022
4	Top tier undergraduate courses in Shanghai	digital signal processing	Li Xiaou	Zhang Xin, Si Boyu, Bai Baodan, Zhu Geng	2021
5	Shanghai Virtual Simulation First Class Course	Virtual simulation experiment on the full process safety control of high-intensity focused ultrasound ablation diagnosis and treatment of malignant liver tumors	Li Xiaou	L ü Dan	2021
6	Key courses at the municipal level in Shanghai universities	Signal and System	Yan Jiayong	Yan Jiayong	2020
7	Key courses at the municipal level in Shanghai universities	digital signal processing	Li Xiaou	Zhang Xin, Yan Jiayong, Bai Baodan, Si Boyu, Wang Xuan, Cha Yutong, Zhu Geng, Hao Lijun	2019
8	Demonstration case of	Application Technology of Single Chip	Wang Yan	Jiang Shumin, Li Xiaou, Si Boyu,	2019



Shanghai University of Medicine & Health Sciences

	high-quality online blended courses in Shanghai universities	Microcomputer		Hao Lijun, Lv Dan, Fan Chengcheng	
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2 Teaching Achievement Awards

1. Yang Hui, Baosteel Outstanding Teacher Award
2. Li Xiaoou, Zhang Xin, and Yan Jiayong were awarded second prize of “Shanghai Municipal Teaching Achievement Award” in 2022, the award-winning result is titled “Creation and practice of a talent training system for medical device technical services throughout the industry chain”.

3 Science and Technology Awards

1. Yang Hui was awarded the “2023 China Industry-Academic-Research Cooperation Innovation Award”
2. Li Xiaoou was awarded the second prize of “China Industry-Academy-Research Cooperation Innovation and Promotion Award”
3. Li Xiaoou was awarded the second prize of “Science and Technology Progress Award of China Instrument and Control Society”

4 Excellent Teaching Materials and Textbooks

1. "Principles of Single-Chip Microcomputer and Application Examples (English Version)", published by the University of Science and Technology of China Press in 2024. Compiled by: Yang Hui.
2. "Tutorial on Digital Image Processing (OPENCV Edition)", published by China Machine Press in 2024. Compiled by: Yang Hui.
3. "Principles of Sensors and Intelligent Detection Applications", published by Tsinghua University Press in 2024. Compiled by: Yang Hui.
4. "Principles and Applications of Electric Circuits", published by Science Press in 2019. Chief Editor: Qiao Ling'ai; Associate Editor: Zhang Xin; Contributing Editors: Zhang Jun'an, Chen Yongqiang, Shan Yanlin.
5. Design and Fabrication of Medical Electronic Circuits (a textbook in the 13th Five-Year Plan), People's Medical Publishing House, 2018. Chief Editor: Liu Hong; Contributing Editor: Wang Xuan.
6. Practical Training Course of Medical Electronic Instruments, Shanghai Jiao Tong University Press, 2017. Chief Editor: Wang Yan; Associate Chief Editors: Cheng Haiping, Mo Guomin; Contributing Editors: Hao Lijun, Jiang Shumin.



5 Examples of Paper Published

Serial Number	Author	Title	Journal	Time
1	Li Xiaouu	Wireless sEMG-based Identification in A Virtual Reality Environment	Microelectronics Reliability	2019.5
2	Bai Baodan	Prediction of atrial fibrillation using the recurrence complex network of body surface potential mapping signals	Technology and Health Care	2019.5
3	Si Boyu	Teaching Reform of the Single-chip Microcomputer Curriculum based on PBL	Advances in Social Science Education and Humanities Research	2020.6
4	Zha Yutong	Biomedical Electronics Curriculum Reform in the Concept of CDIO Education Countermeasures	Advances in Social Science Education and Humanities Research	2020.6
5	Wu Xiupin	A theoretical model for the micron resolution spectral domain optical coherence tomography	Optics Communications	2021.2
6	Bai Baodan	A smart portable ECG monitoring system with high precision and low power consumption	Journal of Intelligent & Fuzzy Systems	2021.3
7	Li Xiaouu	Human Posture Detection Method Based on Wearable Devices	Journal of Healthcare Engineering	2021.3
8	Li Xiaouu	A wearable wireless device designed for surface electromyography acquisition	Microsystem Technologies	2021.5
9	Si Boyu	Virtual Experimental Project Design in the Digital Signal Processing Course	Journal of Contemporary Educational Research	2021.11
10	Hao Lijun	Feature Optimization of Exhaled Breath Signals Based on Pearson-BPSO	mobile information	2021.12
11	Wu Xiupin	Depth-dependent dispersion compensation for the micron resolution optical coherence tomography with a time-frequency analysis method	Optics&laser technology	2022.4
12	Tu Huating	Influence of Dielectric Loss on RF Performance of Microstrip Multi-Resonant Circuits	Journal of Sensors	2022.7
13	Tu Huating	The effect of conductive layer thickness on the function of screen printing fabric-based microstrip line	Journal of the Textile Institute	2022.8



14	Hao Lijun	Application of Multidimensional Features and GRNN in Electronic Nose for Detection of Hepatocellular Carcinoma	Journal of Physics: Conference Series	2022.9
15	Hao Lijun	An improved Adaboost algorithm for identification of lung cancer based on electronic nose	Heliyon	2023.3
16	Zeng Xi	Particle size of aerosols measured by imaging method	Optical Engineering	2023.9
17	Tu Huating	Washable and Flexible Screen-Printed Ag/AgCl Electrode on Textiles for ECG Monitoring	Polymers	2023.9
18	Yang Hui	Pursuing superhydrophobic flexible strain sensors: from design to applications	Advanced Materials Technologies	2024.2
19	Liu Yubo	Electrospun multi-chamber core-shell nanofibers and their controlled release behaviors: A review	WILEY INTERDISCIPLINARY REVIEWS-NANOMEDICINE AND NANOBIOTECHNOLOGY	2024.2

6 Patents (Invention Patents)

1. Li Xiaou, Zhang Qunfeng, Wu Xiangyang, et al. Electroencephalogram Detection Signal Synchronization Circuit, Method and Electroencephalogram Detection System [P]. Shanghai: CN201310482460.8, April 15, 2015.
2. Yan Jiayong, Xiang Yongjia, Cui Xiaoyao, et al. An Automatic Detection Method for the Adventitia of Blood Vessels Based on Intravascular Ultrasound Images [P]. Jiangsu Province: CN201410566445.6, February 27, 2018.
3. Yan Jiayong, Cui Xiaoyao, Xiang Yongjia, et al. A Method for Segmenting the Lumen of Blood Vessels Based on Intravascular Ultrasound Images [P]. Jiangsu Province: CN201410566443.7, June 30, 2017.
4. Huang Zhaoming, Si Boyu. A Multidimensional Measurement System and Method for Articulation Disorders Based on Real-time Vocal Tract Shape Correction [P]. Shanghai: CN201310283315.7, March 22, 2017.
5. Bai Baodan. An Isolated Programmable Electrical Stimulator [P]. Shanghai: CN201610905446.8, September 8, 2023.
6. Bai Baodan, Shan Chunyu. A Transcutaneous Nerve Localization Electrical Stimulation Pen [P]. Shanghai: CN201610516878.X, March 29, 2024.
7. Gao Wanrong, Wu Xiupin, Liao Jiuling, et al. A Device and Method for Quantitatively Detecting Subsurface Defects in Glass [P]. Jiangsu Province: CN201710481948.7, March 26, 2021.



8. Gao Wanrong, Wu Xiupin, Zhang Yunxu, et al. A Device and Method for Detecting Subsurface Defects in Glass at the Submicron Scale [P]. Jiangsu Province: CN201610302192.0, January 11, 2019.