

Ying WEI

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Academic Background

- Obtained Ph.D. degree in Electrical Engineering in 2008 from National University of Singapore.
- Obtained B.Sc and M.Sc. in Information Engineering in 2000 and 2003, respectively, from Xian Jiaotong University, China.

Employment

- 2015- present Professor, Shandong University, china.
- 2010-2015 Associate Professor, Shandong University, china.
- 2008-2009 Research Fellow, National University of Singapore

Professional Performance

Teaching

- Fundamentals of Digital Signal Processing (undergraduate), 2011 to present
- Communication Network Analysis and Design (undergraduate), 2011 to present
- Artificial Neural Networks (graduate), 2011 to present
- Mathematical Methods in Signal Processing (graduate), 2011 to 2012

Research Areas

- Intelligent signal processing techniques for individualized rehabilitation system
- Computationally efficient digital filtering algorithms
- Acoustic signal processing techniques

Honors (recent 5 years)

- First prize winner of the awards for outstanding achievements in scientific research in colleges and universities 2014, Shandong province, China.
- The recipient of promotive research foundation for excellent young and middle-aged scientists 2013, Shandong province, China.
- The recipient of the foundation of Jinan Young Star of Science and Technology in 2012.
- Indexed by National Science and technology Expert Database of China from 2013 to present.
- Indexed by International Cooperation Expert Database of China from 2013 to present
- University Annual Teaching Excellence Award in 2013.

- First prize winner of Teaching Competition Award for Young Professionals, School of Information Science and Engineering, Shandong University, 2013.

Research Grants (Principal Investigator)

Project Title	Source	Fund	Duration
Fast Source Separation and Complete Reconfigurable Decomposition of Acoustic Signals in Binaural Digital Hearing Aid System	National Natural Fund Committee, China	National Natural Science Foundation	2017-2020
Speech enhancement technology in multi-source scene for binaural digital hearing aid systems	Shandong University, China	Cross Discipline Foundation of Shandong University	2015-2017
Analysis and identification system of agricultural pests based on acoustic signal processing	Ministry of Science and Technology, China	Agricultural science and Technology Achievements Transformation Fund	2014-2016
The filtering algorithms for individual digital hearing aid systems based on reconfigurable filter banks.	National Natural Fund Committee, China	National Natural Science Foundation	2013-2015
Research on some key problems of digital hearing aid system with controllable sound decomposition schemes.	Ministry of Education, China	Specialized Research Foundation for the Doctoral Program of Higher Education	2013-2015
Early identification and warning technology of agricultural pests and diseases	Ministry of Science and Technology, China	The National Key Technology R&D Program, Sub-project	2012-2014
Application of filter banks based on human ear characteristic in digital hearing aids.	Jinan Science & Technology Bureau, Shandong, China	University Independent Innovation Foundation	2011-2013

Selected Publications

- [1] **Ying Wei**, Tong Ma, Bing Kun Ho, Yong Lian, "The Design of Low-Power 16-band Nonuniform Filter Bank for Hearing Aids," *IEEE Transactions on Biomedical Circuits and Systems*, vol.13, Issue 1, pp. 112-123, 2019. (SCI)

- [2] Duoduo Gou, **Ying Wei***, Hong Fu and Ning Yan, “Retinal Vessel Extraction Using Dynamic Multi-scale Matched Filtering and Dynamic Threshold Processing Based on Histogram Fitting”, *Machine Vision and Applications*, Vol.29, pp. 655–666, 2018. **(SCI)**
- [3] Shaoguang Huang, Lan Tian, Xiaojie Ma and **Ying Wei***, “A reconfigurable sound wave decomposition filterbank for hearing aids based on nonlinear transformation,” *IEEE Transactions Biomedical Circuits and Systems*, Vol. 10, Issue 2, pp. 487 - 496, 2016. **(SCI)**
- [4] **Ying Wei***, Yinfeng Wang, “Design of Low Complexity Adjustable Filter Bank for Personalized Hearing Aid Solutions,” *IEEE/ACM Transactions on Audio, Speech, and Language Processing*, Vol. 23, Issue: 5, pp.923-931, 2015. **(SCI)**
- [5] **Ying Wei***, Shaoguang Huang and Xiaojie Ma, “A Novel Approach to Design Low-cost Two-Stage Frequency-Response Masking Filters”, *IEEE transactions on Circuits Systems II*, Vol.62, issue 10, pp. 982-986, 2015. **(SCI)**
- [6] **Ying Wei*** and Debao Liu, “Improved Design of Frequency-Response Masking Filters Using Band-Edge Shaping Filter with Non-Periodical Frequency Response,” *IEEE Transactions On Signal Processing*, Vol. 61, Issue: 13, pp. 3269 – 3278, 2013. **(SCI)**
- [7] **Ying Wei*** and Debao Liu, “A Reconfigurable Digital Filterbank for Hearing Aid Systems with a Variety of Sound Wave Decomposition Plans”, *IEEE transactions On Biomedical Engineering*, Vol. 60, Issue: 6, pp. 1628 – 1635, 2013. **(SCI)**
- [8] Lan Tian, Jingxuan Wang, **Ying Wei**, Jianren Lu, Anting Xu and Ming Xia, “Short-wavelength infrared laser activates the auditory neurons: comparing the effect of 980 vs. 810 nm wavelength”, *Lasers in Medical Science*, Volume 32, Issue 2, pp 357–362, February 2017. **(SCI)**
- [9] J Wang, L Tian , J Lu, M Xia and **Y Wei**, “Effect of shorter pulse duration in cochlear neural activation with an 810-nm near-infrared laser,” *Lasers in Medical Science*, vol. 32 (2) , pp. 389-396, 2017. **(SCI)**
- [10] **Ying Wei** and Yong Lian*, “Frequency-Response Masking Filters Based on Serial Masking Schemes”, *Circuits, Systems, and Signal Processing*, Vol. 29, Issue 1, pp. 7-23, 2010. **(SCI)**
- [11] Yong Lian*, and **Ying Wei**, “A Computationally Efficient Non-Uniform FIR Digital Filter Bank for Hearing Aid,” *IEEE Trans. on Circuits and Systems I: Regular Papers*, vol. 52, pp. 2754-2762, Dec. 2005. **(SCI)**
- [12] Mengyang Liu, Hong Fu, **Ying Wei**, Yasar Abbas Ur Rehman, Lai-man Po, Wai Lun Lo, "Light field-based face liveness detection with convolutional neural networks," *J. Electron. Imaging*, Vol.28, Issue 1, 2019 **(SCI)**

Service (recent 5 years)

- Associate Editor, IEEE Transactions on Biomedical Circuits and Systems
- Reviewer, IEEE Transactions on Circuits and Systems Part I
- Reviewer, IEEE Transactions on Circuits and Systems Part II
- Reviewer, Circuits, Systems and Signal Processing, Springer link
- Evaluation Expert, National Natural Science Foundation of China since 2013
- Guest Editor, the Special Issue “Advances in Eye Tracking Technology: Theory, Algorithms, and Applications”, Computational Intelligence and Neuroscience, 2015
- Session organizer and chair, IEEE International Conference on Digital Signal Processing, Singapore, 2015

- Session chair, 8th International conference for Information , Communication and signal processing, Singapore, 2011
- Technical Program Committee Member, 13th international Conference on Communication Technology, China, 2011

Membership in Professional Societies

- Senior member, IEEE, since 2016
- professional Member, ACM, since 2015
- international member, American Speech-Language-Hearing Association (ASHA), since 2016
- senior member , Chinese Institute of Electronics, since 2016