

**Chih-Chung Huang Ph.D**

Professor

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Lab: Biomedical Ultrasound Imaging Laboratory

Biography

Chih-Chung Huang was born in 1978 in Taiwan. He received the B.S., M.S., and Ph.D. degrees in Biomedical Engineering from Chung Yuan Christian University, Chung-Li, Taiwan, in 2002, 2003, and 2007. From 2006 to 2007, he worked at NIH Resource Center for Medical Ultrasonic Transducer Technology at the University of Southern California, Los Angeles, USA as a Visiting Researcher where he was engaged in research of high frequency ultrasound imaging and development of new acoustic methods for cataract diagnosis. In 2008, he joined the Department of Electrical Engineering, Fu Jen Catholic University, Taiwan as an Assistant Professor. In 2012, Dr. Huang was promoted as an Associate Professor. In 2013, he joined the Department of Biomedical Engineering, National Cheng Kung University, Taiwan. Currently, he is a Professor at Department of Biomedical Engineering. Dr. Huang was the Deputy Director of Medical Device Innovation Center, the Deputy Director of Technology Transfer & Business Incubation Center, the Strategic Planning Division Director of Research & Services Headquarters at National Cheng Kung University, Taiwan. He was the Secretary General of Taiwanese Society of Biomedical Engineering. He was a visiting professor in the NC State University, Department of MAE, NC, USA from 2021/08 to 2022/08. His research interests include ultrasonic tissue characterization, blood flow measurement, high frequency ultrasound, and ultrasonic instrument for medical applications, etc. Dr. Huang was selected as a member of IFMBE Asia-Pacific Research Networking Fellowship as well as the ordinary member of CoS representative of Taiwanese Society of Biomedical Engineering of IFMBE affiliated Society. Dr. Huang is an associate editor for Medical Physics and Journal of Medical and Biological Engineering. He is a senior member of IEEE as well as the TPC member of IEEE IUS.

Education

2003~2007: Ph.D., Biomedical Engineering, Chung Yuan Christian University, Taiwan

2002~2003: M.S., Biomedical Engineering, Chung Yuan Christian University, Taiwan

1998~2002: B.S., Biomedical Engineering, Chung Yuan Christian University, Taiwan

Academic Experience

2018~present Professor, Department of Biomedical Engineering, National Cheng Kung University,
Taiwan

2021~2022: Visiting Professor, Department of MAE, North Carolina State University, USA

2019~2020: Deputy Director, Technology Transfer & Business Incubation Center, National Cheng Kung
University, Taiwan

2016~2020: Deputy Director, Medical Device Innovation Center, National Cheng Kung University, Taiwan

2019~2020: Strategic Planning Division Director, Research & Services Headquarters, National Cheng Kung University, Taiwan
2016~2020: Secretary General, Taiwanese Society of Biomedical Engineering, Taiwan
2015~2018: Associate Professor, Department of Biomedical Engineering, National Cheng Kung University, Taiwan
2013~2015: Assistant Professor, Department of Biomedical Engineering, National Cheng Kung University, Taiwan
2012~2013: Associate Professor, Department of Electrical Engineering, Fu Jen Catholic University, Taiwan
2008-2012: Assistant Professor, Department of Electrical Engineering, Fu Jen Catholic University, Taiwan
2006-2007: Research Fellow, Biomedical Engineering, University of Southern California, USA
2005-2006: Lecturer, Biomedical Engineering, Yuan Pei University, Taiwan

Membership

Senior Member of IEEE
Member of IEEE Life Sciences Community
Member of IEEE UFFC Society
Life Member of Taiwanese Society of Biomedical Engineering
Member, Chinese Business Association of Biomedical Engineering

International Editorship

2020~present: Associate Editor, American Association of Physicists in Medicine
2018~present: Associate Editor, Medical Physics
2018~present: Associate Editor, Journal of Medical and Biological Engineering
2018~present: Editorial Board, Journal of Radiology, and Imaging Diagnosis
2019~present: Editorial Board, Acoustics

Research Interests

High Frequency Ultrasound Duplex Image, Doppler Flowmeter Design, Ultrasonic Tissue Characterization, Biomedical electronics, Hemodynamic Research, Biomedical Electronic Equipment Design, Acoustic Radiation Force Imaging, Blood Rheology, High Frequency Ultrasonic Transducer

Awards and Honors

2022 Ministry of Science and Technology Future Tech Award, Taiwan
2021 Excellent Research Award, Engineering College, National Cheng Kung University, Taiwan
2021 Best paper award, 2021 International Forum on Medical Imaging in Asia (IFMIA), Taiwan
2020 Silver Medal Award, Point-of-Care Ultrasound Innovation Competition, Taiwan Society of Ultrasound in Medicine, Taiwan.
2020 Honorable Mention Award, Point-of-Care Ultrasound Innovation Competition, Taiwan Society of Ultrasound in Medicine, Taiwan.
2020 Ministry of Science and Technology Future Tech Award, Taiwan
2019 Best Conference Paper Award, 2019 IEEE Eurasia Conference on Biomedical Engineering, Healthcare and Sustainability, Okinawa, Japan.
2018 Best Oral Presentation Award, 3st Global Conference on Biomedical Engineering (GCBME 2018), Taoyuan, Taiwan.
2017 The Best Annual Paper Award, Journal of Medical and Biological Engineering (SCI)

2017 Best Presentation Award, 2017 Engineering Medical Innovation Global Competition, Taipei, Taiwan
2016 *Rising Star Award*, College of Engineering, National Cheng Kung University, Taiwan
2015 *Certificate High Distinction*, Symposium of Annual Conference of the Biomedical Engineering Society Poster Paper Competition, Taiwan
2015 *Distinction Certificate*, Young Scholar Innovation Competition, Comprehensive University System of Taiwan
2015 Ministry of Science and Technology Research Project for Excellent Young Scholars (2015–2018)
2014 *Best paper award*, 1st Global Conference on Biomedical Engineering (GCBME 2014) / 9th Asian-Pacific Conference on Medical and Biological Engineering, Taiwan.
2014 *Honorable Mention Award*, 1st Global Conference on Biomedical Engineering (GCBME 2014) / 9th Asian-Pacific Conference on Medical and Biological Engineering, Taiwan.
2014 *Best Potentiality Award*, Biomedical Engineering Innovation Competition, Taiwan
2013 *Certificate High Distinction*, Symposium of Annual Conference of the Biomedical Engineering Society Oral Paper Competition, Taiwan
2013 *Certificate High Distinction*, Symposium of Annual Conference of the Biomedical Engineering Society Poster Paper Competition, Taiwan
2013 *Honorable Mention Award*, Symposium of Annual Conference of the Biomedical Engineering Society Poster Paper Competition, Taiwan
2012 Ministry of Science and Technology Research Project for Excellent Young Scholars (2012–2015)
2012 JMBE Annual Excellent Paper Award, Taiwan
2012 *Certificate High Distinction*, Symposium of Annual Conference of the Biomedical Engineering Society Oral Paper Competition, Taiwan
2012 *Honorable Mention Award*, Symposium of Annual Conference of the Biomedical Engineering Society Oral Paper Competition, Taiwan
2012 *Honorable Mention Award*, Symposium of Annual Conference of the Biomedical Engineering Society Oral Paper Competition, Taiwan
2012 *The Best Advisor Award*, Creative Design and Implementation Competition on Biomedical Engineering, Taiwan
2012 *Honorable Mention Award*, Creative Design and Implementation Competition on Biomedical Engineering, Taiwan
2011 *Outstanding research Award*, Fu Jen Catholic University
2011 *Honorable Mention Award*, Symposium of Annual Conference of the Biomedical Engineering Society Oral Paper Competition, Taiwan
2010 *Certificate High Distinction*, Symposium of Annual Conference of the Biomedical Engineering Society Oral Paper Competition, Taiwan
2010 *Honorable Mention Award*, Symposium of Annual Conference of the Biomedical Engineering Society Oral Paper Competition, Taiwan
2010 *Certificate High Distinction*, Symposium of Annual Conference of the Biomedical Engineering Society Poster Paper Competition, Taiwan
2009 *Outstanding research Award*, Fu Jen Catholic University
2009 *Honorable Mention Award*, Symposium of Annual Conference of the Biomedical Engineering Society Student Paper Competition, Taiwan
2008 *Outstanding paper Award*, 13th International Conference on BioMedical Engineering, Singapore

Academic Activities

2022 Session Chair, Global Conference on Biomedical Engineering (GCBME 2022), Taipei, Taiwan.

2022 Organizing Committee, Global Conference on Biomedical Engineering (GCBME 2022), Taipei, Taiwan.

2022 Project review committee, Dutch Research Council, Netherlands

2022 Session Chair, 2022 IEEE International Ultrasonics Symposium, Venice, Italy

2022 International Reviewers, Russian Science Foundation, Russian

2022 Expert Committee, Canada Foundation for Innovation's 2023 Innovation Fund competition, Canada

2022 Project review committee, European Science Foundation

2022 Session Chair, 9th World Congress of Biomechanics, Taipei, Taiwan

2022 Session Chair, IUPESM World Congress on Medical Physics and Biomedical Engineering, Singapore

2022 Special Issue Editor, Piezoelectric Ultrasound Transducer for Biomedical Applications, Micromachines

2022 Reviewer, IFMBE Toh Siew Lok BME Student Design Award Competition, Singapore

2021 Session Chair, 2021 IEEE International Ultrasonics Symposium, Xi'na, China

2020 International Technical Committee, Biomedical Engineering Conference BME2020: Fighting. COVID-19 and Future Pandemics with Innovation & Technology, Hong Kong

2020 Session Chair, 2020 IEEE International Ultrasonics Symposium, Las Vegas, USA

2020 Program Chair, IFMIA 2020 International Forum on Medical Imaging in Asia, Taiwan

2020 Social Program Chair, the 4th Global Conference of Biomedical Engineering & Annual Meeting of TSBME, Taipei, Taiwan

2020 Session Chair, the 11th Asian Pacific Conference on Medical and Biological Engineering, Okayama, Japan

2020 International Organizing Committee, the 11th Asian Pacific Conference on Medical and Biological Engineering, Okayama, Japan

2019 Session Chair, the 9th WACBE World Congress on Bioengineering, Taipei, Taiwan

2019 Social Program Chair, the 9th WACBE World Congress on Bioengineering, Taipei, Taiwan

2019 Session Chair, Future Trends in Biomedical and health Informatics & Cybersecurity in Medical. Devices conference, Taipei, Taiwan

2018 Poster Judge, 2018 Global Conference of Biomedical Engineering, Taoyuan, Taiwan

2018 Judge, Journal of Medical and Biological Engineering, Best Annual Paper Ward Competition, Taiwan

2018 Poster Session Chair, IEEE International Ultrasonics Symposium Proceedings, Kobe, Japan

2018 Judge for the Student Poster Competition, The 3rd Global Conference on Biomedical Engineering, Taiwan

2018 Chairman, Seminar on Southeast Asia Medical Device Regulation and Development, Taiwan

2017 Session Chair, International Congress of Ultrasound, Honolulu, USA

2017 Scientific Committee, the 16th World Federation for Ultrasound in Medicine and Biology. Congress, Taipei, Taiwan

2017 Session Chair, International Symposium of Frontier Acoustics, Shenzhen, China

2017 Session Chair, The Future Trend of Digital Health, Tainan, Taiwan

2017 Judge, 2017 Engineering Medical Innovation Global Competition, Taipei, Taiwan

2017 Session Chair, 2017 International Conference on Future Healthcare and Economic Development in Southeast ASIA, Taiwan

2017 Moderator, 2017 International conference on regulatory approaches for fostering innovation in drug and medical devices, Taiwan

2017 Supervisor, Teachers' Association of National Cheng Kung University, Taiwan

2017 External Examiner of the Hong Kong Polytechnic University, Hong Kong.

2017 Session Chair, Fostering Innovation in Drugs and Medical Devices, Taiwan

2016 Session Chair, Focus and Enhance: Start of Interventional & Therapeutic Ultrasound, Taiwan
2016 Session Chair, Biomedical Engineering Ecosystem Symposium, Taiwan
2016 Committee of BME Innovation Competition, Taiwan
2016 Program Committee, International Forum on Medical Imaging in Asia, Japan
2016 Committee of Medical Device Registration, Taiwan Food and Drug Administration, Taiwan
2015 Committee of Ph.D Degree Defense, Hong Kong University, Hong Kong
2015 Session Chair, 12th Western Pacific Acoustic Conference, Singapore
2015 Audio-Visual Chair, IEEE International Ultrasonics Symposium, Taiwan
2015 Session Chair, 17th International Conference on Biomedical Engineering, Stockholm, Sweden
2015 Session Co-Chair, IFMBE Young Investigator Competition, World Congress on Medical Physics & Biomedical Engineering, Toronto
2015 IFMBE Asia-Pacific Research Networking Fellowship, Taiwan-Japan-Canada
2015 Session Chair, Joint Conference of IWAIT&IFMIA, Taiwan
2015 Supervisor, Taiwanese Society of Biomedical Engineering
2015 Reviewer, Symposium on Engineering, Medicine and Biology Applications, Taiwan
2014 Lead Guest Editor, Journal of Electrical and Computer Engineering
2014 Session Chair, 2014 1st Global Conference on Biomedical Engineering (GCBME 2014) / 9th Asian-Pacific Conference on Medical and Biological Engineering, Taiwan.
2014 Reviewer, the 3rd International Conference on Biomedical Engineering and Biotechnology, China
2014 Reviewer, Biomedical Engineering Innovation Competition of Chung Yuan Christian University, Taiwan
2014 Committee of BME Innovation Competition, Taiwan
2014 Committee of the 2014 1st Global Conference on Biomedical Engineering (GCBME 2014) / 9th Asian-Pacific Conference on Medical and Biological Engineering, Taiwan.
2014 Reviewer, 2014 Symposium on Engineering Medicine and Biology Applications, Taiwan
2013 Session Chair, Taiwan-India Joint Symposium on Medical Device Innovation, Taiwan
2013 Committee of the 5th Asian Conference on Ultrasound Contrast Imaging, Taiwan
2013 Committee of the 2013 International Conference on Biomedical Ultrasound, Taiwan
2013 Session Chair, Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan
2013~2015: Vice Secretary General, Taiwanese Society of Biomedical Engineering
2012~2015: Editor, Taiwanese Society of Biomedical Engineering E-Newsletter
2013 Reviewer, 2013 Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan
2013 Reviewer, IEEE Biomedical Circuits & Systems Conference, Netherlands
2013 Session Chair, Symposium on Engineering Medicine and Biology Applications, Taiwan
2012 Session Chair, Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan
2012 Reviewer, 2012 Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan
2011 Session Chair, 5th WACBE World Congress on Bioengineering, Taiwan
2011 Committee of Poster Paper Competition, Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan
2010 Session Chair, Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan
2010 Reviewer, National Symposium on Telecommunications, Taiwan
2009 Reviewer, National Symposium on Telecommunications, Taiwan
2008 Reviewer, Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan
2008 Committee of Poster Paper Competition, Symposium of Annual Conference of the Biomedical

Technical Referee of the Following Journals

Scientific Reports

Materials

Physics in Medicine and Biology

BioMedical Engineering OnLine

Journal of Sleep Disorders & Therapy

Sensors

Computational and Mathematical Methods in Medicine

Biomedical Engineering Applications, Basis and Communication

Journal of Clinical Ultrasound

IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control

IEEE Transactions on Biomedical Engineering

IEEE Transactions on Medical Imaging

IEEE Journal of Biomedical and Health Informatics

Ultrasound in Medicine and Biology

Ultrasonics

Medical Physics

Journal of Medical and Biological Engineering

Journal of Advanced Engineering

Archives of Ophthalmology

Journal of Electromagnetic Waves and Applications Progress in Electromagnetic Research

Asia-Pacific Journal of Ophthalmology

Journal of Sensors

European Radiology

International Journal of Circuit Theory and Applications

European Journal of Medical Physics

Journal of Vascular Medicine & Surgery

Journal of Medical Ultrasound

Applied Sciences

Journal of Healthcare Engineering

Quantitative Imaging in Medicine and Surgery

Reviews in Cardiovascular Medicine

Invited Speech

2023 Centre for Biomedical Technologies, Queensland University of Technology, Australia

2022 Department of Physiology, National Cheng Kung University, Taiwan

2022 Department of Computer Science, National Tsing-Hua University, Taiwan

2022 Department of Biomedical Engineering, University of Michigan, USA

2022 Medical Biophysics, University of Toronto/ Sunnybrook Research Institute, Canada

2022 Department of Biomedical Engineering, Penn State University, USA

2022 Department of Biomedical Engineering, Columbia University, USA

2022 Department of Biomedical Engineering, Duke University, USA

2022 Department of Radiology, Weill Cornell Medicine, USA

2022 Department of Biomedical Engineering, Duke University, USA

2022 Mayo Musculoskeletal Research Center, Mayo Clinic, Rochester, USA

2022 School of Professional Education and Continuing Studies, National Taiwan University, Taiwan

2021 Institute of Biomedical Engineering, National Tsing-Hua University, Taiwan

2021 Department of Mechanical and Aerospace Engineering, NC State University, USA

2021 Department of Biomedical Engineering, University of Southern California, USA

2021 International Conference on Smart Sensors, Taiwan
2021 National Health Research Institutes, Taiwan
2020 Department of Bioscience Technology, Chung Yuan Christian University, Taiwan
2020 4th Global Conference of Biomedical Engineering & Annual Meeting of TSBME, Taipei, Taiwan
2020 36th Anniversary & 2020 Annual Convention of TSUM, Taipei, Taiwan
2020 National Cheng Kung University Hospital, Taiwan
2020 Department of Electrical Engineering, Fu Jen Catholic University, Taiwan
2020 Department of Mechanical Engineering, National Chiao Tung University, Taiwan
2020 KKU Maker Green Festival, Khon Kaen University, Thailand
2020 Department of Mechanical Engineering, National Central University, Taiwan
2019 Department of Biomedical Engineering, Erasmus MC, Prof. Van der Steen's Lab, Netherlands
2019 Department of Electrical Engineering, National United University, Taiwan
2019 Department of Electrical Engineering, National Cheng Kung University, Taiwan
2019 Institute of Biomedical Engineering, National Chiao Tung University, Taiwan
2019 Materials Research Society of Thailand International Conference, Thailand
2019 Changhua Christian Hospital, Changhua, Taiwan
2018 NCKU-UWP Joint Symposium for Clinical Research, Ho Chi Minh city, Vietnam
2018 Center for Fundamental Science, Kaohsiung Medical University, Taiwan
2018 Annual Convention of Taiwan Society of Ultrasound in Medicine, Taiwan
2018 Workshop on the Promotion of Medical Technology, Taiwan
2017 International Conference on Biomedical Ultrasound, Hong Kong
2017 the 16th World Federation for Ultrasound in Medicine and Biology Congress, Taipei, Taiwan
2017 International Congress of Ultrasound, Honolulu, USA
2017 University of Waterloo, Prof. Alfred Yu's Lab, Canada
2017 Cardinal Tien Hospital, Taiwan
2017 Department of Electrical Engineering, Xidian University, China
2017 Department of Electrical Engineering, National Sun Yat-Sen University, Taiwan
2017 Department of Biomedical Engineering and Environmental Sciences, National Tsing Hua University, Taiwan
2016 Workshop of Frontiers in Massive Data Analysis and Medical Applications, Taiwan
2016 Department of Earth and Environmental Sciences, National Chung Cheng University, Taiwan
2016 Department of Biomedical Engineering, Tsinghua University, Beijing, China
2016 Biomedical Engineering Ecosystem Symposium, Tainan, Taiwan
2016 Annual Convention of Taiwan Society of Ultrasound in Medicine, Taipei, Taiwan
2016 Symposium on Bioelectronics in the 21st Century, Chungli, Taiwan
2016 Institute of Medical Science and Technology, National Sun Yat-sen University, Taiwan
2016 13th Annual Ultrasonic Transducer Engineering Conference, Torrance, USA
2015 Department of Biomedical Engineering, National University of Singapore, Singapore
2015 Workshop of Theranostics with Sound and Light, Shenzhen, China
2015 IFMBE Community, IUPESM World Congress, Toronto, Canada
2015 Food and Drug Administration, Ministry of Health and Welfare, Taiwan
2015 Medical Engineering Programme, The University of Hong Kong, Hong Kong
2014 Institute of Electro-Optical Science and Technology, National Taiwan Normal University, Taiwan
2014 Department of Electrical Engineering, National Tsing Hua University, Hsinchu, Taiwan.
2014 Taiwan-Japan Symposium on Polyscale Technologies for Biomedical Engineering and Environmental Sciences, National Tsing Hua University, Hsinchu, Taiwan.
2014 Medical Imaging Technology Symposium, Fu Jen Catholic University, Taiwan

2013 Department of Biomedical Engineering, National Taiwan University of Science and Technology, Taiwan
2013 Industrial Technology Research Institute, Taiwan
2013 College of Mechanical & Electrical Engineering, National Taipei University of Technology, Taiwan
2013 Department of Mechanical Engineering, National Taipei University of Technology, Taiwan
2013 Department of Electrical Engineering, National United University, Taiwan
2013 Department of Medical Imaging and Radiological Sciences, Chang Gung University, Taiwan
2013 Department of Electrical Engineering, National Taiwan University of Science and Technology, Taiwan
2012 Department of Electrical Engineering, Fu Jen Catholic University, Taiwan
2012 Department of Bioscience Technology, Chung Yuan Christian University, Taiwan
2012 Graduate Institute of Biomedical Engineering, National Chung Hsing University, Taiwan
2012 PXI Technology and Application Conference, Taiwan, Keynote Speech
2011 Department of Computer Science and Information Engineering, National Cheng Kung University, Taiwan
2010 Department of Electrical Engineering, Fu Jen Catholic University, Taiwan
2010 Division of Medical Engineering Research, National Health Research Institutes, Taiwan
2010 Workshop on Angiogenesis Research, Taiwan
2009 Graduate Institute of Applied Science and Engineering, Fu Jen Catholic University, Taiwan
2009 Medical School, Fu Jen Catholic University, Taiwan
2009 Department of Electronic Engineering, Fu Jen Catholic University, Taiwan
2008 Department of Biomedical Engineering, Chung Yuan Christian University, Taiwan

Teaching Courses

Electronics, Introduction to Biomedical Engineering, Medical Electronics, Medical Imaging System, Signals and Systems, Lab Project, Microcontroller, Digital Image Process, Digital Signal Process, Medical Physics, Medical Instrumentation, Medical Ultrasound, Electric Circuits, introduction of artificial intelligence

Publications

A. Journal papers (*corresponding author)

2023

1. Onanong Mee-inta, Chin-Fang Hsieh, Ching-Hsiang Fan, Yu-Yi Chiang, Chan-Chuan Liu, Chun-I Sze, Po-Wu Gean, Ping-Ching Wu, Mon-Shieh Yang, Yu-Min Kuo, and **Chih-Chung Huang*** "Monitoring the function of meningeal lymphatic system in mice model using high-frequency ultrasound imaging" *Ultrasonics*, (accepted)
2. Yu-Hsiang Huang, Hsin Huang, Fan-E Mo, and **Chih-Chung Huang*** "Estimation of mouse carotid arterial wall shear stress using high-frequency ultrasound imaging" *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, (revised)
3. Xiangming Xue, Bohua Zhang, Sunho Moon, Guo-Xuan Xu, **Chih-Chung Huang**, Nitin Sharma, Xiaoning Jiang "Development of a Wearable Ultrasound Transducer for Sensing Muscle Activities in Assistive Robotics Applications" *Biosensors*, Vol. 13, No.1, pp. 134, 2023.
4. Mengyue Chen, Chang Peng, Huaiyu Wu, **Chih-Chung Huang**, Taewon Kim, Zachary Traylor, Marie Muller, Pratik Chhatbar, Chang Nam, Wuwei Feng, and Xiaoning Jiang "Numerical and experimental evaluation of low-intensity transcranial focused ultrasound wave propagation using human skulls" *Medical Physics*, Vol. 50, No.1, pp. 38-49, 2023.

2022

5. Hsiao-Fan Cheng, Wen-Tai Chiu, Yi-Shyun Lai, Thi-Thuyet Truong, Po-Yang Lee, **Chih-Chung Huang*** “Noncontact Low-Intensity Pulsed Ultrasound Modulates Ca²⁺-Dependent Transcription Factors Contributing to Keratinocyte Cell Migration” *Ultrasonics*, Vol. 127, 106852-, 2022.
6. Alexander Machikhin, **Chih-Chung Huang**, Demid Khokhlov, Victoria Galanova, Alexander Burlakov “Single-shot Mueller-matrix imaging of zebrafish tissues: *in vivo* analysis of developmental and pathological features” *Journal of Biophotonics*, e202200088, 2022
7. Huaiyu Wu, Bohua Zhang, **Chih-Chung Huang**, Qifa Zhou, Xiaoning Jiang, “Ultrasound-guided Intravascular Sonothrombolysis with a Dual Mode Ultrasound Catheter: *In-vitro* study” *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, Vol. 69, No.6, pp. 1871-1880, 2022.
8. Hsin Huang, Wei-Ting Chang, and **Chih-Chung Huang***, “High-Spatiotemporal-Resolution Visualization of Myocardial Strains Through Vector Doppler Estimation: A Small-Animal Study” *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, Vol. 69, No.6, pp. 1859-1870, 2022.
9. Wei-Yu Tsai, Yuan-Yu Hsueh, Pei-Yu Chen, Kuo-Shu Hung, and **Chih-Chung Huang*** “High-Frequency Ultrasound Elastography for Assessing Elastic Properties of Skin and Scars” *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, Vol. 69, No.6, pp. 1871-1880, 2022.
10. Xi-Rui Qiu, Mu-Ting Wang, Li-Chieh Kuo, Hsiu-Yu Hsu, Tai-Hua Yang, Fong-Chin Su, and **Chih-Chung Huang*** “Estimating the neovascularity of human finger tendon through high-resolution ultrasound micro-Doppler imaging” *IEEE Transactions on Biomedical Engineering*. Vol. 69, No.8, pp. 2667-2678, 2022. (selected as a feature article)
11. Guo-Xuan Xu, Pei-Yu Chen, Xiaoning Jiang, and **Chih-Chung Huang*** “Visualization of Human Skeletal Muscle Anisotropy by Using Dual-Direction Shear Wave Imaging” *IEEE Transactions on Biomedical Engineering*. Vol. 69, No.9, pp. 2745-2754, 2022. (selected as a feature article)
12. Thi-Thuyet Truong, Wen-Tai Chiu, Yi-Shyun Lai, Hsien Huang, Xiaoning Jiang, **Chih-Chung Huang*** “Ca²⁺ signaling-mediated low-intensity pulsed ultrasound-induced proliferation and activation of motor neuron cells” *Ultrasonics*, Vol. 124, pp.106739, 2022.
13. Jui-Ying Lu, Po-Yang Lee, and **Chih-Chung Huang*** “Improving Image Quality for Single-Angle Plane Wave Ultrasound Imaging With Convolutional Neural Network Beamformer” *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, Vol. 69, No. 4, pp.1326-1336, 2022.

2021

14. I-Chieh Wang, Hsin Huang, Wei-Ting Chang, and **Chih-Chung Huang*** “Wall Shear Stress Mapping for Human Femoral Artery Based on Ultrafast Ultrasound Vector Doppler Estimations” *Medical Physics*, Vol. 48, pp. 6755-6764, 2021.
15. Yi-Ju Ho, **Chih-Chung Huang (co-first)**, Ching-Hsiang Fan, Hao-Li Liu, and Chih-Kuang Yeh “Ultrasonic Technologies in Imaging and Drug Delivery” *Cellular and Molecular Life Sciences*. Vol. 78, pp. 6199-6141, 2021.
16. Pei-Yu Chen, Tai-Hua Yang, Li-Chieh Kuo, Hsiu-Yu Hsu, Fong-Chin Su, and **Chih-Chung Huang*** “Evaluation of hand tendon elastic properties during rehabilitation through high frequency ultrasound shear elastography” *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, Vol. 68, No.8, pp. 2716-2726, 2021.
17. Chien-Chang Weng, Pei-Yu Chen, Dean Chou, Cho-Chiang Shih, and **Chih-Chung Huang*** “High Frequency Ultrasound Elastography for Estimating the Viscoelastic Properties of the Cornea Using Lamb Wave Model”, *IEEE Transactions on Biomedical Engineering*, Vol. 68, No.9, pp. 2637-2644, 2021.
18. Yi-Chen Li, Thau-Yun Shen, Chien-Cheng Chen, Wei-Ting Chang, Po-Yang Lee, and **Chih-Chung Huang*** “Automatic Detection of Atherosclerotic Plaque and Calcification from Intravascular

Ultrasound Images by Using Deep Convolutional Neural Networks” *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, Vol. 68, No.5, pp. 1762-1777, 2021.

19. Ying-Ling Chen, Mark C. Hou, Kai-Wen Chuang, Po-Yang Lee, and **Chih-Chung Huang** “Development and evaluation of inexpensive ultrasound using A-mode and M-mode signals to identify lung depth and avoid risk of pneumothorax in acupuncture” *Journal of Medical and Biological Engineering*, Vol. 41, pp.251-259, 2021.
20. Rui-Bin Yu, **Chih-Chung Huang**, Chun-Hsiang Chang, Ya-Hui Wang, Jeng-Wen Chen, “Prevalence and Patterns of Tongue Deformation in Obstructive Sleep Apnea: A Whole-Night Simultaneous Ultrasonographic and Polysomnographic Study”, *Journal of Sleep Research*. 30, e13131, 2021.

2020

21. Hsin Huang, Pei-Yu Chen, and **Chih-Chung Huang*** “40-MHz High-Frequency Vector Doppler Imaging for Superficial Venous Valve Flow Estimation,” *Medical Physics*, Vol. 47, No. 9, pp.4020-4031, 2020.
22. Duo Sheng, Sheng-Min Chan, Chun-Wei Lin, and **Chih-Chung Huang** “32-channel transmit beamformer with high timing resolution for high-frequency ultrasound imaging systems,” *Review of Scientific Instruments*, Vol. 91, 054701-1-7, 2020.
23. Min-Yuan Wang, Tai-Hua Yang, Hsin Huang, Hsiu-Yun Hsu, Li-Chieh Kuo, Fong-Chin Su, and **Chih-Chung Huang*** “Evaluation of Hand Tendon Movement by Using High-Frequency Ultrasound Vector Doppler Imaging”, *IEEE Transactions on Biomedical Engineering*. Vol. 67, No.10, pp.2945-2952, 2020.
24. Chun-Hsiang Chang, **Chih-Chung Huang**, Ya-Hui Wang, Fang-Ju Chou, and Jeng-Wen Chen “Ultrasound Shear-Wave Elastography of the Tongue in Adults with Obstructive Sleep Apnea”, *Ultrasound in Medicine and Biology*. Vol. 46, No.7, pp. 1658-1669, 2020.
25. Cyrel Ontimare Manlises, Jeng-Wen Chen, and **Chih-Chung Huang*** “Dynamic tongue area measurements in ultrasound images for adults with obstructive sleep apnea”, *Journal of Sleep Research*. 29, e13032, 2020.
26. Chieh-Ju Tang, Po-Yang Lee, Yi-Hsiang Chuang, and **Chih-Chung Huan***, “Measurement of local pulse wave velocity for carotid artery by using an ultrasound-based method”, *Ultrasonics*. Vol. 102, pp. 106064, 2020.
27. Yan-Yi Hsiao, Tai-Hua Yang, Pei-Yu Chen, Hsiu-Yun Hsu, Li-Chieh Kuo, Fong-Chin Su, and **Chih-Chung Huang*** “Characterization of extensor digitorum communis tendon using high frequency ultrasound shear wave elastography” *Medical Physics*. Vol. 47, No.2, pp. 1610-1618, 2020.
28. Duo Sheng, Jun-Wei Lin, Yi-Hsiang Wang, and **Chih-Chung Huang** “High-resolution all-digital transmit beamformer for high frequency and wearable ultrasound imaging system”, *IEEE Transactions of Very Large Scale Integration (VLSI) System*. Vol. 28, No.2, pp. 492-502, 2020.
29. Pei-Yu Chen, Tai-Hua Yang, Li-Chieh Kuo, Cho-Chiang Shih, and **Chih-Chung Huang*** “Characterization of hand tendons through high-frequency ultrasound elastography” *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, Vol. 67, No.1, pp. 37-48, 2020(SCI).
30. Chen Ho-Chiang, Hsin Huang, and **Chih-Chung Huang*** “High frequency ultrasound deformation imaging for adult zebrafish during heart regeneration”, *Quantitative Imaging in Medicine and Surgery*. Vol. 10, No.1, pp. 66-75, 2020.

2019

31. Fang-Yi Lay, Pei-Yu Chen, Hsiang-Fan Cheng, Yu-Min Kuo, and **Chih-Chung Huang*** “Ex Vivo Evaluation of Mouse Brain Elasticity Using High-Resolution Ultrasound Elastography” *IEEE Transactions on Biomedical Engineering*. Vol. 66, No. 12, pp. 3426-3435, 2019(SCI).

32. Hsin-Che Li, Pei-Yu Chen, Hsiang-Fan Cheng, Yu-Min Kuo, and **Chih-Chung Huang*** "In vivo Visualization of Brain Vasculature in Alzheimer's Disease Mice by High-Frequency Micro-Doppler Imaging" *IEEE Transactions on Biomedical Engineering*. Vol. 66, No. 12, pp. 3393-3401, 2019(SCI), 2019. (selected as a feature article)
33. Chao-Chuan Chang, Pei-Yu Chen, Hsin Huang, and **Chih-Chung Huang*** "In vivo visualization of vasculature in adult zebrafish by using high-frequency ultrafast ultrasound imaging", *IEEE Transactions on Biomedical Engineering*. Vol. 66, No. 6, pp. 1742-1751, 2019(SCI). (selected as a feature article)

2018

34. Pei-Yu Chen, Cho-Chiang Shih, Wei-Chen Lin, Ma Teng, Qifa Zhou, K. Kirk Shung, **Chih-Chung Huang*** "High-Resolution Shear Wave Imaging of the Human Cornea Using Dual-Element Transducer", *Sensors*, Vol.18, No. 12, pp. 4224, 2018 (SCI)
35. Cho-Chiang Shih, Xuejun Qian, Ma Teng, Zhaolong Han, **Chih-Chung Huang**, Qifa Zhou, and K. Kirk Shung "Quantitative assessment of thin-layer tissue viscoelastic properties using ultrasonic micro-elastography with Lamb wave model", *IEEE Transactions on Medical Imaging*. Vol. 37, No. 8, pp. 1887-1898, 2018 (SCI, IF =3.799, ranking=16/248 (ENGINEERING, ELECTRICAL & ELECTRONIC)).
36. Cho-Chiang Shih, Pei-Yu Chen, Ma Teng, Qifa Zhou, K. Kirk Shung, **Chih-Chung Huang*** "Development of an intravascular ultrasound elastography based on a dual-element transducer", *Royal Society Open Science*. 5:180138, 2018 (SCI, IF=2.243, ranking=17/64 (MULTIDISCIPLINARY SCIENCES)).

2017

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B. Conference papers

2022

1. Guo-Xuan Xu, Pei-Yu Chen, and **Chih-Chung Huang*** (2022) "In Vivo Visualization of Human Hand Tendon Mechanical Anisotropy by Using High Frequency Ultrafast Ultrasound Imaging." IEEE International Ultrasonics Symposium Proceedings, Venice, Italy (EI).
2. Guo-Xuan Xu, Pei-Yu Chen, and **Chih-Chung Huang*** (2022) "Anisotropic Imaging for Evaluating Human Musculoskeletal Properties Via Dual-Directions Shear Wave Imaging." IEEE International Ultrasonics Symposium Proceedings, Venice, Italy (EI).
3. Hsin Huang and **Chih-Chung Huang*** (2022) "Natural Shear Wave Estimation of Murine Hearts by Using High-frequency Micro-elastography." IEEE International Ultrasonics Symposium Proceedings, Venice, Italy (Poster, EI).
4. Hsin Huang and **Chih-Chung Huang*** (2022) "Dynamic High-spatiotemporal Myocardial Strain Imaging for Adult Zebrafish Through High-frequency Vector Doppler Imaging." IEEE International Ultrasonics Symposium Proceedings, Venice, Italy (Oral, EI).
5. Yu-Chen Wu, Guo-Xuan Xu, Wei-Yu Tsai, and **Chih-Chung Huang*** (2022) "Quantitative Assessment of Skin and Scar Viscoelastic Properties Using High-Frequency Ultrasonic Elastography with Lamb Wave Model" IEEE International Ultrasonics Symposium Proceedings, Venice, Italy (Oral, EI).
6. Chien Chen, Guo-Xuan Xu, Pei-Yu Chen, and **Chih-Chung Huang*** (2022) "Characterization of Muscle Transverse Isotropic Properties Using a T-Shaped Array Transducer." IEEE International Ultrasonics Symposium Proceedings, Venice, Italy (Oral, EI).
7. Chi-Hung Yang, Hsin Huang, and **Chih-Chung Huang*** (2022) "Dynamic high-spatiotemporal wall shear stress imaging of murine heart by high frequency vector Doppler imaging (HFVDI) ." IEEE International Ultrasonics Symposium Proceedings, Venice, Italy (Oral, EI).
8. Hung-Jui Chen, Hsin Huang, Xi-Rui Qui, and **Chih-Chung Huang*** (2022) "Microvasculature Imaging of Mice Brain through High-Frequency Ultrasound Micro-Doppler Imaging with Background Noise Reduction and Vessel Enhancement Processing." IEEE International Ultrasonics Symposium Proceedings, Venice, Italy (Poster, EI).
9. Thi-Thuyet Truong, Wen-Tai Chiu, and **Chih-Chung Huang*** (2022) "The Protective Effects of Low-Intensity Low-Frequency Pulse Ultrasound in Preventing Er Stress-Induced Motor Neuron Apoptosis". IEEE International Ultrasonics Symposium Proceedings, Venice, Italy (Oral, EI).
10. Huaiyu Wu, Bohua Zhang, Guo-Xuan Xu, **Chih-Chung Huang**, and Xiaoning Jiang (2022) "A multi-directional transducer array for muscle shear wave anisotropy estimation". IEEE International Ultrasonics Symposium Proceedings, Venice, Italy (Oral, EI).

2021

11. De-Quan Chen and **Chih-Chung Huang*** (2021) "Visualization of microcirculation from the sciatic nerve of rat via 40 MHz ultrasound localization microscopy in compressive neuropathy model" IEEE International Ultrasonics Symposium Proceedings, Xi'an, China (EI).
12. GuoXuan Xu, Pei-Yu Chen and **Chih-Chung Huang*** (2021) "Visualization of Human Skeletal Muscle Anisotropy by Using Dual Directions Shear Wave Imaging" IEEE International Ultrasonics Symposium Proceedings, Xi'an, China (EI).
13. Hsiao-Fan Cheng, Yi-Shyun Lai, Wen-Tai Chiu, and **Chih-Chung Huang*** (2021) "Non-contact ultrasound modulates Ca²⁺-dependent transcription factors and cell migration" IEEE International Ultrasonics Symposium Proceedings, Xi'an, China (EI).

14. Hsin Huang and **Chih-Chung Huang*** (2021) "40 MHz high spatiotemporal resolution cardiac strain imaging for mice via vector Doppler estimation" IEEE International Ultrasonics Symposium Proceedings, Xi'an, China (EI).
15. Yu-Hsiang Huang and **Chih-Chung Huang*** (2021) "In Vivo Visualization of Wall Shear Stress on Mice Carotid Artery by Using High-Frequency Ultrasound Vector Doppler Imaging (HFVDI)" IEEE International Ultrasonics Symposium Proceedings, Xi'an, China (EI).
16. Thi-Thuyet Truong, Wen-Tai Chiu, and **Chih-Chung Huang*** (2021) "Low-Intensity Pulse Ultrasound Enhances the Differentiation of Mouse Motor Neuron Cells" IEEE International Ultrasonics Symposium Proceedings, Xi'an, China (EI).

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20. Pei-Yu Chen, Hsin Huang, Wei-Yu Tsai, and **Chih-Chung Huang*** (2020) "High Frequency Ultrasound Shear Elastography for Hand Tendon Rehabilitation: A New Fitting Approach Based on Sigmoid Function" IEEE International Ultrasonics Symposium Proceedings, Las Vegas, USA (Poster, EI).
21. Jui-Ying Lu, Po-Yang Lee, Yi-Chen Li, and **Chih-Chung Huang*** (2020) "Multiplying tilted angles from single plane wave for compounding imaging using convolutional neural network" IEEE International Ultrasonics Symposium Proceedings, Las Vegas, USA (Poster, EI).

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23. Chien-Chang Weng, Pei-Yu Chen, **Chih-Chung Huang*** (2019) "4-D Lamb Wave Imaging of Porcine Cornea using 40 MHz High-Frequency Ultrasound" IEEE International Ultrasonics Symposium Proceedings, Glasgow, Scotland, UK. (Oral, EI).
24. Min-Yuan Wang and **Chih-Chung Huang*** (2019) "Assessment of Hand Tendon Rotation by using High Frequency Ultrasound Vector Doppler Imaging" IEEE International Ultrasonics Symposium Proceedings, Glasgow, Scotland, UK. (Poster, EI).
25. Pei-Yu Chen, Chien-Chang Weng, **Chih-Chung Huang*** (2019) "High-Frequency Ultrasound Shear Elastography: A New Approach for Evaluating the Performance of Human Hand Tendon During Rehabilitation" IEEE International Ultrasonics Symposium Proceedings, Glasgow, Scotland, UK. (Poster, EI).

2018

26. Yi-Jie Wang, Hsin Huang, **Chih-Chung Huang*** (2018) "In Vivo Pulse Wave Imaging for Mice Carotid Artery Based on 40 MHz Array Ultrafast Ultrasound Vector Velocity Estimation" IEEE International Ultrasonics Symposium Proceedings, Kobe, Japan. (Poster, EI).
27. Yi-Chen Li, Wei-Ting Chang, **Chih-Chung Huang*** (2018) "Coronary Plaque Characterization from IVUS Image by using Artificial Intelligence Technique" IEEE International Ultrasonics Symposium Proceedings, Kobe, Japan. (Poster, EI).
28. Chieh-Ju Tang, Yi-Hsiang Chuang, Po-Yang Lee, **Chih-Chung Huang*** (2108) "A portable ultrasound

- device for measuring the stiffness of carotid artery: comparison with SphygmoCor carotid-femoral pulse wave velocity" IEEE International Ultrasonics Symposium Proceedings, Kobe, Japan. (Poster, EI).
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 30. Chin-Fang Hsieh, Hsin-Che Li, Hsin Huang, **Chih-Chung Huang*** (2018) "High Frequency Ultrafast Ultrasound Vector Flow Imaging for Mice Brain Without Contrast Agents" IEEE International Ultrasonics Symposium Proceedings, Kobe, Japan. (Poster, EI)

2017

31. Po-Ynag Lee and **Chih-Chung Huang*** (2017) "A FPGA-based Home-Care Ultrasound Device for Measuring the Flow Volume of Arteriovenous Fistula in Dialysis Patients" IEEE International Ultrasonics Symposium Proceedings, Washington DC, USA. (Poster, EI).
32. Chao-Chuan Chang, Pei-Yu Chen, and **Chih-Chung Huang*** (2017) "3D Blood vessel mapping of adult Zebrafish using high frequency ultrasound ultrafast Doppler Imaging" IEEE International Ultrasonics Symposium Proceedings, Washington DC, USA. (Oral, EI).
33. Pei-Yu Chen, Yuan-Yu Hsueh, **Chih-Chung Huang*** (2017) "In Vivo microcirculation mapping of human skin keloid by 40-MHz ultrafast ultrasound imaging" IEEE International Ultrasonics Symposium Proceedings, Washington DC, USA. (Poster, EI).
34. Hsin Huang, Pei-Yu Chen, **Chih-Chung Huang*** (2017) "In vivo blood flow mapping of mice by ultrafast high frequency ultrasound imaging" IEEE International Ultrasonics Symposium Proceedings, Washington DC, USA. (Poster, EI).
35. **Chih-Chung Huang*** and Yan-Yi Hsiao (2017) "Ultra-high Frequency Shear wave elastography for Human Finger Tendon" International Congress on Ultrasonics, Proceedings of 2017 ICU Honolulu, USA. (Oral)
36. **Chih-Chung Huang*** (2017) "3D Blood vessel mapping for small animal using high frequency ultrafast Doppler Imaging" International Congress on Ultrasonics, Proceedings of 2017 ICU Honolulu, USA. (Oral, invited)
37. **Chih-Chung Huang***, Ming-Yuan Wang, and Pei-Yu Chen (2017) "Estimation of the linear displacement and rotation movement of the extensor digitorum communis tendon based on ultrafast high frequency ultrasound imaging" International Congress on Ultrasonics, Proceedings of 2017 ICU Honolulu, USA. (Oral)
38. Chin-Fang Hsieh, Shyh-Hau Wang, and **Chih-Chung Huang*** (2017) "Super-resolution ultrasonic flow imaging for assessing the situation of rats' Achilles tendons" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Oral)
39. Yi-Jie Wang and **Chih-Chung Huang*** (2017) "Measurement of pulse-wave velocity using high-frequency ultrafast ultrasound imaging of mice carotid artery" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Oral)
40. Yi-Chen Li and **Chih-Chung Huang*** (2017) "Development of 4D ultrafast ultrasound imaging technique for mouse carotid artery reconstruction" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Oral)

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41. Po-Hsun Huang, Kai-Sheng Heish, and **Chih-Chung Huang*** (2016) "Implementation of an Augmented Reality Ultrasound Simulator System using Apple Pencil" IEEE International Ultrasonics Symposium Proceedings, Tours, France. (Poster, EI).

42. Pei-Yu Chen, Fang-Yi Lay, Teng Ma, Qifa Zhou, K. Kirk Shung, and **Chih-Chung Huang*** (2016) "High Resolution Shear Wave Imaging for Alzheimer's Disease Mice Brain" IEEE International Ultrasonics Symposium Proceedings, Tours, France. (Poster, EI)
43. Yi-Hsiang Chuang, Ming-Chyi Pai, C.L. Tsai, and **Chih-Chung Huang*** (2016) "Development of a Portable Ultrasound Device for Diagnosing Alzheimer's Disease by Measuring Pulse Wave Velocity of Carotid Artery" IEEE International Ultrasonics Symposium Proceedings, Tours, France. (Oral, EI)
44. Cho-Chiang Shih and **Chih-Chung Huang*** (2016) "A high resolution acoustic radiation force impulse (ARFI) imaging for assessing the elastic properties of brain in mice model of Alzheimer's disease" IEEE International Ultrasonics Symposium Proceedings, Tours, France. (Oral, EI)

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45. Cho-Chiang Shih, Pei-Yu Chen, Lei Sun, and **Chih-Chung Huang*** (2015) "A novel intravascular ultrasound (IVUS) elastography based on high resolution acoustic radiation force impulse (ARFI) imaging for assessing the elastic properties of atherosclerosis" IEEE International Ultrasonics Symposium Proceedings, Taipei, Taiwan. (Oral, EI).
46. Chen Ho-Chiang and **Chih-Chung Huang*** (2015) "High-Resolution Strain and Strain Rate Imaging of Adult Zebrafish Myocardium" IEEE International Ultrasonics Symposium Proceedings, Taipei, Taiwan. (Poster, EI).
47. Po-Yang Lee, Hao-Li Liu, **Chih-Chung Huang*** (2015) "A FPGA-Based Multi-Channel Analog Front-End Device for High-Frequency Ultrasound Plane Wave Imaging System" IEEE International Ultrasonics Symposium Proceedings, Taipei, Taiwan. (Poster, EI).
48. Chi-Kai Weng, Jeng-Wen Chen, **Chih-Chung Huang*** (2015) "A FPGA-based Wearable Ultrasound Device for Monitoring Obstructive Sleep Apnea Syndrome" IEEE International Ultrasonics Symposium Proceedings, Taipei, Taiwan. (Poster, EI).
49. Bo-Heng Chen, Kai-Sheng Heish, **Chih-Chung Huang*** (2015) "Development of an Acoustic Based Sensing System for Medical Ultrasound Image Simulator" IEEE International Ultrasonics Symposium Proceedings, Taipei, Taiwan. (Poster, EI).
50. Pei-Yu Chen, **Chih-Chung Huang***, Ma Teng, Qifa Zhou, K. Kirk Shung (2015) "High Frequency Point Shear Wave Elastography (HF-pSWE): A Novel Technique for High Resolution Soft Tissue Elasticity Mapping" IEEE International Ultrasonics Symposium Proceedings, Taipei, Taiwan. (Oral, EI).
51. Duo Sheng, **Chih-Chung Huang**, Zong-Ru Yang, Yi-Shang Wang (2015) "An All-Digital Transmit-Beamforming ASIC for High-Frequency and Portable Ultrasound Imaging Systems" IEEE International Ultrasonics Symposium Proceedings, Taipei, Taiwan. (Oral, EI).
52. Chih-Yen Chien, Ting-Yu Lai, Jeng-Wen Chen, and **Chih-Chung Huang*** (2015) "A novel speckle tracking algorithm to track the dynamic motion of tongue base in ultrasound image" 12th Western Pacific Acoustic Conference, Singapore. (Oral).
53. Chin-Chia Huang, **Chih-Chung Huang***, Beh-Suet Theng, Yu-Min Kuo (2015) "In vivo measurement of local arterial pulse wave velocity in mice by high frequency ultrasound with dual elements transducer" 12th Western Pacific Acoustic Conference, Singapore. (Oral).

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54. Yi-Shiuan Lu, Cho-Chiang Shih, Jeng-Wen Chen, Chun-Hsiang Chang, and **Chih-Chung Huang*** (2014) "Automatic tracking of the tongue deformation in ultrasound image for diagnosing sleep apnea" IEEE International Ultrasonics Symposium Proceedings, Chicago, USA. (Poster, EI).
55. Cho-Chiang Shih, **Chih-Chung Huang*** (2014) "Evaluating the Intensity Level of Acoustic Radiation Force Impulse (ARFI) Imaging for Intravascular Ultrasound (IVUS): the Preliminary In Vitro Results" IEEE International Ultrasonics Symposium Proceedings, Chicago, USA. (Poster, EI).

56. Shao-Wen Chung and **Chih-Chung Huang*** (2014) "Reconstruction of three-dimensional carotid images for free-hand acquisition ultrasound" 1st Global Conference on Biomedical Engineering / 9th Asian-Pacific Conference on Medical and Biological Engineering, Taiwan. (Oral).
57. Chun-Wen Chien and **Chih-Chung Hung*** (2014) "The effect of vessel compliance on the cyclic variations of Doppler power under a pulsatile flow" 1st Global Conference on Biomedical Engineering / 9th Asian-Pacific Conference on Medical and Biological Engineering, Taiwan. (Poster).
58. Pay-Yu Chen and **Chih-Chung Huang*** (2014) "Characterization of the viscoelastic modulus pulmonary artery by using dynamic shear wave technology" 1st Global Conference on Biomedical Engineering / 9th Asian-Pacific Conference on Medical and Biological Engineering, Taiwan. (Oral).
59. Po-Hen Chen, Kai-Sheng Hsieh, and **Chih-Chung Huang*** (2014) "Development of a Clinical Ultrasound Image Simulator for Infant Heart" 1st Global Conference on Biomedical Engineering / 9th Asian-Pacific Conference on Medical and Biological Engineering, Taiwan. (Oral).

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60. Po-Yang Lee, **Chih-Chung Huang***, and Huihua K. Chiang (2013) "Implementation of a Novel High Frequency Ultrasound Device for Guiding Epidural Anesthesia-*In Vivo* Animal Study" IEEE International Ultrasonics Symposium Proceedings, Prague, Czech Republic. (Poster, EI).
61. Cho-Chiang Shih, Pay-Yu Chen, and **Chih-Chung Huang*** (2013) "A Feasibility Study of Developing an Acoustic Radiation Force Impulse Imaging for Intravascular Ultrasound" IEEE International Ultrasonics Symposium Proceedings, Prague, Czech Republic. (Poster, EI).
62. Cheng Liu, Yaoheng Yang, Lei Sun, and **Chih-Chung Huang** (2013) "Characterization of the colorectal cancer in a rabbit model using quantitative high-frequency endoscopic ultrasound" IEEE International Ultrasonics Symposium Proceedings, Prague, Czech Republic. (Poster, EI).
63. Po-Yang Lee and **Chih-Chung Huang*** (2013) "Implementation of a FPGA based high-frequency ultrasound pulser-receiver front end for array system" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Oral)
64. Pei-Yu, Chen and **Chih-Chung Huang*** (2013) "Measurement of the viscoelastic properties of blood clots by intravascular ultrasound shear wave technology" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Oral)
65. Po-Hsun Peng and **Chih-Chung Huang*** (2013) "Coherent Plane Wave Compounding Technology for Ultrafast Frame Rate High-frequency Ultrasound System" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Poster)
66. Ying-Hua Huang, Po-Yang Lee, and **Chih-Chung Huang*** (2013) "Measurement of blood flow velocity by using a miniature portable continuous wave ultrasound Doppler device" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Poster)
67. Yi-Shiuan Lu, Cho-Chiang Shih, Jeng-Wen Chen, Chun-Hsiang Chang, **Chih-Chung Huang*** (2013) "Automatic extraction and tracking of the boundary between the tongue and airway by using ultrasound image" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Oral)
68. Ta-Han Su, Ting-Yu Liu, and **Chih-Chung Huang*** (2013) "In vivo analysis of adult zebrafish ventricular functions by high frequency ultrasound tissue Doppler imaging during heart regeneration phase" IEEE International Ultrasonics Symposium Proceedings, Prague, Czech Republic. (Poster, EI).

2012

69. Cho-Chiang Shih and **Chih-Chung Huang*** (2012) "Detection of the elastic properties of cornea tissue by high resolution acoustic radiation force imaging" IEEE International Ultrasonics Symposium Proceedings, Dresden, Germany. (Oral, EI).

70. Po-Yang Lee, Ting-Yu Liu and **Chih-Chung Huang*** (2012) "80 MHz high frequency pulsed multigated Doppler sonography for assessing the cardiac flows of adult zebrafish" IEEE International Ultrasonics Symposium Proceedings, Dresden, Germany. (Poster, EI).
71. Wei-Tsen Chen, Cho-Chiang Shih and **Chih-Chung Huang*** (2012) "Three dimension high frequency ultrasound computed tomography for detecting the testicular tumor *in vitro*" IEEE International Ultrasonics Symposium Proceedings, Dresden, Germany. (Poster, EI).
72. Ting-Yu Liu, Po-Yang Lee and **Chih-Chung Huang*** (2012) "In vivo analysis of adult zebrafish cardiac functions by Doppler-gated ultra-high frame rate 80 MHz high frequency retrospective ultrasound imaging" IEEE International Ultrasonics Symposium Proceedings, Dresden, Germany. (Poster, EI).
73. Pay-Yu Chen, Cho-Chiang Shih, and **Chih-Chung Huang*** (2012) "Assessing the viscoelastic properties of thrombus using shear wave dispersion ultrasound vibrometry" IEEE International Ultrasonics Symposium Proceedings, Dresden, Germany. (Poster, EI).
74. Ya-Chang Lin and **Chih-Chung Huang*** (2012) "GPU for reconstructing zebrafish ultrahigh frame rate retrospective high frequency echocardiography" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Oral)
75. Hung-Lung Chou, Ting-Yu Liu, Po-Yang Lee, and **Chih-Chung Huang*** (2012) "FPGA Based High Frequency Duplex Imaging for Zebrafish Cardiac Flow Measurements" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Oral)
76. Ying-Hua Huang, Ting-Yu Liu and **Chih-Chung Huang*** (2012) "Needle Electrodes Electrocardiogram for Monitoring the Physiological State of Zebrafish" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Poster)
77. Jyun-Yan Yang, Jiun-Jr Wang, and **Chih-Chung Huang*** (2012) "Investigating the Hemodynamic Properties of Blood Pressure and Blood flow for Rats in Vascular Thrombosis Mode by Doppler Ultrasound Imaging" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Oral)

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78. Ting-Yu Liu, Po-Yang Lee, and **Chih-Chung Huang*** (2011) "High Frequency Doppler Flow Triggering for 75 MHz Ultra-High Frame Rate 3D Ultrasonic Zebrafish Echocardiography" IEEE International Ultrasonics Symposium Proceedings, Orlando, USA. (Oral, EI).
79. Wei-Tsen Chen, Cho-Chiang Shih, and **Chih-Chung Huang*** (2011) "High Frequency Ultrasound Computer Tomography for Small Animal Imaging Applications" IEEE International Ultrasonics Symposium Proceedings, Orlando, USA. (Poster, EI).
80. **Chih-Chung Huang***, Po-Yang Lee, and Pay-Yu Chen, (2011) "Implementation of a Smart-Phone Based Portable Doppler Flowmeter" IEEE International Ultrasonics Symposium Proceedings, Orlando, USA. (Oral, EI).
81. Cho-Chiang Shih and **Chih-Chung Huang*** (2011) "High Frequency Acoustic Radiation Force Elastography for Imaging the Elastic Properties of Tissues" IEEE International Ultrasonics Symposium Proceedings, Orlando, USA. (Poster, EI).
82. Ting-Yu Liu, Po-Yang Lee, Cho-Chiang Shih and **Chih-Chung Huang*** (2011) "In Vitro Study of Cell-Free Layer in Microvessels by High Frequency Ultrasound Duplex Imaging" IEEE International Ultrasonics Symposium Proceedings, Orlando, USA. (Poster, EI).
83. **Chih-Chung Huang***, Ting-Yu Liu, and Po-Hsiang Tsui (2011) "High frequency echogenicity variations from erythrocyte suspension: The "black hole" phenomenon under microcirculation flow" 2011 WFUMB Euroson Ultraschall, Vienna, Austria. (Poster).
84. Po-Hsiang Tsui, Chih-Kuang Yeh, and **Chih-Chung Huang** (2011) "Strategy to remove noise-induced artifacts in ultrasonic Nakagami images" 2011 WFUMB Euroson Ultraschall, Vienna, Austria. (Poster).

85. Chen-Chih Liao, Po-Yang Lee, and **Chih-Chung Huang*** (2011) "The Effects of Instantaneous Acceleration and Deceleration of Flow on Red Cell Aggregation Under Steady Condition by High Frequency Ultrasound" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.(Oral)
86. Tsung-Ying Lu, Tin-Yu Liu, Yuang-Shung Lee, and **Chih-Chung Huang*** (2011) "Ultrasonic Wireless Power Transmission System for Medical Implantable Device" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Poster)
87. Ting-Yu Liu, Po-Yang Lee, and **Chih-Chung Huang*** (2011) "Using image matching similarity to detect high frame rate zebrafish heart image contour" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.(Oral)
88. Cho-Chiang Shih and **Chih-Chung Huang*** (2011) "High Resolution Acoustic Radiation Force Imaging by Using a High Frequency Dual Confocal Ultrasound Transducer" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Oral)
89. Wei-Tsen Chen and **Chih-Chung Huang*** (2011) "High Frequency Ultrasound Computed Tomography Imaging" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Oral)
90. **Chih-Chung Huang*** (2011) "Characterization of blood tissue in microcirculation by high frequency ultrasound duplex imaging system" 5th WACBE World Congress on Bioengineering, Taiwan on August 19-21, 2011.(Oral, Special Session)

2010

91. Ting-Yu Liu and **Chih-Chung Huang*** (2010) "Development of real-time high frequency duplex ultrasound imaging system for microcirculation" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Oral, Honorable Mention Award)
92. Po-Yang Lee and **Chih-Chung Huang*** (2010) "Development of High-Frequency Pulsed-Wave Doppler Ultrasound Flowmeter for Real-Time Measuring the Zebrafish Cardiac Flow" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Oral, Honorable Mention Award)
93. Te-Yi Chang and **Chih-Chung Huang*** (2010) "Development of Infant Breathing Monitor System by Zigbee" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.
94. Chen-Sung Yang, Ting-Yu Liu, and **Chih-Chung Huang*** (2010) "Implementation of a Portable High Frequency Ultrasound Speed Meter for Body Fluid Characterization" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.
95. Shun-Ming Wang, Po-Yang Lee, Ting-Yu Liu, and **Chih-Chung Huang*** (2010) "The Development of Arbitrary Frequency Ultrasonic Pulse Generator and Receiver: Between 10-50 MHz" Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Poster, Honorable Mention Award)
96. **Chih-Chung Huang*** (2010) "High-Frequency Ultrasonic Attenuation and Backscatter Measurements of Rat Blood" IEEE International Ultrasonics Symposium Proceedings, San Diego, USA. (Poster, EI).
97. Cho-Chiang Shih, Ting-Yu Liu, and **Chih-Chung Huang*** (2010) "*In Vitro* Assessments of Viscoelastic Properties of Fibrin Clot by Acoustic Radiation Force" IEEE International Ultrasonics Symposium Proceedings, San Diego, USA. (Oral, EI).
98. Yu-Chang Chang, Po-Yang Lee, Chen-Chih Liao, and **Chih-Chung Huang*** (2010) "Study of the Effects of Flow Acceleration on Blood Aggregation by High Frequency Duplex Ultrasound: Under Pulsatile Flow" IEEE International Ultrasonics Symposium Proceedings, San Diego, USA. (Oral, EI).
99. Yi-Hsun Lin, **Chih-Chung Huang**, and Shyh-Hau Wang (2010) "*In Vivo* Assessment of Inflammatory Skin Using High Frequency Ultrasound Image and Quantitative Parameters" IEEE International Ultrasonics Symposium Proceedings, San Diego, USA. (Poster, EI).
100. Yi-Hsun Lin, Hao-Chuan Pai, Kuo-Lun Tung, **Chih-Chung Huang**, and Shyh-Hau Wang (2010) "Evaluation for the Distribution of Fouling Deposition on the Microfiltration Membrane Using High

Frequency Ultrasound” IEEE International Ultrasonics Symposium Proceedings, San Diego, USA. (Oral, EI).

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101. Yi-Hsun Lin, **Chih-Chung Huang**, Shyh-Hau Wang (2009) “A feasibility study of the application of high frequency ultrasound image and statistical parameter of backscatter to assess inflammatory skin” Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.
102. Ting-Yu Liu, Yu-Chang Chang, Po-Yang Lee, and **Chih-Chung Huang*** (2009) “Development of High Frequency Ultrasound Image System for Evaluating the Effects of Marine Algae on Skin Inflammation” Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.
103. Po-Yang Lee, Ting-Yu Liu, Yu-Chang Chang, and **Chih-Chung Huang*** (2009) “Development of Ultrasonic Pulse Generator Circuit for High Frequency Ultrasound Image System Using FPGA” Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.
104. Yu-Chang Chang, Ting-Yu Liu, Po-Yang Lee, and **Chih-Chung Huang*** (2009) “Ultrasonic Attenuation form Blood of Varying Hematocrit and Shear Rate-Under Couette Flow” Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.
105. **Chih-Chung Huang***, Ruimin Chen, Po-Hsiang Tsui, Qifa Zhou, Mark S. Humayun, and K. Kirk Shung (2009) “In Situ Measurements of attenuation coefficient for evaluating the hardness of cataract lens by a high frequency ultrasonic needle transducer” IEEE International Ultrasonics Symposium Proceedings, Roma, Italy. (Oral, EI).
106. Yi-Hsun Lin, **Chih-Chung Huang**, Shyh-Hau Wang (2009) “A quantitative assessment for the orientation and distribution of carbon fibers in the bipolar plate of fuel cell using high frequency ultrasound” IEEE International Ultrasonics Symposium Proceedings, Roma, Italy. (Oral, EI).

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107. **Chih-Chung Huang**, Yi-Hsun Lin, and Shyh-Hau Wang (2008) “Statistical Variations of Ultrasound Backscattering From the Blood under Steady Flow,” 13th International Conference on BioMedical Engineering, Singapore. (Oral, Outstanding Paper Award).
108. Chun-Yi Chiu, Show-Huie Chen, **Chih-Chung Huang**, Shyh-Hau Wang (2008) “Fibroblasts proliferation dependence on the Insonation of pulsed ultrasounds of various frequencies” 13th International Conference on BioMedical Engineering, Singapore.

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109. **Chih-Chung Huang**, Hossein Ameri, Shyh-Hau Wang, Mark S. Humayun, K. Kirk Shung (2007) “Evaluation of lens hardness in cataract surgery using high-frequency ultrasonic parameters in vitro,” BMES 2007 Annual Fall Meeting, September, Los Angeles, USA. (Oral).
110. **Chih-Chung Huang**, Lei Sun, Seth Hammond Dailey, Shyh-Hau Wang, and K. Kirk Shung (2007) “High frequency ultrasonic characterization of human vocal fold tissue by High frequency ultrasonnd,” IEEE International Ultrasonics Symposium Proceedings, New York, USA. (EI).
111. **Chih-Chung Huang** and K. Kirk Shung (2007) “Use of high frequency ultrasonic parameters to detect the properties of crystalline lens,” 8th Annual Ultrasonic Transducer Engineering Conference, Los Angeles, USA. (Oral).
112. Che-Wen Chang, **Chih-Chung Huang**, Yi-Hsun Lin, and Shyh-Hau Wang (2007) “The effect of vessel size and shear rate on the properties of coagulating blood under laminar flow: an in vitro study by ultrasound,” Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.
113. Chun-Yi Chiu, Show-Huie Chen, Shyh-Hau Wang, and **Chih-Chung Huang** (2007) “Effect of ultrasound insonification on the proliferation of fibroblasts,” Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.

114. Show-Huie Chen, Chun-Yi Chiu, **Chih-Chung Huang**, and Shyh-Hau Wang (2007) "Effect of intensity ultrasound on the growth of osteoblasts," Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.
115. Yi-Hsun Lin, **Chih-Chung Huang**, and Shyh-Hau Wang (2007) "Feasibility study of using high frequency ultrasonic Nakagami imaging for assessment burnt degrees *in vivo*," Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.

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116. Yi-Hsun Lin, **Chih-Chung Huang**, and Shyh-Hau Wang (2006) "In situ assessment of burn wound healing with statistical parameter of high frequency ultrasonic backscattering," Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.
117. Che-Wen Chang, Yi-Hsun Lin, **Chih-Chung Huang**, and Shyh-Hau Wang (2006) "Development and validation of a real-time digital pulse Doppler ultrasound system," Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.
118. **Chih-Chung Huang**, Chun-Yi Chiu, Show-Huie Chen, and Shyh-Hau Wang (2006) "Statistical parameter of ultrasonic backscattered signals modulated by the flow and blood properties," International Symposium on Biomedical Engineering Taiwan, Taiwan. (Oral).
119. **Chih-Chung Huang** and Shyh-Hau Wang (2006) "Properties of Coagulating Blood under Steady Flow Detected By Statistical Analysis of Backscattered Signals" IEEE International Ultrasonics Symposium Proceedings, Vancouver, Canada, 2-6 Oct, Page(s):2064 - 2067 (EI).
120. **Chih-Chung Huang**, Che-Wen Chung, Show-Huie Chen, and Shyh-Hau Wang (2006) "Detection of Blood Coagulation in Different Hematocrits Using Ultrasonic Backscattering and Attenuation" The 13th TWNDT Conference, Taoyuan, Taiwan. (Oral)
121. Show-Huie Chen, Shyh-Hau Wang, Yi-Hsun Lin, **Chih-Chung Huang**, and Po-Hsiang Tsui (2006) "A Feasibility Study on the Quantification of Cell Numbers by High Frequency Ultrasound Backscattering" 9th Western Pacific Acoustics Conference, Seoul, Korea.

2005

122. Show-Huie Chen, Shyh-Hau Wang, Yi-Hsun Lin, **Chih-Chung Huang**, and Po-Hsiang Tsui (2005) "A Feasibility Study on the Development of Ultrasonic Techniques to Quantify Cell Concentration," Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.
123. **Chih-Chung Huang**, Yi-Hsun Lin, Che-Wen Chang, and Shyh-Hau Wang (2005) "Analysis of Blood Coagulation Under Flow Condition Using Ultrasonic Backscatter," Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan. (Oral).
124. **Chih-Chung Huang**, Po-Hsiang Tsui, and Shyh-Hau Wang (2005) "Detection of Red Blood Cells Concentration by High Frequency Ultrasonic Backscattering Using the Nakagami Statistical Model," 12th International Conference on BioMedical Engineering, Singapore.(Oral).
125. Po-Hsiang Tsui, **Chih-Chung Huang**, and Shyh-Hau Wang (2005) "A feasible study on the determination of blood hematocrit with Nakagami parameter calculated from backscattered signals," IEEE Ultrasonic Symposium Proceedings, Netherlands: Rotterdam, September 18-21. (EI).
126. **Chih-Chung Huang**, Shyh-Hau Wang, and Po-Hsiang Tsui (2005) "Blood coagulation and clot formation studies using ultrasonic parameters," 6th Asian-Pacific Conference on Medical and Biological Engineering, Okayama, Japan.
127. Po-Hsiang Tsui, **Chih-Chung Huang** and Shyh-Hau Wang (2005) "The effect of the logarithmic compression on the estimation of Nakagami parameter," 6th Asian-Pacific Conference on Medical and Biological Engineering, Okayama, Japan.

2004

128. **Chih-Chung Huang** and Shyh-Hau Wang (2004) "Blood coagulation and clot formation studies using high frequency ultrasound," IEEE International Ultrasonics Symposium Proceedings, 1757-1760 (EI).

129. **Chih-Chung Huang**, Shyh-Hau Wang and Che-Wen Chang (2004) “A study on the blood coagulation and clot formation using Doppler ultrasound,” Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.
130. Yi-Hsun Lin, **Chih-Chung Huang**, Che-Wen Chang, Xi-Yuan Su and Shyh-Hau Wang (2004) “Development and function validation of a simple ultrasonic air bubble,” Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.
131. Che-Wen Chang, **Chih-Chung Huang**, Yi-Hsun Lin and Shyh-Hau Wang (2004) “Development of a Micro-Infusion Pump and its Feedback Control,” Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.

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132. **Chih-Chung Huang** and Shyh-Hau Wang (2003) “Development of a pulse ultrasound Doppler system and its application in preliminary hemodynamics study,” Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.

2001

133. **Chih-Chung Huang**, Shyh-Hau Wang and Jiunn-Der Liao (2001) “An automatic impedance measurement system for array electrodes,” Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.
134. P. H. Tsui, S. H. Wang, C. C. Hsu, J. H. Hsieh, **C. C. Huang** (2001) “Studies on the Response of Neural Tissues following Ultrasonic Stimulations,” Symposium of Annual Conference of the Biomedical Engineering Society, Taiwan.

C. Patent

1. **Chih-Chung Huang**, K. Kirk Shung, Mark S. Humayun, and Hossein Ameri. “Preoperative and intra-operative lens hardness measurement by ultrasound” US20080249412 A1, 09-Oct-2008, USA
2. **Chih-Chung Huang**, Ting-Yu Liu, Po-Yang Lee, and Pei-Yu Chen. “Physiological Signals Measurement System Applied for Smartphone”, Taiwan Patent, I425707.
3. **Chih-Chung Huang**, Chia-Hsun Lin, Jia-Sheu Huang “Wearable hybrid blood vessel flow velocity detector”, Taiwan Patent, I572328
4. **Chih-Chung Huang**, Po-Yang Lee, Yi-Hsiang Chuang “System for pulse wave measurement and alignment guidance method”, Taiwan Patent, I670044.
5. **Chih-Chung Huang**, Po-Yang Lee, Yi-Hsiang Chuang “System for pulse wave measurement and alignment guidance method thereof”, US20200060648A1, USA
6. **Chih-Chung Huang**, Pei-Yu Chen, and Cho-Chiang Shih “Measuring apparatus and system for measuring elasticity of biological tissue” US20210169452A1, USA

Research Grants

Date of funding period	Title of project	Role	Funding resource
2008/11/1~2009/10/31	Study of Blood Rheological Properties Using High Frequency Ultrasonic Parameters and Statistical Models	PI	Ministry of Science and Technology, Taiwan
2009/8/1~2012/7/31	Development of high frequency ultrasonic measurement system for hemodynamic properties study from microvasculature - by using in vitro Couette flow and in vivo animal model	PI	Ministry of Science and Technology, Taiwan
2010/8/1~	Identification of soft tissue properties by high	PI	Ministry of Science

2013/7/31	frequency acoustic radiation force technology		and Technology, Taiwan
2010/8/1~ 2012/7/31	Aging-in-place: Platform development and applications of ICT for elderly medicine and healthcare	PI	Fu Jen Catholic University, Taiwan
2012/1/1~ 2013/10/31	Ultrasound Epidural Anesthesia Positioning and Guiding System Development	Co-PI	Ministry of Science and Technology, Taiwan
2012/8/1~ 2015/7/31	Development of a high frequency ultrasound echocardiography for evaluating the regenerative cardiac function of zebrafish	PI	Ministry of Science and Technology, Taiwan
2013/1/1~ 2014/12/31	Core Circuit/ Electronics and ASIC Design in Medical Ultrasound Devices	Co-PI	Ministry of Science and Technology, Taiwan
2013/8/1~ 2016/7/31	Application of ultrasound monitoring device in sleep disordered breathing patients	PI	Ministry of Science and Technology, Taiwan
2014/1/1~ 2014/12/31	Novel Ultrasound techniques and system for Carpal Tunnel Syndrome Diagnosis	Co-PI	National Cheng Kung University, Taiwan
2014/8/1~ 2016/7/31	Development of Clinical Simulation and 3D Printing System for Echocardiography	Co-PI	Ministry of Science and Technology, Taiwan
2014/8/1~ 2016/10/31	Study of an all-digital and high-resolution transmit beamformer for high-frequency ultrasonic imaging system applications	Co-PI	Ministry of Science and Technology, Taiwan
2015/8/1~ 2018/7/31	Development of the multi-functions intravascular ultrasound elastography imaging system	PI	Ministry of Science and Technology, Taiwan
2015/10/1~ 2 022/9/30	Early detection and treatment strategy of Alzheimer's disease: family history study.	Co-PI	Ministry of Science and Technology, Taiwan
2015/3/1~ 2016/8/31	High frequency elastography for micro-tissues characterization	PI	National Cheng Kung University, Taiwan
2018/1/1~ 2021/12/31	High frequency ultrafast ultrasound imaging for assessing the digital flexor tendon function	PI	National Health Research Institutes
2018/8/1~ 2021/7/31	Quantitative assessment of the viscoelastic properties for thin layer tissue by using guided wave technique	PI	Ministry of Science and Technology, Taiwan
2018/8/1~ 2021/7/31	High resolution ultrasound vector flow imaging for low and high blood flow velocities estimation	PI	Ministry of Science and Technology, Taiwan
2017/9/1~ 2019/8/31	Carotid artery stiffness detector	PI	Southern Taiwan Science Park
2018/6/1~ 2020/5/31	Automated analysis of the intravascular ultrasound image by artificial intelligence	PI	National Cheng Kung University

			Hospital
2021/9/1~ 2024/8/31	Characterization of arteriosclerosis by using duplex high frequency ultrasound arterial wall shear stress and pulse wave mappings: from small animal to human	PI	Ministry of Science and Technology, Taiwan
2021/8/1~ 2022/7/31	Development of an implantable high resolution ultrasound ultrafast imaging system for mouse brain blood flow mapping	PI	Ministry of Science and Technology, Taiwan
2021/7/1~ 2022/6/30	A Novel Therapeutic Device for Obstructive Sleep Apnea	PI	Ministry of Science and Technology, Taiwan
2022/1/1~ 2024/12/31	Development of a wearable ultrasound device to optimize the treatment of rotator cuff tear by characterizing dynamic properties of the shoulder tissues	PI	National Health Research Institutes
2022/8/1~ 2023/7/31	High frequency ultrasound for mice meningeal lymphatic system	PI	Ministry of Science and Technology, Taiwan
2022/1/1~ 2024/12/31	A novel acoustic/optical imaging modality for zebrafish cardiovascular system: from embryos to adult fish	PI	Ministry of Science and Technology, Taiwan