

謝寶育

Bao-Yu Hsieh, Ph.D.

Birth: 10/31/1982

Address: 33302 桃園市龜山區文化一路 259 號
第一醫學大樓 12 樓 1217 室

TEL: 886-3-211-8800 #3619

Email: byhsieh@mail.cgu.edu.twLab website: <http://byhsieh.edublogs.org/>LinkedIn: www.linkedin.com/pub/bao-yu-hsieh/a2/573/ba3**Education**

<u>School</u>	<u>Dates</u>	<u>Degree</u>	<u>Major</u>
Graduate Institute of Biomedical Electronics and Bioinformatics, National Taiwan University	<u>2007-2012</u>	Ph.D.	Ultrasound /Photoacoustic imaging
Institute of Biophotonics, National Yang-Ming University	<u>2005-2007</u>	M.S.	Biophotonics, Biosensor
Department of Biomedical Imaging and Radiological Sciences, National Yang-Ming University	<u>2001-2005</u>	B.S.	Medical imaging, Radiology

Current Position

- Assistant Professor, Department of Medical Imaging and Radiological Sciences, Chang Gung University, Aug. 2020- present.

Work Experience

- Assistant Professor, Department of Biomedical Imaging and Radiological Science, China Medical University, Feb. 2016- present.
- Assistant Professor, The PhD Program for Medical Engineering and Rehabilitation Science, China Medical University, Feb. 2016- present.
- Assistant Professor, Master Program for Biomedical Engineering, China Medical University, Feb. 2016- present.
- Senior Research Fellow, Department of Bioengineering, University of Washington, USA, Nov. 2014- Jan. 2016.
- Postdoctoral Research Associate, Micro/Nano Engineering Lab (MNEL), Department of Mechanical and Aerospace Engineering, North Carolina State University, USA, Jan. 2014- Oct.

2014.

- Postdoctoral Research Associate, Ultrasonic Imaging Laboratory, National Taiwan University, Taipei, Taiwan, R.O.C., Oct. 2013-Dec. 2013.
- Teaching Assistant, *Biomedical Engineering Lab*, Department of Electrical Engineering, National Taiwan University, Taipei, Taiwan, R.O.C., 2009-2012
- Radiologist, Minsheng Clinical Laboratory, Taipei, Taiwan, R.O.C., 2005-2012

Licenses/Certification

- Assistant Professor Certificate, Ministry of Education, Reg. No.: 142604
- Certification of Medical Radiologist 醫事放射師證書 放字第 004888 號

Honor

- 2021 全國大專校院 Healthy x Happy 創新創業競賽 第三名(指導教師): 台灣首創骨骼肌 AI 智慧分析服務 MuscleCare
- 2017 Best Poster Award, International Conference on Biomedical Ultrasound (ICBMU), Hong Kong
- 2017 Certificate High Distinction, Symposium of Annual Conference of the Biomedical Engineering Society Poster Paper Competition, Taiwan.
- 2011 Certificate High Distinction, Symposium of Annual Conference of the Biomedical Engineering Society Poster Paper Competition, Taiwan.
- 2009 Certificate High Distinction, Symposium of Annual Conference of the Biomedical Engineering Society Poster Paper Competition, Taiwan.

Research Interests

- Biomedical Imaging
- Biophotonics
- Ultrasound and Photoacoustic imaging
- Laser Ultrasound
- Ultrafast Doppler Imaging
- Elasticity Imaging

Membership

Member of IEEE, IEEE UFFC Society, SPIE and ISMRM

Programming Skills

MATLAB and LabVIEW

Ad Hoc Reviewer

Applied Physics Letters
 Biomedical Signal Processing and Control
 Journal of Medical and Biological Engineering
 American Society of Mechanical Engineering Conference
 Chinese Optics Letters

Invited Presentations

- 陽明生醫光電
- 陽明醫放
- 勤益科大
- Bao-Yu Hsieh, “Ultrasound Ultrasensitive Microvasculature Imaging: from Preclinical to Clinical Applications,” 中華民國醫用超音波年會, Taipei, Taiwan 17 Oct. 2020.
- Bao-Yu Hsieh, “Application of Laser Ultrasound,” School of Information and Electrical Engineering, Harbin Institute of Technology, Weihai, 25 July 2016.
- Bao-Yu Hsieh, “Biomedical Applications of Laser Ultrasound,” National Sun Yat-sen University, Kaoshung, 7 Dec. 2016.

Research Grants

- 科技部 專題研究計畫(三年期) [主持人] 2020~2023
 功能性超音波影像應用於缺血性腦中風動態血液動力學之研究
 (MOST 109-2221-E-039 -003-MY3)
- 科技部 專題研究計畫(三年期) [共同主持人] 2020~2021
 早產兒身體器官病變所造成的腦神經發展障礙與來自身體的發炎訊號改變了脈絡叢屏障
 及其調控的晝夜節律有關--早產兒“X(身體器官)-腦功能失調症”對腦連結異常及神經
 發展障礙之影響(1/3)(MOST 109-2314-B-038-075 -)
- 經濟部工業局 中小型製造業即時輔導計畫 [技術服務] 2020~2020
 雷射複合式切割、焊接頭運用(佑昇雷射股份有限公司)
- 科技部 專題研究計畫(三年期) [主持人] 2017~2020
 血管內超音波/光學同調斷層剪力波彈性影像技術開發於動脈粥狀硬化早期診斷之可行
 性評估(MOST 106-2218-E-039-001-MY3)
- 中國醫藥大學 校內計畫 [主持人] 2019~2020
 功能性超音波應用於腦皮質擴散性去極化造成之血液動力學研究(CMU108-S-05)
- 產學計畫 上銀科技股份有限公司 [主持人] 2019~2020
 超音波輔助介入性治療臨床需求評估(HIWIN-CMU-T-108-05)
- 科技部 大專生研究計畫 [指導教師] 2020~2021
 使用超快速都卜勒超音波來獲取腫瘤血管新生之影像
 (109-2813-C-039-017-E)
- 中國醫藥大學 校內計畫 [主持人] 2020~2021

使用超快速都卜勒超音波來獲取腫瘤血管新生之影像

- 產學計畫 上銀科技股份有限公司 [主持人] 2017~2018
超音波影像導引脊椎手術之可行性評估(10642631)
- 中國醫藥大學 校內計畫 [主持人] 2019~2020
血管內超音波/光學同調斷層剪力波彈性影像技術開發於動脈粥狀硬化早期診斷之可行性評估(CMU108-MF-63)
- 科技部 大專生研究計畫 [指導教師] 2019~2020
剪力波彈性影像應用於高強度聚焦超音波治療之監控(108-2813-C-039-014-E)
- 科技部 大專生研究計畫 [指導教師] 2019~2020
(108-2813-C-039-014-E)
- 科技部 專題研究計畫(三年期) [共同主持人] 2018~2021
超音波調控生長因子於骨組織修復之應用(MOST 107-2314-B-039-015-MY3)
- 科技部 專題研究計畫 [共同主持人] 2019~2020
開發新式靶向前列腺特定膜抗原(PSMA)之抗體藥物結合物(MOST 108-2314-B-039-013-)
- 中國醫藥大學 校內計畫 [主持人] 2018~2019
超快速都卜勒血管影像應用於阻塞性中風小動物之血管分佈重塑之研究(CMU107-N-01)
- 中國醫藥大學 校內計畫 [主持人] 2017~2018
基於模糊 C 均值演算法應用於全自動乳房超音波斷層掃描之早期乳癌電腦輔助診斷技術開發(CMU106-N-12)
- 中國醫藥大學 校內計畫 [主持人] 2016~2017
具有超音波觸發釋藥功能之含硼藥物載體開發於硼中子捕獲治療之應用(CMU105-N-03)
- 科技部 專題研究計畫 [共同主持人] 2016~2017
魚骨型奈米結構光學感測器之製作與靈敏度之研究(MOST 105-2218-E-167-002)
- 科技部 大專生研究計畫 [指導教師] 2018~2019
超音波彈性影像技術應用於凝膠劑量計計讀於放射治療劑量分布之可行性評估
(107-2813-C-039-008-E)
- 中國醫藥大學 校內計畫 [主持人] 2018~2019
超音波彈性影像技術應用於凝膠劑量計計讀於放射治療劑量分布之可行性評估
(CMU107-SR-05)
- 科技部 大專生研究計畫 [指導教師] 2017~2018
結合全自動乳房斷層掃描及 X 光乳房攝影之乳腺密度量測於乳房篩檢之可行性評估
(106-2813-C-039-011-E)
- 中國醫藥大學 校內計畫 [主持人] 2017~2018
結合全自動乳房斷層掃描及 X 光乳房攝影之乳腺密度量測於乳房篩檢之可行性評估
(CMU106-SR-11)
- 科技部 大專生研究計畫 [指導教師] 2017~2018
開發具超音波調控釋藥功能之微氣泡-矽奈米藥物載體於硼中子捕獲治療之可行性研究
(106-2813-C-039-013-E)

- 中國醫藥大學 校內計畫 [主持人] 2017~2018
開發具超音波調控釋藥功能之微氣泡-矽奈米藥物載體於硼中子捕獲治療之可行性研究 (CMU106-SR-13)
- 科技部 大專生研究計畫 [指導教師] 2016~2017
以正子斷層攝影搭配新式氟化分子早期診斷腦部發炎之可行性研究 (105-2815-C-039-057-B)
- 中國醫藥大學 校內計畫 [主持人] 2016~2017
以正子斷層攝影搭配新式氟化分子早期診斷腦部發炎之可行性研究(CMU105-SR-56)

Teaching Grants

- 教育部 高教深耕計畫 [主持人] 2018~2019
培育精準醫療跨領域 T 型人才，謝寶育、阮文滔、彭馨蕾、吳駿一

Academic Service

- 輻射防護繼續教育課程
- 中華民國醫用超音波學會超音波技術人員共同科教育訓練課程
- 住院醫師醫學物理基礎教育系列課程
- Life (Guest Editor)
- Committee member of Ph.D. degrees
 - Graduate Institute of Biomedical Electronics and Bioinformatics, National Taiwan University, 2018.
- Committee member of master degrees
 - Institute of Electrical Engineering, National Tsing Hua University, 2019.
 - Graduate Institute of Biomedical Electronics and Bioinformatics, National Taiwan University, 2016, 2018, 2019.
 - Graduate Institute of Biomedical Imaging and Radiological Sciences, China Medical University, 2018.

Peer Reviewed Publications

Google Scholar:

<https://scholar.google.com/citations?user=33CjtW0AAAAJ&hl=zh-TW>

Peer Reviewed Articles (by JCR 2020)

- Chun-Yi Wu, Pei-An Chu, Hsin-Hua Hsieh, Hsin-Lai Peng, Chia-Fan Hsu, Hsiao-Ting Lin, Po-Husan Su, and *Bao-Yu Hsieh, “Establishment of an Imaging Platform to Monitor the Progression of Liver Fibrosis,” (preparation)

- Subir Das, Yun-Yu Hsu, Bao-Yu Hsieh* and Fu-Jen Kao*, “Time-Resolved Imaging of Ultrasound Waveform with Synchronized Laser Illumination,” (preparation)
- Hsien-Jung Chan, Zhuhuang Zhou, Jui Fang, Dar-In Tai, Jeng-Hwei Tseng, Ming-Wei Lai, Bao-Yu Hsieh, Tadashi Yamaguchi, and Po-Hsiang Tsui, “Sample Entropy of Ultrasound Radiofrequency Signals for Parametric Imaging of Hepatic Steatosis,” 2021. (submitted to IEEE Journal of Biomedical and Health Informatics, revised)
- Bao-Yu Hsieh*, Yu-Chieh Jill Kao, Yi-Pei Lin, Yu-Ying Mei, Dong-Chuan Wu, Ning Zhou*, “Dynamic Ultrafast Doppler Imaging for Vascular Responses of Penetrating Vessels during Cortical Spreading Depolarization,” 2021. (submitted to IEEE Transactions on Biomedical Engineering)
- Yu-Chieh Jill Kao, Seu-Hwa Chen, Chia-Feng Lu, Bao-Yu Hsieh, Cheng-Yu Chen, Ying-Chao Chang, Chao-Ching Huang, “Early neuroimaging and ultrastructural correlates of injury outcome after neonatal hypoxic-ischemia,” *Brain Communications*, **3**(2), fcab048, 2021.
- Wei-Huan Xie, Chun-Ting Su, Yu-Chieh Jill Kao, Tung-Hao Chang, Yuan-Jen Chang, Chun-Hsu Yao, and Bao-Yu Hsieh, “Radiotherapy dose characterization of gel dosimetry using shear wave elasticity imaging,” *Med. Phys.*, **47**(3), 1404-1410, 2020. (IF: 4.071, Rank: 32/134=24%)
- Y.-C. J. Kao, Y. W. Liu, C.-F. Lu, H.-L. Chen, B.-Y. Hsieh, C.-Y. Chen, “Behavioral and structural effects of single and repeat closed-head injury,” *Am. J. Neuroradiol.*, **40**, 601-608, 2019. (IF: 3.825, Rank: 40/134=30%)
- Bao-Yu Hsieh, Shaozhen Song, Thu-Mai Nguyen, Soon Joon Yoon, Tueng T. Shen, Ruikang K. Wang, Matthew O’Donnell, “Moving-source elastic wave reconstruction for high-resolution optical coherence elastography,” *J. Biomed. Opt.*, **21**(11), 116006, 2016. (IF: 3.170, Rank: 30/99=30%)
- S. Song, W. Wei, B.-Y. Hsieh, I. Pelivanov, T. Shen, M. O’Donnell, and R.K. Wang, “Strategies to improve phase-stability of ultrafast swept source optical coherence tomography for single shot imaging of transient mechanical waves at 16 kHz frame rate,” *Appl. Phys. Lett.*, **108**(19), 191104, 2016. (IF: 3.791, Rank: 47/160=29%)
- Bao-Yu Hsieh, J. Kim, J. Zhu, S. Li, X. Zhang, and X. Jiang, “A laser ultrasound transducer using carbon nanofibers-polydimethylsiloxane composite thin film,” *Appl. Phys. Lett.*, **106**(2), 021902, 2015. (IF: 3.791, Rank: 47/160=29%)
- J. Li, S. J. Yoon, Bao-Yu Hsieh, W. Tai, M. O’Donnell, and X. Gao, “Stably doped conducting polymer nanoshells by surface initiated polymerization,” *Nano Lett.*, **15**(12), 8217-8222, 2015. (IF: 11.189, Rank: 22/162=14%)
- S.Y. Hung, W.S. Wu, B.Y. Hsieh, and P.C. Li, “Concurrent photoacoustic- ultrasound imaging using single laser pulses,” *J. Biomed. Opt.*, **20**(8), 086004, 2015. (IF: 2.785, Rank: 29/97=30%)
- Bao-Yu Hsieh, Sung-Liang Chen, Tao Ling, L. Jay Guo, and Pai-Chi Li, "All-optical scanhead for ultrasound and photoacoustic imaging: imaging-mode switching by dichroic filtering,"

Photoacoustics, **2**(1), 39-46, 2014. (IF: 5.870, Rank: 9/133=6%)

- Bao-Yu Hsieh, Sung-Liang Chen, Tao Ling, L. Jay Guo, and Pai-Chi Li, "All-optical scanhead for ultrasound and photoacoustic dual-modality imaging," *Opt. Express*, **20**(2), 1588-1596, 2012. (IF: 3.561, Rank: 20/95=21%)
- Bao-Yu Hsieh, Sung-Liang Chen, Tao Ling, L. Jay Guo, and Pai-Chi Li, "Integrated intravascular ultrasound and photoacoustic imaging scan head," *Opt. Lett.*, **35**(17), 2892-2894, 2010. (IF: 3.866, Rank: 16/95=16%)
- Yae-Lin Sheu, Cheng-Ying Chou, Bao-Yu Hsieh, and Pai-Chi Li, "Image reconstruction in intravascular photoacoustic imaging," *IEEE Trans. Ultrason. Ferroelectr. Freq. Control*, **58**(10), 2067-2077, 2011. (IF: 2.704, Rank: 6/31=19%)
- C.H. Lin, H.Y. Chen, C.J. Yu, P.L. Lu, C.H. Hsieh, Bao-Yu Hsieh, Y.F. Chang, C. Chou "Quantitative measurement of binding kinetics in sandwich assay using a fluorescence detection fiber-optic biosensor," *Analytical Biochemistry*, **385**, 224-228, 2009. (IF: 2.275, Rank: 35/78=44%)
- Bao-Yu Hsieh, Y.F. Chang, M.Y. Ng, W.C. Liu, C.H. Lin, H.T. Wu, C. Chou "Localized surface plasmon coupled fluorescence fiber optic biosensor with gold nanoparticles," *Anal. Chem.*, **79**, 3487-3493, 2007. (IF : 6.042, Rank: 4/79= 5%)
- Y.F. Chang, T.C. Chang, Y.M. Huang, K.W. Yu, Bao-Yu Hsieh, Y.C. Chung, C. Chou "Fiber Optic Biosensor for the Identification of *E. coli* in Blood Culture," *Journal of Bionanoscience*, **1**(2), 117-121, 2007.

Conference Presentations

- Longitudinal Apparent Diffusion Coefficient Trajectory in Different Severity Outcome Following Experimental Neonatal Hypoxic Ischemia
- B.-Y. Hsieh, Y.-P. Lin, Y.-Y. Mei, D.-C. Wu, Y.-C. J. Kao, and N. Zhou, "Hemodynamic analysis of single vessel in the cerebral cortex with ultrafast Doppler," IUS, 2020.
- B.-Y. Hsieh, S.-Y. Huang and Y.-C. J. Kao, "Dose dependent effect of isoflurane on cerebral perfusion in rats with ultrafast Doppler," IUS, 2020.
- Y.-C. J. Kao and B.-Y. Hsieh, "Monitoring of Vascular Response to Peri-Infarct Depolarization (PID) in Photothrombotic Stroke Animal Model," IUS, Glasgow, UK, 2019.
- N. Zhou, Y.-C. J. Kao, Y.-Y. Mei, Y.-P. Lin, D.-C. Wu, B.-Y. Hsieh, "Detection of KCl Induced Cortical Spreading Depolarization (CSD) with Dynamic Ultrafast Doppler" IUS, Glasgow, UK, 2019.
- C.-T. Chen and B.-Y. Hsieh, "Ultrasound spinal image with angle compounding imaging technique," WACBE, Taipei, Taiwan, 2019.
- S.-Y. Huang, Y.-C. J. Kao, and B.-Y. Hsieh, "Exploring brain hemodynamics under different anesthetic level with high sensitive ultrafast Doppler," WACBE, Taipei, Taiwan, 2019.

- W.-H. Hsieh, C.-T. Su, T.-H. Chang, Y.-J. Chang, C.-H. Yao, and B.-Y. Hsieh, “Radiotherapy dose reading of 3D gel dosimetry with ultrasonic shear wave elasticity imaging,” WACBE, Taipei, Taiwan, 2019.
- Y.-C. J. Kao, J. Tazoe, C.-F. Lu, B.-Y. Hsieh, and C.-Y. Chen, “Difference in tensor metrics between the survived and infarcted penumbra by reperfusion in a rat model of cerebral ischemia,” ISMRM, Montrail, Canada, 2019.
- Y.-C. J. Kao, C.-F. Lu, B.-Y. Hsieh, and C.-Y. Chen, “Connectivity reorganization after repetitive mild traumatic brain injury is impact site associated,” ISMRM, Montrail, Canada, 2019.
- W.-C. Hsiao and B.-Y. Hsieh, “Ultrasound Shear Wave Elasticity Imaging for Carotid Artery-Phantom Study,” 3rd Global Conference on Biomedical Engineering, Taoyuan, Taiwan, 2018.
- C.-T. Chen and B.-Y. Hsieh, “Ultrasound Angle Compounding Spinal Image,” 3rd Global Conference on Biomedical Engineering, Taoyuan, Taiwan, 2018.
- Y.-C. Kao and B.-Y. Hsieh, “Ultrafast Doppler observation in rat stroke model – Comparison with high field magnetic resonance imaging” International Ultrasonic Symposium (IUS), Kobe, Japan, 2018.
- R.-X. Huang, Y. Fu, W. Liu, Y.-T. Ma, B.-Y. Hsieh, S.-C. Chen, M.-J. Sun, and P.-C. Li, “Dual-wavelength OR-PAM with compressed sensing for cell tracking in a 3D cell culture system,” SPIE Photonics West International Symposium on Biomedical Optics, San Francisco, California, 2018.
- Y.-C. J. Kao, C.-F. Lu, P.-H. Tsai, F.-T. Hsu, B.-Y. Hsieh, and C.-Y. Chen, “Low-frequency fluctuations of resting-state fMRI BOLD signal after experimental mild traumatic brain injury,” Joint Annual Meeting ISMRM-ESMRMB, Paris, Frances, 2018.
- J. Tazoe, Y.-C. J. Kao, C.-F. Lu, P.-H. Tsai, F.-T. Hsu, B.-Y. Hsieh, and C.-Y. Chen, “Alteration in diffusion characteristics of cerebrospinal fluid after neurological disease in rats,” Joint Annual Meeting ISMRM-ESMRMB, Paris, Frances, 2018.
- B.-Y. Hsieh, S. Song, W. Wei, W.-H. Xie, Y.-C. Kao, T. Shen, R. Wang and M. O’Donnell, “Laser-generated shear wave imaging of corneal biomechanics by photoacoustic effect” International Conference on Biomedical Ultrasound, Hong Kong, 2017. (Best poster award)
- W.-H. Xie, and B.-Y. Hsieh, “Non-contact elasticity optical coherence elasticity imaging tool for ophthalmology,” Symposium of Annual Conference of the Biomedical Engineering Society, Taoyuan, Taiwan, R.O.C., Nov. 17-18, 2017. (Best poster award)
- M.-M. Tseng, T.-F. Chang, C.-J. Liao, P.-P. Tsai, and B.-Y. Hsieh, “Combination of automated breast volume scanner and digital breast tomosynthesis for breast density analysis” Symposium of Annual Conference of the Biomedical Engineering Society, Taoyuan, Taiwan, R.O.C., Nov. 17-18, 2017.
- Y.-P. Lin, Y.-X. Mao, B.-Y. Hsieh, “Development of ultrasound-mediated drug delivery system

with silicon nanoparticle drug carrier,” Symposium of Annual Conference of the Biomedical Engineering Society, Taoyuan, Taiwan, R.O.C., Nov. 17-18, 2017.

- Y.-C. J. Kao, C.-F. Lu, H.-L. Chen, P.-H. Tsai, F.-T. Hsu, H.-S. Liu, G. A. Lee, P. Blakeley, L.-C. Hsieh, B.-Y. Hsieh, and C.-Y. Chen, “Evolving functional connectivity in rats following mild traumatic brain injury,” The 25th Annual Meeting & Exhibition of ISMRM, Hawaii, USA, 2017.
- Y.-C. J. Kao, C.-F. Lu, H.-L. Chen, P.-H. Tsai, F.-T. Hsu, H.-S. Liu, G. A. Lee, P. Blakeley, L.-C. Hsieh, B.-Y. Hsieh, and C.-Y. Chen, “Behavioral and image evidence for mild traumatic brain injury in rats with the skull helmet,” The 25th Annual Meeting & Exhibition of ISMRM, Hawaii, USA, 2017.
- S. J. Yoon, J. Li, B.-Y. Hsieh, W. Tai, X. Gao, M. O’Donnell, “Highly sensitive magneto-motive photoacoustic imaging using stably doped conducting polymer nanoshells,” SPIE Photonics West International Symposium on Biomedical Optics, San Francisco, California, 2017.
- Jia-Jia Lin, Gen-Jia Chang, Chun-Yi Wu, and Bao-Yu Hsieh, “Preliminary study on synthesis of ultrasound-mediated drug carrier for neutron capture therapy,” The 11th International Symposium of Medical Imaging and Radiological Science, Taipei, Taiwan, 2016. (Best poster award)
- B.-Y. Hsieh, S. Song, T.-M. Nguyen, S. J. Yoon, T. Shen, R. Wang, and M. O’Donnell, “Elasticity imaging of speckle-free tissue regions with moving acoustic radiation force and phase-sensitive optical coherence tomography,” SPIE Photonics West International Symposium on Biomedical Optics, Proc. SPIE, 97101F-5, San Francisco, California, 2016.
- S. Song, B.-Y. Hsieh, W. Wei, T. Shen, M. O’Donnell, and Ruikang K. Wang, “Optical coherence elastography based on high speed imaging of single-shot laser-induced acoustic wave at 16 kHz frame rate,” SPIE Photonics West International Symposium on Biomedical Optics, 96971O-5, San Francisco, California, 2016.
- S. Song, B.-Y. Hsieh, W. Wei, T. Shen, M. O’Donnell, and Ruikang K. Wang, “High speed all optical shear wave imaging optical coherence elastography,” SPIE Photonics West International Symposium on Biomedical Optics, 97100B-1, San Francisco, California, 2016.
- B.-Y. Hsieh, S. Song, T.-M. Nguyen, S. J. Yoon, T. Shen, R. Wang, and M. O’Donnell, “Moving beam shear wave reconstruction for both ultrasound and optical coherence tomography applications,” International Ultrasonic Symposium, 2015.
- S. J. Yoon, B.-Y. Hsieh, C.-W. Wei, T.-M. Nguyen, B. Arnal, I. Pelivanov, and M. O’Donnell, “Optimization of the laser irradiation pattern in a high frame rate integrated photoacoustic / ultrasound (PAUS) imaging system,” International Ultrasonic Symposium, 2015.
- S.-Y. Hung, B.-Y. Hsieh, and P.-C. Li, “Optical generation of narrowband high frequency ultrasound”, SPIE Photonics West International Symposium on Biomedical Optics, San Francisco, California, Proc. SPIE, 8943, 89432Z, 2014.

- S.-Y. Hung, B.-Y. Hsieh, and P.-C. Li, “Optical generation of frequency adjustable ultrasound with multilayer structure”, Symposium of Annual Conference of the Biomedical Engineering Society, Hsinchu, Taiwan, 2013.
- B.-Y. Hsieh, S.-Y. Hung, S.-L. Chen, T. Lin, L.-J. Guo and P.-C. Li, “All-optical ultrasound and photoacoustic imaging probes”, International Conference on Biomedical Ultrasound (ICBMU), Taipei, Taiwan, 2013.
- B.-Y. Hsieh, S.-L. Chen, T. Ling, L.-J. Guo and P.-C. Li, “All-optical transducer for ultrasound and photoacoustic imaging by dichroic filtering”, International Ultrasonic Symposium, Dresden, Germany, October 7-10, 1410-1413, 2012.
- B.-Y. Hsieh and P.-C. Li, “Real-time intravascular ultrasound/photoacoustic imaging system with omni-directional light excitation”, SPIE International Symposium on Biomedical Optics, San Francisco, California, January 21-26, 2012.
- B.-Y. Hsieh, S.-L. Chen, T. Ling, L.-J. Guo and P.-C. Li, “All-optical generation and detection of acoustic waves for intravascular ultrasound and photoacoustic imaging”, International Ultrasonic Symposium, Orlando, Florida, October 18-21, 2011.
- B.-Y. Hsieh and P.-C. Li, “All-optical ultrasound/photoacoustic transducer for intravascular imaging”, Symposium of Annual Conference of the Biomedical Engineering Society, Tainan, Taiwan, R.O.C., August 19-20, 2011. (Best Paper Award)
- B.-Y. Hsieh, S.-L. Chen, T. Ling, L.-J. Guo and P.-C. Li, “Design and fabrication of an integrated intravascular ultrasound/photoacoustic scan head,” SPIE International Symposium on Biomedical Optics, San Francisco, California, January 23-28, 2010.
- Y.-L. Sheu, C.-Y. Chou, B.-Y. Hsieh and P.-C. Li, “Application of limited-view image reconstruction method to intravascular photoacoustic tomography”, SPIE International Symposium on Biomedical Optics, San Francisco, California, January 23-28, 2010.
- B.-Y. Hsieh, Y.-H. Chuang and P.-C. Li, “Development of IVPA/IVUS imaging technologies and investigation on ultrasound-assisted thrombolysis(3/3)”, Symposium of Annual Conference of the Biomedical Engineering Society, Kaohsiung, Taiwan, R.O.C., December 10-11, 2010.
- B.-Y. Hsieh and P.-C. Li, “Design and fabrication of integrated intravascular ultrasound / photoacoustic probe”, Symposium of Annual Conference of the Biomedical Engineering Society, Taipei, Taiwan, R.O.C., December 11-12, 2009. (Best Paper Award)
- B.-Y. Hsieh, S.-C. Chen and P.-C. Li, “Development of IVPA/IVUS imaging technologies and investigation on ultrasound-assisted thrombolysis (2/3)”, Symposium of Annual Conference of the Biomedical Engineering Society, Taipei, Taiwan, R.O.C., December 11-12, 2009.
- B.-Y. Hsieh, S.-C. Chen, and P.-C. Li, “Development of IVPA/IVUS imaging technologies and investigation on ultrasound-assisted thrombolysis”, International Symposium on Biomedical Engineering, Taoyuan, Taiwan, R.O.C., December 12-13, 2008.
- Y.F. Chang, B.-Y. Hsieh, H.Y. Chen, M.Y. Ng, W.C. Liu, Y.C. Chung, H.T. Wu, C. Chou

“Sensitivity enhancement of fiber-optic biosensor by localized surface plasmon-coupled emission with gold nanoparticles,” *Proceedings of SPIE*, **6447**, 64470R, 2007.

- H.T. Wu, Y.L. Chen, Y.C. Huang, W.C. Liu, M.Y. Ng, Y.F. Chang, B.Y. Hsieh, C. Chou “Colloid-gold nanoparticle enhanced detection sensitivity of paired surface plasma waves biosensor,” *Proceedings of SPIE*, **6447**, 64470S, 2007.
- Y.F. Chang, R.C. Chen, Y.C. Li, C.J. Yu, B.Y. Hsieh, C. Chou “Alpha-fetoprotein Detection by Using a Localized Surface Plasmon Coupled Fluorescence Fiber-Optic Biosensor,” *Proceedings of SPIE*, **6826**, 68261B, 2007.

Others

- C. Chou, H.T. Wu, C.J. Yu, Y.F. Chang, and B.Y. Hsieh “Fiber-optic biosensor for antigen antibody kinetic assays,” SPIE Newsroom paper, 2007.

Patents

- “醫療影像對位方法”，謝寶育、黃宗祺、陳賢德、陳佑旻、劉羿晟，中華民國專利 I683286 號 (2020/01/21 公告)。
- “医用画像アライメント法”，謝寶育、黃宗祺、陳賢德，日本專利特許証第 6792904 號
- “An image generation system”，P.-C. Li and B.-Y. Hsieh, US Patent number 9,039,622, 2015/05/26.
- “影像生成系統”，李百祺、謝寶育，中華民國專利 I459015 號 (2014/11/01 公告)。
- “Imaging probe”，P.-C. Li and B.-Y. Hsieh, US Patent number 8,262,576, 2012/09/11.
- “影像探頭”，李百祺、謝寶育，中華民國專利 I402054 號(2013/7/21 公告)。