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類別	專案師資	
職稱	助理教授	
研究領域	生醫光電工程技術、生醫光學模擬技術、光遺傳學、生物醫學工程	

學 歷		
學 校 名 稱	學 位	起 迄 年 月
國立臺灣大學 醫學工程學研究所	博士	2006 年 09 月 ~ 2012 年 06 月
中原大學 生物醫學工程學系 研究所	碩士	2003 年 09 月 ~ 2005 年 06 月
中原大學 生物醫學工程學系	學士	1999 年 09 月 ~ 2003 年 06 月
經 歷		
服 務 機 構 及 單 位	職 稱	起 迄 年 月
國立陽明交通大學 生醫工程研究所	專案助理教授	2014 年 02 月 ~ 迄今
國立陽明交通大學 光電工程學系 生醫光學影像實驗室	博士後研究員	2012 年 08 月 ~ 2014 年 01 月
國立陽明大學 牙醫學系	博士後研究員	2013 年 08 月 ~ 2014 年 01 月
國立陽明大學 生醫光電暨分子影像研究中心	博士後研究員	2012 年 09 月 ~ 2013 年 07 月
國立陽明大學 生醫光電暨分子影像研究中心 生醫光學影像實驗室	兼任研究助理	2008 年 06 月 ~ 2012 年 07 月
學 術 服 務		
2013 年 ~ 迄今	國際期刊審查委員 (Journal of Biomedical Optics)	
2012 年 ~ 迄今	國際期刊審查委員 (IEEE Transactions on Biomedical Engineering)	
2014 年	國際研討會論文審查委員 The 3rd International Conference on Biomedical Engineering and Biotechnology (ICBEB)	
2013 年	國際研討會論文審查委員 The 2nd International Conference on Biomedical Engineering and Biotechnology (ICBEB)	

A. 期刊論文 (Journal Publications)

1. Chia-Wei Sun*, **Ching-Cheng Chuang**, Chia-Yen Lee, and Chung-Ming Chen, “Diffuser-aided time-domain diffuse optical imaging: a phantom study,” *Journal of Biomedical Optics*, 19(4), pp. 046008, 2014. (SCI) **(Co-first author)**
2. Xiaonan Geng, Zhuhuang Zhou, Qiang Li, Shuicai Wu, Chiao-Yin Wang, Hao-Li Liu, **Ching-Cheng Chuang**, and Po-Hsiang Tsui*, “Comparison of ultrasound temperature imaging with infrared thermometry during radio frequency ablation,” *Japanese Journal of Applied Physics*, 53, pp. 047001, 2014. (SCI)
3. **Ching-Cheng Chuang**, Kazuyuki Nakagome, Shenghong Pu, Tsuo-Hung Lan, Chia-Yen Lee, and Chia-Wei Sun*, “Discriminant analysis of functional optical topography for schizophrenia diagnosis,” *Journal of Biomedical Optics*, 19(1), 011006, 2014. (SCI)
4. Yao-Sheng Hsieh, Shyh-Yuan Lee, Yi-Ching Ho, **Ching-Cheng Chuang**, Jui-che Tsai, Kun-Feng Lin, Chia-Wei Sun*, “Dental Optical Coherence Tomography,” *Sensors*, 13(7), pp. 8928–8949, 2013. (SCI)
5. **Ching-Cheng Chuang**, Chia-Yen Lee, Chung-Ming Chen, Yao-Sheng Hsieh, Chun-Yang Wang, and Chia-Wei Sun*, “Brain structure and spatial sensitivity profile assessing by near-infrared spectroscopy modeling based on 3D MRI data,” *Journal of Biophotonics*, 6(3), pp. 267–274, 2013. (SCI)
6. Chia-Wei Sun*, Yao-Sheng Hsieh, Yi-Ching Ho, Cho-Pei Jiang, **Ching-Cheng Chuang** and Shyh-Yuan Lee, “Characterization of tooth structure and the dentin-enamel zone based on the Stokes–Mueller calculation,” *Journal of Biomedical Optics*, 17(11), 116026, 2012. (SCI)
7. **Ching-Cheng Chuang**, Chung-Ming Chen, Yao-Sheng Hsieh, Tsan-Chi Liu, and Chia-Wei Sun*, “Patient-oriented photon migration simulation of human brain based on Monte Carlo algorithm by using MRI data,” *BioMedical Engineering Online*, 11(21), 2012. (SCI)
8. **Ching-Cheng Chuang**, Chia-Yen Lee, Chung-Ming Chen, Yao-Sheng Hsieh, Chun-Yang Wang, and Chia-Wei Sun*, “Diffuser-aided diffuse optical imaging for breast tumor: three-dimensional Monte Carlo modeling,” *IEEE Transactions on Biomedical Engineering*, 59(5), pp. 1454–1461, 2012. (SCI)
9. Chun-Yang Wang, Ming-Lung Chuang, **Ching-Cheng Chuang**, Yao-Sheng Hsieh, and Chia-Wei Sun*, “The utility of far infrared illumination in oxygenation dynamics as measured with near-infrared spectroscopy,” *Journal of Biophotonics*, 5(10), pp. 719–723, 2012. (SCI)
10. **Ching-Cheng Chuang**, Jui-che Tsai, Chung-Ming Chen, Zong-Han Yu, and Chia-Wei Sun*, “Convergence rate calculation of simultaneous iterative reconstruction technique algorithm for diffuse optical tomography image reconstruction: a feasibility study,” *Optics Communications*, 285(8), pp. 2236–2241, 2012. (SCI)
11. **Ching-Cheng Chuang**, Pei-Ning Wang, Wei-Ta Chen, Tsuo-Hung Lan, Chung-Ming Chen, Yao-Sheng Hsieh, Chun-Yang Wang, and Chia-Wei Sun *, “Near-infrared brain volumetric imaging method: A Monte Carlo study,” *IEEE Journal of Selected Topics in Quantum Electronics*, 18(3), pp. 1122–1129, 2012. (SCI)
12. Chun-Yang Wang, Ming-Lung Chuang, Yo-Wei Lin, Shinn-Jye Liang, Yao-Sheng Hsieh, **Ching-Cheng Chuang**, Jui-che Tsai, Chih-Wei Lu, Po-Lei Lee and Chia-Wei Sun*, “Diffuse

- optical multi-patch technique for tissue oxygenation monitoring: clinical study in intensive care unit,” *IEEE Transactions on Biomedical Engineering*, **59**(1), pp. 87–94, 2012. (SCI)
13. Yao-Sheng Hsieh, Yi-Ching Ho, Shyh-Yuan Lee, Chih-Wei Lu, Cho-Pei Jiang, **Ching-Cheng Chuang**, Chun-Yang Wang, and Chia-Wei Sun*, “Subgingival calculus imaging based on swept-source optical coherence tomography,” *Journal of Biomedical Optics*, **16**(7), 071409, 2011. (SCI)
 14. Chia-Yen Lee, **Ching-Cheng Chuang**, Hsin-Yu Hsieh, Wan-Rou Lee, Ching-Yen Lee, Shyang-Rong Shih, Si-Chen Lee, Chiun-Sheng Huang, Yeun-Chung Chang, and Chung-Ming Chen*, “Evaluation of Dual-Spectrum IR Spectrogram System on Invasive Ductal Carcinoma Breast Cancer,” *Biomedical Engineering: Applications, Basis and Communications*, **23**(6), pp. 427–433, 2011. (SCI)
 15. Chun-Yang Wang, **Ching-Cheng Chuang**, Yao-Sheng Hsieh, and Chia-Wei Sun*, “Fluorescence imaging of cut-open aorta by using confocal microscopy,” DOI 10.5402/2011/215627, ISRN Cardiology, 2011.
 16. Yao-Sheng Hsieh, Yi-Ching Ho, Shyh-Yuan Lee, **Ching-Cheng Chuang**, Chun-Yang Wang, and Chia-Wei Sun*, “Dental calculus image based on optical coherence tomography,” DOI 10.1117/12.874772, Proceedings of SPIE, 2011. (EI)
 17. **Ching-Cheng Chuang**, Chung-Ming Chen, Jui-che Tsai, Chih-Wei Lu, and Chia-Wei Sun*, “Study on dynamics of photon migration in human breast based on three-dimensional Monte Carlo modeling,” Proceedings of SPIE Vol. 7573, 7573–47, 2010. (EI)
 18. Yao-Sheng Hsieh, Chun-Yang Wang, Yo-Wei Lin, Ming-Lung Chuang, **Ching-Cheng Chuang**, Jui-che Tsai, Chih-Wei Lu, and Chia-Wei Sun*, “Hemodynamic analysis of patients in intensive care unit based on diffuse optical spectroscopic imaging system,” Proceedings of SPIE Vol. 7555, 7555–24, 2010. (EI)

B. 研討會論文

B-1 International Conference Papers

1. **Ching-Cheng Chuang***, Chia-Yen Lee, “Diffuser-aided time-domain diffuse optical imaging,” IEEE International Symposium on Computer, Consumer and Control, Taichuang, Taiwan, June 2014.
2. **Ching-Cheng Chuang** and Chia-Wei Sun*, “Dominant frequency analysis of prefrontal cortex: a study of resting-state functional optical topography,” SPIE Translational Biophotonics, Houston, Texas, USA, May 2014.
3. Chen-Wen Chou, **Ching-Cheng Chuang** and Chia-Wei Sun*, “Oxygenation Dynamic Monitoring Using Time-resolved Diffuse Optical Imaging System with Time Division Multiple Access,” SPIE Translational Biophotonics, Houston, Texas, USA, May 2014.
4. Chung-Jung Huang, **Ching-Cheng Chuang** and Chia-Wei Sun*, “Study on temperature effect of microcirculation using near-infrared laser Doppler system,” SPIE Translational

Biophotonics, Houston, Texas, USA, May 2014.

5. Cheng-Han Huang, Shyh-Yuan Lee, Yao-Sheng Hsieh, **Ching-Cheng Chuang** and Chia-Wei Sun*, “Periodontal Disease Diagnosis with Swept-source Doppler Optical Coherent Tomography,” SPIE Translational Biophotonics, Houston, Texas, USA, May 2014.
6. Wei-Long Kao, **Ching-Cheng Chuang** and Chia-Wei Sun*, “Study on functional electrical stimulation therapy for knee osteoarthritis complicating quadriceps muscular atrophy with near-infrared spectroscopy measurement,” SPIE Translational Biophotonics, Houston, Texas, USA, May 2014.
7. Dai-Chen Lu, **Ching-Cheng Chuang** and Chia-Wei Sun*, “Usefulness of simultaneous electroencephalography near-infrared spectroscopy in diagnosis of neurological disorders,” SPIE Translational Biophotonics, Houston, Texas, USA, May 2014.
8. **Ching-Cheng Chuang**, Yao-Sheng Hsieh, Kuen-Feng Lin, and Chia-Wei Sun*, “Resting state functional connectivity study in frontal cortex by using functional optical topography,” European Conferences on Biomedical Optics (ECBO), Munich, Germany, May 2013.
9. Yao Sheng Hsieh, Chih-Wei Lu, Yi-Ching Ho, I-Chiang Chou, **Ching-Cheng Chuang**, Wei-Cheng Huang, Shyh-Yuan Lee, and Chia-Wei Sun*, “Microleakage Detection Based on Dental Optical Coherence Tomography,” European Conferences on Biomedical Optics (ECBO), Munich, Germany, May 2013.
10. **Ching-Cheng Chuang**, Yao-Sheng Hsieh, Kuen-Feng Lin, Tsan-Chi Liu, and Chia-Wei Sun*, “Study of resting state functional connectivity on the prefrontal cortex by using functional optical topography,” BiOS 2013, SPIE Photonics West, San Francisco, USA, February 2013.
11. **Ching-Cheng Chuang**, Liu Tsan Chi, Yao-Sheng Hsieh, Kuen Feng Lin, and Chia-Wei Sun*, “Doppler diffuse optical multipatch imaging for microcirculatory monitoring,” BiOS 2013, SPIE Photonics West, San Francisco, USA, February 2013. (joint first authors, equal contribution)
12. Yao-Sheng Hsieh, Chih-Wei Lu, Yi-Ching Ho, Shyh-Yuan Lee, **Ching-Cheng Chuang**, Wei-Cheng Huang, and Chia-Wei Sun*, “Microleakage detection based on dental optical coherence tomography,” BiOS 2013, SPIE Photonics West, San Francisco, USA, February 2013.
13. Kuen Feng Lin, Yao-Sheng Hsieh, **Ching-Cheng Chuang**, Tsan-Chi Liu, and Chia-Wei Sun*, “Tooth structure characterization and dentin-enamel zone identification based on Stokes-Mueller calculation,” BiOS 2013, SPIE Photonics West, San Francisco, USA, February 2013.
14. **Ching-Cheng Chuang**, I-Jen Chiang, Tsuo-Hung Lan, Chung-Ming Chen, Yao-Sheng Hsieh, Chun-Yang Wang, Ching-Po Lin, and Chia-Wei Sun*, “Discriminant analysis of functional near-infrared imaging for schizophrenia diagnosis,” BiOS 2012, SPIE Photonics West, San Francisco, USA, January 2012.

15. **Ching-Cheng Chuang**, Tsuo-Hung Lan, Chung-Ming Chen, Yao-Sheng Hsieh, Chun-Yang Wang, Ching-Po Lin, and Chia-Wei Sun*, “Near-infrared brain volumetric imaging for neurodegenerative diseases diagnosis: a feasibility study based on Monte Carlo simulation,” BiOS 2012, SPIE Photonics West, San Francisco, USA, January 2012.
16. Yao-Sheng Hsieh, Yi-Ching Ho, Chih-Wei Lu, Cho-Pei Jiang, **Ching-Cheng Chuang**, Chun-Yang Wang, and Chia-Wei Sun*, “Subgingival calculus detection by swept-source optical coherence tomography,” BiOS 2012, SPIE Photonics West, San Francisco, USA, January 2012.
17. Yao-Sheng Hsieh, Yi-Ching Ho, Shyh-Yuan Lee, **Ching-Cheng Chuang**, Chun-Yang Wang, and Chia-Wei Sun*, “Tooth structure analyzing by use of Stokes formalism and Mueller matrix,” BiOS 2012, SPIE Photonics West, San Francisco, USA, January 2012.
18. **Ching-Cheng Chuang**, Chung-Ming Chen, Yao-Sheng Hsieh, Chun-Yang Wang, and Chia-Wei Sun*, “Study on the early diagnosis of Alzheimer's disease with near-infrared spectroscopy based on three-dimensional Monte Carlo modeling,” BiOS 2011, SPIE Photonics West, San Francisco, USA, January 2011.
19. **Ching-Cheng Chuang**, Chung-Ming Chen, Yao-Sheng Hsieh, Chun-Yang Wang, and Chia-Wei Sun*, “Study on diffuser-aided diffuse optical tomography for breast imaging based on three-dimensional Monte Carlo modeling,” BiOS 2011, SPIE Photonics West, San Francisco, USA, January 2011.
20. **Ching-Cheng Chuang**, Chun-Yang Wang, Chih-Ching Lin, Yao-Sheng Hsieh, and Chia-Wei Sun*, “Study on extremity oxygenation assessing of hemodialysis patients based on near-infrared spectroscopy,” BiOS 2011, SPIE Photonics West, San Francisco, USA, January 2011.
21. Yao-Sheng Hsieh, Yi-Ching Ho, Shyh-Yuan Lee, Chih-Wei Lu, **Ching-Cheng Chuang**, Chun-Yang Wang, and Chia-Wei Sun*, “Subgingival calculus imaging based on swept-source optical coherence tomography,” BiOS 2011, SPIE Photonics West, San Francisco, USA, January 2011.
22. Yao-Sheng Hsieh, Yi-Ching Ho, Shyh-Yuan Lee, Chih-Wei Lu, **Ching-Cheng Chuang**, Chun-Yang Wang, and Chia-Wei Sun*, “Dentin enamel junction characterization by use of Stokes-Mueller formalism,” BiOS 2011, SPIE Photonics West, San Francisco, USA, January 2011.
23. Chun-Yang Wang, Shinn-Jye Liang, Ming-Lung Chuang , **Ching-Cheng Chuang**, Yao-Sheng Hsieh, and Chia-Wei Sun*, “Skeletal muscle oxygenation assessment by near-infrared spectroscopy in intensive care medicine,” BiOS 2011, SPIE Photonics West, San Francisco, USA, January 2011.
24. **Ching-Cheng Chuang**, Chung-Ming Chen, Yao-Sheng Hsieh, Chun-Yang Wang, Po-Lei Lee, Chih-Wei Lu, and Chia-Wei Sun*, “Study on human breast imaging by use of three-dimensional Monte Carlo modeling,” XII International Conference on Laser Applications

in Life Sciences (LALS-2010), Oulu, Finland, June 2010.

25. Chun-Yang Wang, Shinn-Jye Liang, **Ching-Cheng Chuang**, Yao-Sheng Hsieh, Chih-Wei Lu, Po-Lei Lee, and Chia-Wei Sun*, “Oxygenation signals analysis of patients in intensive care unit based on near-infrared spectroscopy,” XII International Conference on Laser Applications in Life Sciences (LALS-2010), Oulu, Finland, June 2010.
26. Yao-Sheng Hsieh, Yi-Ching Ho, Shyh-Yuan Lee, Chih-Wei Lu, **Ching-Cheng Chuang**, Chun-Yang Wang, Po-Lei Lee, and Chia-Wei Sun*, “Subgingival calculus imaging based on optical coherence tomography,” XII International Conference on Laser Applications in Life Sciences (LALS-2010), Oulu, Finland, June 2010.
27. **Ching-Cheng Chuang**, Chung-Ming Chen, Jui-che Tsai, Chih-Wei Lu, and Chia-Wei Sun*, “Study on dynamics of photon migration in human breast based on three-dimensional Monte Carlo modeling,” Bios 2010, Photonics West, San Francisco, USA, January 2010.
28. Yao-Sheng Hsieh, Chun-Yang Wang, Yo-Wei Lin, Ming-Lung Chuang, **Ching-Cheng Chuang**, Jui-che Tsai, Chih-Wei Lu, and Chia-Wei Sun*, “Hemodynamic analysis of patients in intensive care unit based on diffuse optical spectroscopic imaging system,” BiOS 2010, SPIE Photonics West, San Francisco, USA, January 2010.

B-2 Domestic Conference Papers

1. **Ching-Cheng Chuang**, Kazuyuki Nakagome, Tsuo-Hung Lan, Yao-Sheng Hsieh, Kuen-Feng Lin, Tsan-Chi Liu, and Chia-Wei Sun* “Diffuse optical imaging of brain functional detection for schizophrenic patients and healthy subjects,” Optics & Photonics Taiwan, International Conference 2012, Taipei, Taiwan, R.O.C., December 2012.
2. **Ching-Cheng Chuang**, Tsuo-Hung Lan, Chung-Ming Chen, Yao-Sheng Hsieh, Chun-Yang Wang, Ching-Po Lin, and Chia-Wei Sun*, “Alzheimer’s disease diagnosis based on near-infrared brain volumetric imaging: a feasibility study by detecting brain structural information with Monte Carlo simulation,” International Photonics Conference 2011, Tainan, Taiwan, R.O.C., December 2011.
3. Chun-Yang Wang, Ming-Lung Chuang, Yo-Wei Lin, Shinn-Jye Liang, Yao-Sheng Hsieh, **Ching-Cheng Chuang**, Jui-che Tsai, Chih-Wei Lu, Po-Lei Lee, and Chia-Wei Sun*, “Skeletal muscle oxygenation measured at venous occlusion by diffuse optical spectroscopy imaging in Intensive care medicine,” Optics and Photonics Taiwan 2010, Tainan, Taiwan, R.O.C., December 2010. (2010 臺灣光電科技研討會暨國科會光電學門成果發表會優秀論文獎)
4. Yao-Sheng Hsieh, Yi-Ching Ho, Shyh-Yuan Lee, Chih-Wei Lu, **Ching-Cheng Chuang**, Chun-Yang Wang, and Chia-Wei Sun*, “Dental calculus image based on optical coherence tomography,” Optics and Photonics Taiwan 2010, Tainan, Taiwan, R.O.C., December 2010.
5. **Ching-Cheng Chuang**, Chung-Ming Chen, Chia-Yen Lee, Yao-Sheng Hsieh, Chun-Yang Wang, Arthur Chiou, Jui-che Tsai, Po-Lei Lee, Chih-Wei Lu, and Chia-Wei Sun*, “Dynamics modeling of photon migration in human breast based on the three-dimensional Monte Carlo

algorithm,” Optics and Photonics Taiwan 2009, Taipei, Taiwan, R.O.C., December 2009.

6. Chun-Yang Wang, Shinn-Jye Liang, Yao-Sheng Hsieh, **Ching-Cheng Chuang**, Ming-Lung Chuang, Arthur Chiou, Jui-che Tsai, Chung-Ming Chen, Po-Lei Lee, Chih-Wei Lu, and Chia-Wei Sun*, “Metabolic detection of extremities during venous occlusion test based on near-infrared spectroscopy,” Optics and Photonics Taiwan 2009, Taipei, Taiwan, R.O.C., December 2009.
7. Yao-Sheng Hsieh, Yu-Tsung Wu, Arthur Chiou, Chun-Yang Wang, **Ching-Cheng Chuang**, Ming-Lung Chuang, Chung-Ming Chen, Jui-che Tsai, Chih-Wei Lu, Po-Lei Lee, and Chia-Wei Sun*, “Correlations between tissue oxygenation and erythrocyte elasticity in human tissue,” Optics and Photonics Taiwan 2009, Taipei, Taiwan, R.O.C., December 2009.

C. 專書 (Books)

1. Chia-Wei Sun*, **Ching-Cheng Chuang**, “Chapter 3: Hemodynamics study based on near-infrared optical assessment,” Hemodynamics, ISBN 979-953-307-404-6, Intech, Croatia, 2012. (Co-first author)

榮譽與獎勵

2012 年 第九屆國家新創獎
得獎題目：近紅外光大腦體積造影 (Near-infrared brain volumetric imaging)