Personal Data

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Alvin, Chia-Feng Lu, Ph.D.

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Education

National Yang-Ming University Taipei, Taiwan
2007-2012 Ph.D. Department of Biomedical Imaging and Radiological Sciences

National Yang-Ming University Taipei, Taiwan
2002-2006 BSc Department of Medical Radiation Technology

Current Positions

02/2025 – present, Professor, Department of Biomedical Imaging and Radiological Sciences, National Yang Ming Chiao Tung University, Taipei, Taiwan

08/2024 – present, Associate Dean, Office of Student Affairs, National Yang Ming Chiao Tung University, Taipei, Taiwan

11/2022 – present, Director, Bilingual Education Promotion Task Force, College of Biomedical Science and Engineering, National Yang Ming Chiao Tung University, Taipei, Taiwan

02/2025 – present, Professor (Joint Appointment), Bachelor Program in Digital Healthcare, National Yang Ming Chiao Tung University, Taipei, Taiwan

Work Experience

08/2020 – 01/2025, Associate Professor, Department of Biomedical Imaging and Radiological Sciences, National Yang Ming Chiao Tung University, Taipei, Taiwan

02/2018 – 07/2020, Assistant Professor, Department of Biomedical Imaging and Radiological Sciences, National Yang-Ming University, Taipei, Taiwan

11/2021 – 07/2024, Deputy Director, English as Medium of Instruction (EMI) Teaching and Learning Center, National Yang Ming Chiao Tung University, Taipei, Taiwan

08/2022 – 01/2025, Associate Professor (Joint Appointment), Bachelor Program in Digital Healthcare, National Yang Ming Chiao Tung University, Taipei, Taiwan

08/2018 – 07/2020, Assistant Professor (Joint Appointment), Institute of Biophotonics, National

Yang-Ming University, Taipei, Taiwan

08/2020－07/2023, Associate Professor (Joint Appointment), Institute of Biophotonics, National Yang Ming Chiao Tung University, Taipei, Taiwan

08/2017－01/2018, Assistant Professor, Department of Anatomy and Cell Biology, School of Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan

09/2015－02/2018, Chief Executive Officer, Translational Imaging Research Center, College of Medicine, Taipei Medical University, Taipei, Taiwan

09/2014－07/2017, Assistant Research Fellow, Translational Imaging Research Center, College of Medicine, Taipei Medical University, Taipei, Taiwan

08/2013－08/2014, Assistant Professor, Department of Physical Therapy and Assistive Technology, National Yang-Ming University, Taipei, Taiwan

01/2013－07/2013, Postdoctoral Fellow, Department of Biomedical Imaging and Radiological Sciences, National Yang-Ming University, Taipei, Taiwan

08/2015 － 01/2018, Adjunct Assistant Professor, Department of Biomedical Imaging and Radiological Sciences, National Yang-Ming University, Taipei, Taiwan

08/2015－07/2017, Adjunct Assistant Professor, Department of Radiology, School of Medicine, Taipei Medical University, Taipei, Taiwan

08/2014－07/2017, Adjunct Assistant Professor, Department of Physical Therapy and Assistive Technology, National Yang-Ming University, Taipei, Taiwan

01/2014－07/2014, Adjunct Assistant Research Fellow, Taipei City Hospital, Taipei, Taiwan

Personal Statement

Dr. Chia-Feng Lu, Ph.D., is a board-certified radiological technologist and associate professor in Taiwan. For the past nine years, he designed and taught more than fifteen courses related to computer science, programming language, medical imaging techniques, and image analysis for undergraduate and graduate students. Not only in-class teaching, but he is also continuously providing online self-learning materials, including more than 350 YouTube teaching videos that accumulated over 120-thousand-hour viewing time. He was awarded the College Outstanding Teaching Award in the College of Biomedical Science and Engineering and participated in the innovative teaching program to redesign the course of programming language and implement new teaching technologies to enhance student learning. He works closely with colleagues and students to continuously improve the teaching and learning environment in higher education of medical imaging. A major research focus recently is to develop image platforms and artificial intelligence in quantifying tumor phenotypes, predicting treatment outcomes using multimodal radiomics (MR/CT/PET/US), and performing neurological studies of fNIRS, fMRI, and DTI. The issue of patentability and the subsequent technique transfer for the developed techniques and platforms is of interest to him.

Certificates & Memberships

1. Professor Certificate, Ministry of Education, Reg. No: 148820, 2025, Taiwan.
2. Associate Professor Certificate, Ministry of Education, Reg. No: 147350, 2020, Taiwan.
3. Assistant Professor Certificate, Ministry of Education, Reg. No: 038138, 2013, Taiwan.
4. Certificate of Medical Radiation Technologist, Ministry of Health and Welfare, Reg. No: 005201, 2006, Taiwan.
5. Senior Fellowship Certificate (SFHEA), UK Professional Standards Framework, Advance HE, Reference No. PR265970, 2023, United Kingdom.
   (SFHEA Fellowship is accepted by Association for Medical Education in Europe (AMEE) as evidence to achieve AMEE Fellowship.)
6. Fellowship Certificate (FHEA), UK Professional Standards Framework, Advance HE, Reference No. PR209962, 2021, United Kingdom.
   (FHEA Fellowship is accepted by Association for Medical Education in Europe (AMEE) as evidence to achieve AMEE Associate Fellowship.)
7. English Medium Instruction Certificate for University Lecturers, Oxford EMI Training, Reg. 10674286, 2023, Oxford, United Kingdom.
8. Certificate of completion for EMI PD courses, Center for Higher Education EMI Professional Development, 2023, Taiwan.
9. Certificate of MRI IDEA Sequence Programming (MR8SDE), SIEMENS, Identification Number: CAD2W0A, Instructor: Mark A. Brown, August 2015.
10. Member of International Society for Magnetic Resonance in Medicine (ISMRM), USA.
11. Member of IEEE society, USA.
12. Member of Radiological Society of North America (RSNA), USA.
13. Member of Taiwan Society of Radiological Technologists (TWSRT), Taiwan.
14. Member of Taiwan Society of Molecular Imaging (TSMI), Taiwan.
15. Member of Taiwan Society of Medical Imaging and Radiological Sciences (TSMIRS), Taiwan.

Rewards

1. Teaching and Research Outstanding Award (績優教研人員獎勵), College of Biomedical Science and Engineering, National Yang Ming Chiao Tung University, 2025-2027.
2. Distinguished Alumni of the College of Biomedical Science and Engineering (醫工院傑出校友), National Yang Ming Chiao Tung University, 2025.
3. Teaching Excellence Award (校級傑出教學獎), National Yang Ming Chiao Tung University, 2024.
4. Excellent Mentor for International Students Award (輔導境外學生績優教師獎), National Yang Ming Chiao Tung University, 2024.
5. Silver Medal Award, Taiwan Innotech Expo Invention Competition (台灣創新技術博覽會發明競賽), Patent name: Benign tumor development trend assessment system, 2024.

6. Outstanding Paper Award (Predicting survival after radiosurgery in patients with lung cancer brain metastases using deep learning of radiomics and EGFR status), Veterans General Hospitals and University System of Taiwan Joint Research Program (VGHUST), 2024.
7. ISMRM Merit Award (Magna cum Laude Awards, silver award). Prediction of Long-term Motor Function Based on Functional Connectivity in Ischemic Stroke after Intra-arterial Thrombectomy. The 33rd Annual Meeting & Exhibition of ISMRM, 2024.
8. Best Paper Award (International Application of Lesion Detection on Digital Breast Tomosynthesis: Comparing Western and Eastern Databases), Taiwan Society of Molecular Imaging and National Atomic Research Institute, 2024.
9. Teaching and Research Outstanding Award (績優教研人員獎勵), College of Biomedical Science and Engineering, National Yang Ming Chiao Tung University, 2023-2025.
10. National Innovation Award (2023 國家新創精進獎), DeepBT intelligent system for precision medicine in brain tumors: Longitudinal lesion segmentation and outcome prediction after radiosurgery, Research Center for Biotechnology and Medicine Policy, 2023.
11. English as a Medium of Instruction (EMI) Teaching Award, College of Biomedical Science and Engineering, National Yang Ming Chiao Tung University, 2023.
12. Future Technology Award (2022 未來科技獎), DeepBT intelligent system for precision medicine in brain tumors: Longitudinal lesion segmentation and outcome prediction after radiosurgery, National Science and Technology Council, 2022.
13. National Innovation Award (2022 國家新創獎), DeepBT intelligent system for precision medicine in brain tumors: Longitudinal lesion segmentation and outcome prediction after radiosurgery, Research Center for Biotechnology and Medicine Policy, 2022.
14. First Prize Outstanding Paper Award (黃忠山學術論文獎: Prediction of pseudoprogression and long-term outcome of vestibular schwannoma after Gamma Knife radiosurgery based on preradiosurgical MR radiomics), Taiwan Society of Medical Imaging and Radiological Sciences, 2022.
15. Outstanding Paper Award (Enhancement of Radiosurgical Treatment Outcome Prediction Using MRI Radiomics in Patients with Non-Small Cell Lung Cancer Brain Metastases), Veterans General Hospitals and University System of Taiwan Joint Research Program (VGHUST), 2022.
16. Faculty Academic Excellence Awards (教師學術卓越獎勵), College of Biomedical Science and Engineering, National Yang Ming Chiao Tung University, 2021-2023.
17. Outstanding Clinical Paper Award (Comparison of Conventional and Radiomic Features between 18F-FBPA PET/CT and PET/MR), Taiwan Society of Neutron Capture Therapy (TSNCT), 2022.
18. Featured Teaching Excellence Award - Computer Sciences (特色教學傑出獎), National Yang Ming Chiao Tung University, 2021.
19. College Outstanding Teaching Award (院級教學傑出獎), College of Biomedical Science and Engineering, National Yang-Ming University, 2020.
20. ISMRM Merit Award (Magna cum Laude Awards, silver award). Using MR Radiomics to

Improve Prediction of Local Tumor Control after Radiosurgery in Brain Metastases. The 29th Annual Meeting & Exhibition of ISMRM, 2021.

21. ISMRM Merit Award (Summa cum Laude Awards, golden award). Association of Brain Functional Connectivity with Dizziness is Modulated by Executive Functions in Mild Traumatic Brain Injury. The 28th Annual Meeting & Exhibition of ISMRM, 2020.
22. Research of Excellence, Young Investigator Awards for Pediatric Neuropsychiatric Science, President Award of National Health Research Institutes, 2019.
23. Selected Nomination for Young Investigator Awards for Pediatric Neuropsychiatric Science, An-An Slow Angels Family Support Association, 2019.
24. Golden Medal. Disruption and Compensatory Enhancement of Functional Connectivity are Associated with Post-Concussion Symptoms in Mild Traumatic Brain Injury. the 14th International Symposium on Medical Imaging and Radiology, 2019.
25. Superior Award. MR Radiomics Based Machine Learning to Predict Hemorrhage After Gamma Knife Radiosurgery in Cerebral Cavernous Malformation). the 14th International Symposium on Medical Imaging and Radiology, 2019.
26. Excellent Research Award: Medical Technology and Engineering, National Yang-Ming University, 2007.
27. The Phi Tau Phi Scholastic Honor Society Member, 2006.

Peer-Reviewed Journal Publications

1. **Chia-Feng Lu**, Fei-Ting Hsu, Kevin Li-Chun Hsieh, Yu-Chieh Jill Kao, Sho-Jen Cheng, Bo-Kai Hsu, Ping-Huei Tsai, Ray-Jade Chen, Chao-Ching Huang, Yun Yen, Cheng-Yu Chen. Machine Learning-Based Radiomics for Molecular Subtyping of Gliomas. ***Clinical Cancer Research***, 24(18):4429-4436, **2018**. (SCI, 2024 IF=10.2, Q1)
2. Po-Chien Shen, Wei-Kai Chuang, Yang-Hong Dai, Cheng-Hsiang Lo, Yu-Fu Su, Jen-Fu Yang, Wen-Yen Huang, Chun-Shu Lin, **Chia-Feng Lu***, Identification of a Suitable Subgroup for Radiation Dose Escalation in Definitive Concurrent Chemoradiation Therapy for Non-Metastatic Esophageal Squamous Cell Carcinoma. ***JCO Precision Oncology***, 8:e2400555, **2024**. (SCI, 2024 IF=5.6, Q1)
3. Huai-Che Yang, Chih-Chun Wu, Cheng-Chia Lee, Huai-En Huang, Wei-Kai Lee, Wen-Yuh Chung, Hsiu-Mei Wu, Wan-Yuo Guo, Yu-Te Wu, **Chia-Feng Lu***. Prediction of Pseudoprogression and Long-term Outcome of Vestibular Schwannoma after Gamma Knife Radiosurgery based on Preradiosurgical MR Radiomics. ***Radiotherapy and Oncology***, 155:123-130, **2021**. (SCI, 2024 IF=5.3, Q1)
4. Bing-Fong Lin, Fei Hon, Mu-Yun Lin, Po-Yi Tsai, **Chia-Feng Lu***. Right Arcuate Fasciculus as Outcome Predictor after Low-Frequency Repetitive Transcranial Magnetic Stimulation in Nonfluent Aphasic Stroke. ***European Journal of Neurology***, 30:2031-2041, **2023** (SCI, 2024 IF=3.9, Q1).

5. Chun-Yi Lin#, **Chia-Feng Lu#**, Chi-Wen Jao, Po-Shan Wang, Yu-Te Wu. Toward Consistency between Humans and Classifiers: Improved Performance of a Real-Time Brain–Computer Interface Using a Mutual Learning System. ***Expert Systems with Applications***, 226:120205, **2023**. (SCI, 2024 IF=7.5, Q1) #Co-first author
6. Hsueh-Ching Tseng, Huei-Mei Liu, Pei-Hsuan Lin, Tien-Chen Liu, Lu Lu, Chun-Ying Wang, **Chia-Feng Lu***, Chen-Chi Wu. Predicting Variability in Pediatric Cochlear Implant Outcomes through Synchronous Brain Activation Patterns: Insights from fNIRS. ***Hearing Research***, 465:109347, **2025**. (SCI, 2024 IF=2.5, Q1)
7. Chien-Yi Liao, Cheng-Chia Lee, Huai-Che Yang, Ching-Jen Chen, Wen-Yuh Chung, Hsiu-Mei Wu, Wan-Yuo Guo, Ren-Shyan Liu, **Chia-Feng Lu***. Predicting Survival after Radiosurgery in Patients with Lung Cancer Brain Metastases Using Deep Learning of Radiomics and EGFR Status. ***Physical and Engineering Sciences in Medicine***, 46:585–596, **2023**. (SCI, 2024 IF=2.0, Q3)
8. **Chia-Feng Lu**, Bing-Wen Soong, Hsiu-Mei Wu, Shin Teng, Po-Shan Wang, Yu-Te Wu. Disrupted Cerebellar Connectivity Reduces Whole-Brain Network Efficiency in Multiple System Atrophy. ***Movement Disorders***, 28(3):362-369, **2013**. (SCI, 2024 IF=7.6, Q1)
9. Cheng-Ta Li, **Chia-Feng Lu**, Hui-Ching Lin, Ying-Zu Huang, Chi-Hung Juan, Tung-Ping Su, Ya-Mei Bai, Mu-Hong Chen, Wei-Chen Lin, Cortical Inhibitory and Excitatory Function in Drug-Naive Generalized Anxiety Disorder. ***Brain Stimulation,*** 10(3):604-608, **2017**. (SCI, 2024 IF=8.4, Q1)
10. Chien-Yi Liao, Yuh-Min Chen, Yu-Te Wu, Heng-Sheng Chao, Hwa-Yen Chiu, Ting-Wei Wang, Jyun-Ru Chen, Tsu-Hui Shiao, **Chia-Feng Lu***, Personalized Prediction of Immunotherapy Response in Lung Cancer Patients Using Advanced Radiomics and Deep Learning. ***Cancer Imaging***, 24:129, **2024**. (SCI, 2024 IF=3.5, Q1)
11. **Chia-Feng Lu**, Chien-Yi Liao, Heng-Sheng Chao, Hwa-Yen Chiu, Ting-Wei Wang, Yen Lee, Jyun-Ru Chen, Tsu-Hui Shiao, Yuh-Min Chen, Yu-Te Wu. A Radiomics-Based Deep Learning Approach to Predict Progression Free-Survival after Tyrosine Kinase Inhibitor Therapy in Non-small Cell Lung Cancer. ***Cancer Imaging***, 23:9, **2023**. (SCI, 2024 IF=3.5, Q1)
12. Po-Chien Shen, Wen-Yen Huang, Yang-Hong Dai, Cheng-Hsiang Lo, Jen-Fu Yang, Yu-Fu Su, Ying-Fu Wang, **Chia-Feng Lu***, Chun-Shu Lin*. Radiomics-based predictive model of radiation induced liver disease in hepatocellular carcinoma patients receiving stereotactic body radiotherapy. ***Biomedicines***, 10(3), 597, **2022**. (SCI, 2024 IF=3.9, Q1)
13. Chien-Yi Liao, Jun-Hsuang Jen, Yi-Wei Chen, Chien-Ying Li, Ling-Wei Wang, Ren-Shyan Liu, Wen-Sheng Huang*, **Chia-Feng Lu***, Comparison of Conventional and Radiomic Features between 18F-FBPA PET/CT and PET/MR. ***Biomolecules***, 11, 1659, **2021**. (SCI, 2024 IF=4.8, Q1)
14. Ling Kuo, Guan-Jie Wang, Shih-Ling Chang, Yenn-Jiang Lin, Fa-Po Chung, Li-Wei Lo, Yu-Feng Hu, Tze-Fan Chao, Ta-Chuan Duan, Jo-Nan Liao, Ting-Yung Chang, Chin-Yu Lin, Chih-Min Liu,

Shin-Huei Liu, Ming-Ren Kuo, Guan-Yi, Lee, Yu-Shan, Huang, Cheng-I Wu, Shih-Ann Chen*, **Chia-Feng Lu***, The Feasibility of Auto-quantified Epicardial Adipose Tissue in Predicting Atrial Fibrillation Recurrence after Catheter Ablation. ***Circulation Journal***, 88(7):1089-1098, **2024**. (SCI, 2024 IF=3.7, Q1)

15. Chien-Yi Liao, Cheng-Chia Lee, Huai-Che Yang, Ching-Jen Chen, Wen-Yuh Chung, Hsiu-Mei Wu, Wan-You Guo, Ren-Shyan Liu, **Chia-Feng Lu***. Enhancement of Radiosurgical Treatment Outcome Prediction Using MRI Radiomics in Patients with Non-Small Cell Lung Cancer Brain Metastases. ***Cancers***, 13:4030, **2021.** (SCI, 2024 IF=4.5, Q1)
16. Kuei-Yuan Hou, Jyun-Ru Chen, Yung-Chen Wang, Ming-Huang Chiu, Sen-Ping Lin, Yuan-Heng Mo, Shih-Chieh Peng, **Chia-Feng Lu***. Radiomics-Based Deep Learning Prediction of Overall Survival in Non-Small Cell Lung Cancer Using Contrast-Enhanced Computed Tomography. ***Cancers***, 14:3798, **2022.** (SCI, 2024 IF=4.4, Q2)
17. Jyun-Ru Chen, Chun-Jen Lin, Feng-Chi Chang, I-Hui Lee, **Chia-Feng Lu***. Territory-related functional connectivity changes associated with verbal memory decline in patients with unilateral asymptomatic internal carotid stenosis. ***American Journal of Neuroradiology***, 45(7):934-942, **2024**. (SCI, 2024 IF=3.7, Q1)
18. Jyun-Ru Chen, Kuei-Yuan Hou, Yung-Chen Wang, Sen-Ping Lin, Yuan-Heng Mo, Shih-Chieh Peng, **Chia-Feng Lu***. Enhance Malignancy Prediction of Small Lung Nodules in Different Populations Using Transfer Learning on Low-Dose Computed Tomography. ***Diagnostics***, 15:1460, **2025**. (SCI, 2024 IF=3.3, Q1)
19. Chih-Yung Chang, Tse-Hao Lee, Ren-Shyan Liu, Chien-Ying Li, Bang-Hung Yang, Weng-Yi Chang, Tzu-Ping Lin*, Chi-Wei Chang, Shan-Fan Yao, Tzu-Chun Wei, Chien-Yuan Lin, Charng-Chyi Shieh, **Chia-Feng Lu***, Fractionated Deep-inspiration breath-hold ZTE Compared with Free-breathing four-dimensional ZTE for Detecting Pulmonary Nodules in Oncological Patients underwent PET/MRI. ***Scientific Reports***, 11(1)1-9, **2021**. (SCI, 2024 IF=3.9, Q1)
20. Bing-Fong Lin, Shih-Ching Yeh, Yu-Chieh Kao, **Chia-Feng Lu***, Po-Yi Tsai*, Functional Remodeling Associated with Language Recovery after Repetitive Transcranial Magnetic Stimulation in Chronic Aphasic Stroke. ***Frontiers in Neurology***, 13:809843, **2022**. (SCI, 2024 IF=2.8, Q2)
21. Ling Kuo, Guan-Jie Wang, Po-Hsun Su, Shih-Ling Chang, Yenn-Jiang Lin, Fa-Po Chung, Li-Wei Lo, Yu-Feng Hu, Chin-Yu Lin, Ting-Yung Chang, Shih-Ann Chen, **Chia-Feng Lu***, Deep Learning-based Workflow for Automatic Extraction of Atria and Epicardial Adipose Tissue on cardiac Computed Tomography in Atrial Fibrillation. ***Journal of the Chinese Medical Association***, 87(5):471-479, **2024**. (SCI, 2024 IF=2.4, Q1)
22. **Chia-Feng Lu**, Po-Shan Wang, Yuan-Lin Lao, Hsiu-Mei Wu, Bing-Wen Soong, Yu-Te Wu. Medullo-ponto-cerebellar White Matter Degeneration Altered Brain Network Organization and Cortical Morphology in Multiple System Atrophy. ***Brain Structure & Function***, 219(3):947-958, **2014**. (SCI, 2024 IF=2.9, Q1)

† Key Research Article on Psychology Progress

23. Yan-Ci Liu, Yea-Ru Yang, Yun-An Tsai, Ray-Yau Wang*, **Chia-Feng Lu***. Brain activation and gait alteration during cognitive and motor dual task walking in stroke - a functional near-infrared spectroscopy study. ***IEEE Transactions on Neural Systems & Rehabilitation Engineering***, 26(12): 2416-2423, **2018**. (SCI, 2024 IF=5.2, Q1) ***: corresponding authors.**
24. **Chia-Feng Lu***, Yu-Te Wu, Shin Teng, Po-Shan Wang, Pei-Chi Tu, Tung-Ping Su, Chi-Wen Jao, Cheng-Ta Li*. Genetic Predisposition and Disease Expression of Bipolar Disorder Reflected in Shape Changes of the Anterior Limbic Network. ***Brain Sciences,*** 9(9), 240, **2019**. (SCI, 2024 IF=2.8, Q3)
25. **Chia-Feng Lu**, Yan-Ci Liu, Yea-Ru Yang, Yu-Te Wu, Ray-Yau Wang. Maintaining Gait Performance by Cortical Activation During Dual-Task Interference: A Functional Near-Infrared Spectroscopy Study. ***PLoS ONE***, 10(6): e0129390, **2015**. (SCI, 2024 IF=2.6, Q2)
26. Shih-Pin Hsu, **Chia-Feng Lu**, Bing-Fong Lin, Chih-Wei Tang, I-Ju Kuo, Yun-An Tsai, Chao-Yu Guo, Po-Lei Lee, Kuo-Kai Shyu, David M Niddam, I-Hui Lee. Effects of bihemispheric transcranial direct current stimulation on motor recovery in subacute stroke patients: a double-blind, randomized sham-controlled trial. ***Journal of NeuroEngineering and Rehabilitation***, 20(1):27, **2023**. (SCI, 2024 IF=5.2, Q1)
27. Ching Cheng, **Chia-Feng Lu**, Bao-Yu Hsieh, Shu-Hui Huang, Yu-Chieh Jill Kao. Anisotropy component of DTI reveals long-term neuroinflammation following repetitive mild traumatic brain injury in rats. ***European Radiology Experimental***, 8:82, **2024**. (SCI, 2024 IF=3.6, Q1)
28. Jun Tazoe, **Chia-Feng Lu**, Bao-Yu Hsieh, Cheng-Yu Chen, Yu-Chieh Jill Kao. Altered diffusivity of the subarachnoid cisterns in the rat brain following neurological disorders. ***Biomedical Journal***, 46:134-143, **2023**. (SCI, 2023 IF=4.4, Q2)
29. Hsiang-Jung Tseng, **Chia-Feng Lu**, Jia-Shyun Jeng, Chih-Ming Cheng, Jui-Wen Chu, Mu-Hong Chen, Ya-Mei Bai, Shih-Jen Tsai, Tung-Ping Su, Cheng-Ta Li. Frontal Asymmetry as a Core Feature of Major Depression: A Functional Near-infrared Spectroscopy Study. ***Journal of Psychiatry & Neuroscience***, 47(3):186-193, **2022**. (SCI, 2024 IF=3.3, Q2)
30. Pang-Wei Chang, **Chia-Feng Lu**, Shin-Tsu Chang, Po-Yi Tsai. Functional Near-Infrared Spectroscopy as A Target Navigator for rTMS Modulation in Patients with Hemiplegia: A Randomized Control Study. ***Neurology and Therapy***, 11(1):103-21, **2021**. (SCI, 2024 IF=4.8, Q1)
31. Chun-Yi Lin, **Chia-Feng Lu**, Han-Mei Lu, Chi-Wen Jao, Po-Shan Wang, Yu-Te Wu. Using Fuzzy Classifier in Ensemble Method for Motor-Imagery Electroencephalography Classification. ***International Journal of Fuzzy Systems***, 23:2417–2431, **2021**. (SCI, 2024 IF=3.6, Q2)
32. Cheng-Ta Li#, **Chia-Feng Lu#**, Yu-Te Wu, Szu-Hui Lee, Ruei-Wen Chu, Tung-Ping Su. Attenuated Motor Cortical Responsiveness to Motor and Cognitive Tasks in Generalized Anxiety Disorder. ***Neuropsychiatry***, 8(3): 843-853, **2018**. (SCI, 2016 IF=4.778, Q1) **#: equal contribution.**

33. **Chia-Feng Lu**, Wan-Yuo Guo, Feng-Chi Chang, Shang-Ran Huang, Yen-Chun Chou, Yu-Te Wu. Hemodynamic Segmentation of Brain Perfusion Images with Delay and Dispersion Effects Using an Expectation-Maximization Algorithm. ***PLoS ONE***, 8(7): e68986, **2013**. (SCI, 2024 IF=2.6, Q2)
34. Shin Teng#, **Chia-Feng Lu#**, Po-Shan Wang, Cheng-Ta Li, Pei-Chi Tu, Chih-I Hung, Tung-Ping Su, Yu-Te Wu. Altered Resting-State Functional Connectivity of Striatal-Thalamic Circuit in Bipolar Disorder. ***PLoS ONE***, 9(5): e96422, **2014**. (SCI, 2024 IF=2.6, Q2) **#: equal contribution.**
35. **Chia-Feng Lu**, Shin Teng, Chih-I Hung, Po-Jung Tseng, Liang-Ta Lin, Po-Lei Lee, Yu-Te Wu. Reorganization of Functional Connectivity during the Motor Task Using EEG Time-frequency Cross Mutual Information Analysis. ***Clinical Neurophysiology***, 122:1569-1579, **2011**. (SCI, 2024 IF=3.6, Q1)
36. Jih-Yuan Lin, **Chia-Feng Lu**, Yong-Sin Hu, Huai-Che Yang, Yo-Tsen Liu, Jing Kai Loo, Kang-Lung Lee, Chien-Yi Liao, Feng-Chi Chang, Kang-Du Liou, Chung-Jung Lin, Magnetic resonance radiomics-derived sphericity correlates with seizure in brain arteriovenous malformations. ***European Radiology***, 34(1), 588-599, **2024**. (SCI, 2024 IF=4.7, Q1)
37. Ying-Wei Sung, **Chia-Feng Lu**, Bao-Yu Hsieh, Chao-Ching Huang, Yu-Chieh Jill Kao, Resting-state functional magnetic resonance imaging in the adolescent rats under the combination of isoflurane and dexmedetomidine. ***Brain Research Bulletin***, 232:111600, **2025**. (SCI, 2024 IF=3.7, Q2)
38. Yi-Li Tseng, **Chia-Feng Lu**, Shih-Min Wu, Sotaro Shimada, Ting Huang, Guan-Yi Lu, A Functional Near-infrared Spectroscopy Study of State Anxiety and Auditory Working Memory Load. ***Frontiers in Human Neuroscience***, 12: Article 313, **2018**. (SCI, 2024 IF=2.7, Q2)
39. Duen-Pang Kuo, **Chia-Feng Lu**, Michelle Liou, Yung-Chieh Chen, Hsiao-Wen Chung, Cheng-Yu Chen, Differentiate Infarct Core from Ischemic Penumbra by Diffusion Tensor Imaging-Derived Metrics Within the First 4.5 Hours in a Rat Model. ***Korean Journal of Radiology***, 18(2):269-278, **2017**. (SCI, 2024 IF=5.3, Q1, highlighted as Cover Story)
40. Yu-Chieh Jill Kao, Yvonne Lui, **Chia-Feng Lu**, Huai-Lu Chen, Bao-Yu Hsieh, Cheng-Yu Chen, Behavioral and Structural Effects of Single and Repeated Closed-Head Injury. ***American Journal of Neuroradiology***, 40:601-08, **2019**. (SCI, 2024 IF=3.7, Q1)
41. 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-ischaemia. ***Brain Communications***, 3(2):fcab048, **2021**. (SCI, 2024 IF=4.5, Q1)
42. I-Hsuan Chen, Yea-Ru Yang, **Chia-Feng Lu**, Ray-Yau Wang, Novel Gait Training Alters Functional Brain Connectivity during Walking in Chronic Stroke Patients: A Randomized Controlled Pilot Trial. ***Journal of NeuroEngineering and Rehabilitation***, 16(1):33, **2019**. (SCI, 2024 IF=5.2, Q1)

43. Hung-Chi Lee, Kai-I Chuang, **Chia-Feng Lu**, Yu Chiang, Hung-Jung Wang, Kevin Li-Chun Hsieh, Use of Contrast Medium Volume to Guide Prophylactic Hydration to Prevent Acute Kidney Injury After Contrast Administration: A Meta-Analysis. ***American Journal of Roentgenology***, 215(1):15-24, **2020**. (SCI, 2024 IF=6.1, Q1)
44. Yen-Yu Lin, Wan-Yuo Guo, **Chia-Feng Lu**, Syu-Jyun Peng, Yu-Te Wu, Cheng-Chia Lee, Application of Artificial Intelligence to Stereotactic Radiosurgery for Intracranial Lesions: Detection, Segmentation, and Outcome Prediction, ***Journal of Neuro-Oncology***, 16:441-450, **2023**. (SCI, 2024 IF=3.1, Q2)
45. Yuan-Lin Liao, **Chia-Feng Lu**, Yung-Nien Sun, Chieh-Tsai Wu, Jiann-Der Lee, Shih-Tseng Lee, Yu-Te Wu. Three-Dimensional Reconstruction of Cranial Defect Using Active Contour Model and Image Registration. ***Medical & Biological Engineering & Computing***, 49(2): 203-211, **2011**. (SCI, 2024 IF=2.6, Q2)
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Book Chapter

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2. Bing-Fong Lin, Wei Yang, Yen-Jun Lai, Ting-Yi Lu, Shin-Lei Peng, **Chia-Feng Lu***, Prediction of Long-term Motor Function Based on Microstructural integrity of corticospinal tract in Ischemic Stroke after Intra-arterial Thrombectomy, The 34th Annual Meeting & Exhibition of **ISMRM**, Honolulu, Hawaii, USA, May 10-15, 2025 (Power Pitch).
3. Jyun-Ru Chen, Cheng-Chia Lee, Huai-Che Yang, Hsiu-Mei Wu, **Chia-Feng Lu***, Enhancing Prognostic Prediction for Patients with Brain Metastasis from Lung Cancer after Radiosurgery Based on Tumor and Vasculature Radiomics, The 34th Annual Meeting & Exhibition of **ISMRM**, Honolulu, Hawaii, USA, May 10-15, 2025.
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42. Nai-Chi Chen, **Chia-Feng Lu**, Li-Chun Hsieh, Sho-Jen Cheng, Yu-Chieh Jill Kao, and Cheng-Yu Chen. Altered Functional Connectivity during N-Back Task is Associated with Cognitive Deficits in Mild Traumatic Brain Injury. The 27th Annual Meeting & Exhibition of **ISMRM**, Montreal, Canada, May 11-16, 2019.
43. Tyng-Shiuan Hsieh, **Chia-Feng Lu**, Bao-Yu Hsieh, Cheng-Yu Chen, and Yu-Chieh Jill Kao. The Effect of IC Number Selection in Group ICA for Rat Functional Connectivity. The 27th Annual Meeting & Exhibition of **ISMRM**, Montreal, Canada, May 11-16, 2019.
44. Yu-Chieh Jill Kao, Jun Tazoe, **Chia-Feng Lu**, Bao-Yu Hsieh, and Cheng-Yu Chen. Difference in Tensor Metrics between the Survived and Infarcted Penumbra by Reperfusion in a Rat Model of Cerebral Ischemia. The 27th Annual Meeting & Exhibition of **ISMRM**, Montreal, Canada, May 11-16, 2019.
45. **Chia-Feng Lu**, Yu-Chieh Jill Kao, Li-Chun Hsieh, Sho-Jen Cheng, Ho-Fang Huang, Wen-Jin Hsieh, Fei-Ting Hsu, Ping-Huei Tsai, Cheng-Yu Chen. Association Between Concussion-induced Dizziness and Damage of Thalamo-cortical Connectivity after mild Traumatic Brain Injury. The 26th Annual Meeting & Exhibition of **ISMRM**, Paris, France, June 15-21, 2018 (Oral Presentation).
46. Nai-Chi Chen, **Chia-Feng Lu**, Li-Chun Hsieh, Sho-Jen Cheng, Yu-Chieh Jill Kao, Ho-Fang Huang, Cheng-Yu Chen. Alteration of Resting-state Functional Networks is Associated with Post Concussion Symptoms in Mild Traumatic Brain Injury. The 26th Annual Meeting & Exhibition of **ISMRM**, Paris, France, June 15-21, 2018.
47. Yu-Chieh Jill Kao, **Chia-Feng Lu**, Ping-Huei Tsai, Fei-Ting Hsu, Bao-Yu Hsieh, and Cheng-Yu Chen. Low-frequency Fluctuations of Resting-state fMRI BOLD Signal after Experimental Mild Traumatic Brain Injury. The 26th Annual Meeting & Exhibition of **ISMRM**, Paris, France, June 15-21, 2018.
48. Yu-Chieh Jill Kao, **Chia-Feng Lu**, Chao-Ching Huang, Cheng-Yu Chen. Early Apparent Diffusion Coefficient Deficit Correlates to Final Outcome in Experimental Neonatal Hypoxic Ischemia. The 26th Annual Meeting & Exhibition of **ISMRM**, Paris, France, June 15-21, 2018.
49. Jun Tazoe, Yu-Chieh Jill Kao, **Chia-Feng Lu**, Ping-Huei Tsai, Fei-Ting Hsu, Bao-Yu Hsieh, and Cheng-Yu Chen. Alteration in Diffusion Characteristic of Cerebrospinal Fluid after Neurological Disease in Rats. The 26th Annual Meeting & Exhibition of **ISMRM**, Paris, France, June 15-21, 2018.
50. Ping-Huei Tsai, Hua-Shan Liu, Fei-Ting Hsu, Yu-Chieh Kao, **Chia-Feng Lu**, Hsiao-Wen Chung, Cheng-Yu Chen. Sequential Changes of Diffusion Anisotropy and Mean Kurtosis in Cuprizone-Induced Demyelination: A Rat Model. The 26th Annual Meeting & Exhibition of **ISMRM**, Paris, France, June 15-21, 2018.
51. **Chia-Feng Lu**, Fei-Ting Hsu, Li-Chun Hsieh, Yu-Chieh Jill Kao, Cheng-Yu Chen. Machine

Learning based Classification of Glioma Subtypes Characterized by MR Radiomics. The 103rd Annual Meeting of Radiological Society of North America (**RSNA** 2017), Scientific Posters, Chicago, USA, Nov 26-Dec 1, 2017.

52. Cheng-Yu Chen, **Chia-Feng Lu**, Fei-Ting Hsu, Paul Blakeley, Li-Chun Hsieh, Yu-Chieh Jill Kao, Ping-Huei Tsai, Yung-Hsiao Chiang, Wan-Yuo Guo, Ming-Hsong Chen, Chih-Chun Wu, Liang-Wei Chen, Hung Wen Kao, Yuan-Hao Chen, Hsin-I Ma. Personalized Survival Prediction Using Random Forest Survival Model on MR Radiomic Features in Gliomas. The 103rd Annual Meeting of Radiological Society of North America (**RSNA** 2017), Scientific Papers (Oral), Chicago, USA, Nov 26-Dec 1, 2017.
53. **Chia-Feng Lu**, Li-Chun Hsieh, Yu-Chieh Jill Kao, Ho-Fang Huang, Wen-Jin Hsieh, Fei-Ting Hsu, Ping-Huei Tsai, Hua-Shan Liu, Hui-Hsien Lin, Huai-Lu Chen, and Cheng-Yu Chen. Symptom-related Alterations of Thalamocortical Connectivity in mild Traumatic Brain Injury: An fMRI Connectome Study. The 25th Annual Meeting & Exhibition of **ISMRM**, Hawaii, USA, April 22-24, 2017.
54. **Chia-Feng Lu**, Yu-Chieh Jill Kao, Huai-Lu Chen, Fei-Ting Hsu, Ping-Huei Tsai, Hua-Shan Liu, Li-Chun Hsieh, Gilbert Aaron Lee, and Cheng-Yu Chen. Reorganization of Rodent Resting-state Functional Networks after mild Traumatic Brain Injury. The 25th Annual Meeting & Exhibition of **ISMRM**, Hawaii, USA, April 22-24, 2017.
55. **Chia-Feng Lu**, Wen-Jin Hsieh, Yu-Chieh Jill Kao, Paul Blakeley, Fei-Ting Hsu, Hua-Shan Liu, Ping-Huei Tsai, Li-Chun Hsieh, and Cheng-Yu Chen. Global Change of Intrinsic Functional Networks as an Imaging biomarker of Alzheimer's disease. The 25th Annual Meeting & Exhibition of **ISMRM**, Hawaii, USA, April 22-24, 2017.
56. Cheng-Yu Chen, **Chia-Feng Lu**, Li-Chun Hsieh, Yu-Chieh Jill Kao, Ping-Huei Tsai, Ho-Fang Huang. Disruption of Thalamo-cortical Tracts is Associated with Post-Concussion Symptoms in mild Traumatic Brain Injury Revealed by Automatic Tract-Based Analysis. The 55th Annual Meeting of **ASNR**, Long Beach, California, USA, April 22-27, 2017.
57. Paul Blakeley, **Chia-Feng Lu**, Fei-Ting Hsu, Li-Chun Hsieh, Yu-Chieh Jill Kao, Huai-Lu Chen, Ping-Huei Tsai, Hua-Shan Liu, Gilbert Aaron Lee, and Cheng-Yu Chen. Exploiting radiogenomics data for personalised prediction of glioblastoma. The 25th Annual Meeting & Exhibition of **ISMRM**, Hawaii, USA, April 22-24, 2017.
58. Yu-Chieh Jill Kao, **Chia-Feng Lu**, Huai-Lu Chen, Ping-Huei Tsai, Fei-Ting Hsu, Hua-Shan Liu, Gilbert Aaron Lee, Paul Blakeley, Li-Chun Hsieh, Bao-Yu Hsieh, and Cheng-Yu Chen. Evolving Functional Connectivity in Rats following Mild Traumatic Brain Injury. The 25th Annual Meeting & Exhibition of **ISMRM**, Hawaii, USA, April 22-24, 2017.
59. Yu-Chieh Jill Kao, **Chia-Feng Lu**, Huai-Lu Chen, Ping-Huei Tsai, Fei-Ting Hsu, Hua-Shan Liu, Gilbert Aaron Lee, Paul Blakeley, Li-Chun Hsieh, Bao-Yu Hsieh, and Cheng-Yu 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, April 22-24, 2017.

60. Yu-Chieh Jill Kao, **Chia-Feng Lu**, Huai-Lu Chen, Ping-Huei Tsai, Cheng-Yu Chen. Evolution of Diffusion Tensor Signal after Impact Acceleration Injury in Experimental Mild Traumatic Brain Injury. The 66th Annual Meeting of **RSROC**, Taipei, Taiwan, March 18-19, 2017.
61. Kevin Li-Chun Hsieh, Cheng-Yu Chen, **Chia-Feng Lu**, Paul Blakeley. The Radiogenomic Portrait of the Unsuccess of Bevacizumab in Glioblastoma. The 55th Annual Meeting of **ASNR**, Long Beach, California, USA, April 22-27, 2017.
62. Hui-Hsien Lin, Hua-Shan Liu, Ping-Huei Tsai, Fei-Ting Hsu, **Chia-Feng Lu**, Yu-Chieh Jill Kao, Wen-Jin Hsieh, Ho-Fang Huang, Huai-Lu Chen, Paul Blakeley, Gilbert Aaron Lee, and Cheng-Yu Chen. Quantitative Susceptibility Mapping in Mild Traumatic Brain Injury. The 25th Annual Meeting & Exhibition of **ISMRM**, Hawaii, USA, April 22-24, 2017.
63. Ping-Huei Tsai, Fei-Ting Hsu, Hua-Shan Liu, Hsiao-Wen Chung, Yu-Chieh Kao, **Chia-Feng Lu**, Huai-Lu Chen, Paul Blakeley, Gilbert Aaron Lee, and Cheng-Yu Chen. 2-Deoxyglucose-Weighted MR Imaging in Rodent Brain Using Inverse Z-Spectrum Analytic Scheme. The 25th Annual Meeting & Exhibition of **ISMRM**, Hawaii, USA, April 22-24, 2017.
64. Ping-Huei Tsai, Yung-Chieh Chen, Shih-Wei Chiang, Hua-Shan Liu, Ming-Chung Chou, Fei-Ting Hsu, Yu-Chieh Kao, **Chia-Feng Lu**, Hsiao-Wen Chung, and Cheng-Yu Chen. Increased Anisotropy as Possible Compensatory Plasticity of Ventral Thalamic Nuclei to Gait Disturbance in Patients with Idiopathic Normal Pressure Hydrocephalus. The 25th Annual Meeting & Exhibition of **ISMRM**, Hawaii, USA, April 22-24, 2017.
65. **Chia-Feng Lu**, Hsin-Yi Lai, Fei-Ting Hsu, Yu-Chieh Kao, Hua-Shan Liu, Ping-Huei Tsai, Li-Chun Hsieh, Pen-Yuan Liao, Cheng-Yu Chen. MR radiomics for characterizing molecular subtypes of breast cancer. The 65th Annual Meeting of **RSROC**, Kaohsiung city, Taiwan, March 19-20, 2016.
66. Yu-Chieh Kao, **Chia-Feng Lu**, Ping-Huei Tsai, Hua-Shan Liu, Fei-Ting Hsu, Li-Chun Hsieh, Pen-Yuan Liao, Cheng-Yu Chen. 2016. Remodeling of Neuronal Network after Mild Traumatic Brain Injury Small Animal MRI Study. The 65th Annual Meeting of **RSROC**, Kaohsiung city, Taiwan, March 19-20, 2016.
67. Chia-Yu Huang, Chang-Ming Chern, **Chia-Feng Lu,** Jong-Ling Fuh, Feng-Chi Chang. Monitoring the Therapeutic Effect of Internal Carotid Artery Stenting: A Pilot Study of Functional NIRS. The 22nd Annual Meeting of the **Organization for Human Brain Mapping**, Geneva, Switzerland, June 26-30, 2016.
68. **Chia-Feng Lu**, Fei-Ting Hsu, Li-Chun Hsieh, Yu-Chieh Jill Kao, Hua-Shan Liu, Ping-Huei Tsai, Pen-Yuan Liao, Cheng-Yu Chen. Imaging Angiogenesis Genotype of Glioblastoma by Radiomic Features of Multimodality MRI. The 24th Annual Meeting & Exhibition of **ISMRM**, Singapore, May 7-13, 2016.
69. Yu-Chieh Jill Kao, **Chia-Feng Lu**, Hua-Shan Liu, Fei-Ting Hsu, Ping-Huei Tsai, Li-Chun Hsieh, Pen-Yuan Liao, Cheng-Yu Chen. Gd-enhanced Susceptibility Weighted Imaging in Neonatal Rats. The 24th Annual Meeting & Exhibition of **ISMRM**, Singapore, May 7-13, 2016.

70. Kevin Li-Chun Hsieh, Fei-Ting Hsu, **Chia-Feng Lu**, Cheng-Yu Chen. Radiogenomic Mapping of Dysregulated Angiogenesis in Glioblastoma. The 24th Annual Meeting & Exhibition of **ISMRM**, Singapore, May 7-13, 2016.
71. Cheng-Yu Chen, Fei-Ting Hsu, Hua-Shan Liu, Ping-Huei Tsai, **Chia-Feng Lu**, Yu-Chieh Kao, Li-Chun Hsieh, Pen-Yuan Liao. Low Apparent Diffusion Coefficient Values Correlate with Enhancing Mitosis and Cell Proliferation Expression in glioblastoma using Locus-Specific Radiogenomic Map. The 24th Annual Meeting & Exhibition of **ISMRM**, Singapore, May 7-13, 2016.
72. Ping-Huei Tsai, Hua-Shan Liu, Fei-Ting Hsu, Yu-Chieh Kao, **Chia-Feng Lu**, Li-Chun Hsieh, Pen-Yuan Liao, Hsiao-Wen Chung, Cheng-Yu Chen. Improvement of in vivo glucoCEST imaging in rat brain using inverse z-spectrum analytical scheme at 7.0 T. The 24th Annual Meeting & Exhibition of **ISMRM**, Singapore, May 7-13, 2016.
73. **Chia-Feng Lu**, Hua-Shan Liu, Ping-Huei Tsai, Fei-Ting Hsu, Pen-Yuan Liao, Li-Chun Hsieh, Cheng-Yu Chen. Resting-State fMRI Connectivity for Detecting Thalamo-Cortical Dysrhythmia (TCD) and locating the Cortical Lesion Sites. The 64th Annual Meeting of **RSROC**, Taipei, Taiwan, March 21-22, 2015.
74. Cheng-Yu Chen, Duen-Pang Kuo, Hsiao-Wen Chung, Michelle Liou, **Chia-Feng Lu**. Diffusion Tensor Imaging Study of Ischemic Stroke: A Rat Model of Permanent Middle Cerebral Artery Occlusion with Normobaric Hyperoxygenation. The 64th Annual Meeting of **RSROC**, Taipei, Taiwan, March 21-22, 2015.
75. Fei-Ting Hsu, Li-Chun Hsieh, Ping-Huei Tsai, Hua-Shan Liu, **Chia-Feng Lu**, Cheng-Yu Chen. Radiogenomic Imaging-linking Advanced MRI and Molecular Diagnostic. The 64th Annual Meeting of **RSROC**, Taipei, Taiwan, March 21-22, 2015.
76. **Chia-Feng Lu**, Yuh-Jen Wang, Shin Teng, Yu-Te Wu, Sui-Hing Yan. Altered Network Organization in Mild Alzheimer's Disease Compared to Mild Cognitive Impairment Using Resting-State EEG. **International Conference on Biomedical Engineering**, Kyoto, Japan, Nov 13-14, 2014.
77. **Chia-Feng Lu**, Yuh-Jen Wang, Yu-Te Wu, Sui-Hing Yan. Relations of Progression in Cognitive Decline with Initial EEG Resting-State Functional Network in Mild Cognitive Impairment. **International Conference on Biomedical Engineering**, Kyoto, Japan, Nov 13-14, 2014.
78. Yan-Ci Liu, **Chia-Feng Lu**, Yea-Ru Yang, Yu-Te Wu, Ray-Yau Wang. Gait Performance and Brain Activity during Dual Task Walking: A Functional Near-Infrared Spectroscopy Study. **Physiology**, London, 30 June - 2 July, 2014.
79. Po-Shan Wang, Shang-Ran Huang, Chao-Wen Tsai, **Chia-Feng Lu**, Shin Teng, C-I Hung, Yu-Te Wu. Attention Drawing of Movie Trailers Revealed by Electroencephography Using Sample Entropy. The 2nd **International Conference of Biomedical Engineering (ICBE)**, Beiji, China, June 13-15, 2014.

80. **Chia-Feng Lu**, Shin Teng, and Yu-Te Wu. Dynamics of Hemoglobin States in the Sensorimotor Cortex During Motor Tasks: A Functional Near Infrared Spectroscopy Study. The 35th Annual International Conference of the IEEE, **EMBS** 2013, Osaka, Japan, July 3-7, 2013.
81. Shin Teng, **Chia-Feng Lu**, Po-Shan Wang, Chih-I Hung, Cheng-Ta Li, Pei-Chi Tu, Tung-Ping Su, Yu-Te Wu. Classification of Bipolar Disorder using Basal-ganglia-related Functional Connectivity in the resting state. The 35th Annual International Conference of the IEEE, **EMBS** 2013, Osaka, Japan, July 3-7, 2013.
82. **Chia-Feng Lu**, Shin Teng, Hsiu-Mei Wu, Wei-Yuan Huang, Jen-Chuen Hsieh, Yu-Te Wu. Structural Connectivity for Human Bilateral Insulae Using Diffusion Tensor Imaging. The 18th Annual Meeting of the **Organization for Human Brain Mapping**, Beijing, China, June 10-14, 2012.
83. Shin Teng, **Chia-Feng Lu**, Wei-Yuan Huang, Jen-Chuen Hsieh, Yu-Te Wu. The modular organization of aesthetic experience in painters using resting-state fMRI. The 18th Annual Meeting of the **Organization for Human Brain Mapping**, Beijing, China, June 10-14, 2012.
84. Feng, WC, Huang, SR, Hung, CI, **Lu, CF**, Wang, PS, Wu, YT. Using Functional Magnetic Resonance Imaging for the Analysis of Functional Connectivity when Watching Movie Trailers. Annual Symposium on Biomedical Engineering and Technology, Taoyuan, Taiwan, November 17-18, 2012.
85. Shun-Wen Chang, Shin Teng, **Chia-Feng Lu**. Effects of Weighting Schemes on the Composite Scores under the Multivariate Proficiency Distribution Using IRT. 2012 **AERA** Annual Meeting, April 13 – 17, Vancouver, Canada.
86. Peii Chen, Chih-I Hung, **Chia-Feng Lu**, Anna M. Barrett, Glenn Wylie, and Yu-Te Wu. Sex Differences in Functional Connectivity at Rest. The 63rd Annual Meeting of the **American Academy of Neurology**. Honolulu, April 9 - 16, 2011.
87. Shun-Wen Chang, Shin Teng, **Chia-Feng Lu**. Effects of Score Transformation on the Composite Scores under the Multivariate Proficiency Distribution Using IRT. 2011 **NCME** Annual Meeting, April 7 - 11, New Orleans, Louisiana.
88. **Lu, C. F.**, Teng, S., Wang, P. S., Yeh, T. C., Su, T. P., Hsieh, J. C. and Wu, Y. T. Investigation of Differences on Cortical Connectivity Between Patients With Major Depressive Disorder and Normal Subjects Using MR Diffusion Tensor Imaging. The 2nd International Conference on Bioinformatics and Biomedical Technology, ChengDu, China, 2010.
89. **Lu, C. F.**, Teng, S., Wang, P. S., Yeh, T. C., Su, T. P., Hsieh, J. C. and Wu, Y. T. A Neuronal Fiber Tracking Study for Major Depressive Disorder Using MR Diffusion Tensor Imaging With Fiber Tractography. The 2nd International Conference on Bioinformatics and Biomedical Technology, ChengDu, China, 2010.
90. Teng, S., **Lu, C. F.**, Wang, P. S., Yeh, T. Z., Su, T. P., Hsieh, J. C., and Wu, Y. T. Investigation of Differences on Functional Connectivity in Major Depressive Disorder Using Functional

Magnetic Resonance Imaging. The 2nd International Conference On Bioinformatics and Biomedical Technology, Chengdu, China, 2010.

91. Yuan-Lin Liao, Yung-Nien Sun, **Chia-Feng Lu**, Chieh-Tsai Wu, Shih-Tseng Lee, Jiann-Der Lee, and Yu-Te Wu. Skull-Based Registration of Intra-subject Brain CT Images: The Effects of Different Resolutions and Partial Contents. The 2nd International Conference On Bioinformatics and Biomedical Technology, Chengdu, China, 2010.
92. Shang-Ran Huang, **Chia-Feng Lu**, Yen-Chun Chou, Feng-Chi Chang, Wan-Yuo Guo, Yu-Te Wu. Hemodynmaics Segregation Using Expectation-Maximization Algorithm Initialized by Hierarchical Clustering on MR Dynmaic Images from Patients with Unilateral Internal Carotid Artery Stenosis. World Congress, Munich, Germany, 2009.
93. **Lu CF**, Hung CY, Tseng PJ, Lin LT, Wang ZY, Wu YT. Recognition of Arm-Movement Electroencephalography (EEG) Using Motor-Related Intrinsic Mode Functions Filtering and Cross Mutual Information. World Congress, Munich, Germany, 2009.
94. Yuan-Lin Liao, **Chia-Feng Lu**, Shang-Ran Huang, Shih-Tseng Lee, Jiann-Der Lee, Yung-Nien Sun, Yu-Te Wu. Skull-based registration of pre-operative CT images with intra-operative CT images for the application on partial skull reconstruction. The 5th Asian Conference on Computer Aided Surgery, Chang Bin, Taiwan, July 3-4, 2009.
95. **Lu CF**, Hung CY, Tseng PJ, Lin LT, Wang ZY, Wu YT. Recognition of Resting and Movement-Related Electroencephalography (EEG) Using Time-Frequency Cross Mutual Information. In Proceedings of CACS International Automatic Control Conference, Taipei, Taiwan, November 27-29, 2009.
96. **Chia-Feng Lu**, Po-Shan Wang, Yen-Chun Chou, Hsiao-Chien Li, Bing-Wen Soong, Yu-Te Wu. Segmentation of diffusion-weighted brain images using expectation maximization algorithm initialized by hierarchical clustering. The 30th Annual International Conference of the IEEE, **EMBS** 2008, Vancouver, Aug 25-28, 2008.
97. Yu-Te Wu, Yen-Chun Chou, **Chia-Feng Lu**, Shang-Ran Huang, Wan-Yuo Guo. Tissue Classification from Brain Perfusion MR Images Using Expectation-Maximization Algorithm Initialized by Hierarchical Clustering on Whitened Data. In Proceeding of The 13th **International Conference on Biomedical Engineering**, Singapore, December 3-6, 2008.
98. **Chia-Feng Lu**, Po-Shan Wang, Yen-Chun Chou, Hsiao-Chien Li, Bing-Wen Soong, Yu-Te Wu. Multi-tissue Classification of Diffusion-Weighted Brain Images in Multiple System Atrophy Using Expectation Maximization Algorithm Initialized by Hierarchical Clustering. In Proceeding of The 13th **International Conference on Biomedical Engineering**, Singapore, December 3-6, 2008.
99. **Chia-Feng Lu**, Po-Shan Wang, Bing-Wen Soong, Yen-Chun Chou, Hsiao-Chien Li, Yu-Te Wu. Multi-tissue Classification of Diffusion-Weighted Brain Images in Multiple System Atrophy. 2008 International Symposium on Biomedical Engineering, Taoyuan, Taiwan, December 12-13, 2008.

100. **Chia-Feng Lu**, Yen-Chun Chou, Wan-Yuo Guo, Yu-Te Wu. Brain MR Perfusion Image Segmentation Using Independent Component Analysis and Hierarchical Clustering. The 29th Annual International Conference of the IEEE, **EMBS** 2007, Lyon, Aug 22-26, 2007.

Patents

Lee, Shih-Tseng；Wu, Yu-Te；Liao, Yuan-Lin；**Lu, Chia-Feng**；Lee, Jiann-Der
Method for Manufacturing Artificial Implants
製作人工植入物之方法
US Patent No.: US8,200,355B2
US Patent Date: June 2012
TW Patent Number: I381828
TW Patent Date: Jan 2013
CN Patent Number: 1172537
CN Patent Date: April 2013
Technology Transfer Date: Sept 2019 (NTD 906,400)

Chen, Cheng-Yu ; Kuo, Duen-Pang ; Chung, Hsiao-Wen ; **Lu, Chia-Feng** ; Kao, Yu-Chieh
Method for Determining Ischemic Status or Assessing Stroke Onset Time of A Brain Region
確定腦區域之缺血狀態或評估缺血狀態時間的方法
US Patent No.: US11,826,136B2
US Patent Date: Nov 2023
TW Patent Number: I679968
TW Patent Date: Dec 2019

Yu-Te Wu, **Chia-Feng Lu**, Wan-Yuo Guo, Wei-Kai Lee, Tzu-Hsuan Huang, Chun-Yi Lin, Chih-Chun Wu, Cheng-Chia Lee, Wen-Yuh Chung, Huai-Che Yang
Benign Tumor Development Trend Assessment System, Server Computing Device Thereof and Computer Readable Storage Medium
良性腫瘤發展趨勢評估系統、其伺服計算機裝置及計算機可讀取的儲存媒體
US Patent No.: US11,475,563B2
US Patent Date: October 2022
TW Patent: 109106437
TW Patent Date: July 2021

Cheng-Chia Lee, Huai-Che Yang, Wen-Yuh Chungm Chih-Chun Wu, Wan-Yuo Guo, Ya-Xuan Yang, Tzu-Hsuan Huang, Chun-Yi Lin, Wei-Kai Lee, **Chia-Feng Lu**, Yu-Te Wu
Brain tumor types distinguish system, server computing device thereof and computer readable storage medium

US Patent Application No.: US 2023/0274432 A1
US Patent Publication Date: April 2023

International Journal/Society Service

1. Chief Editor, Chinese Journal of Radiologic Technology
2. Associate Editor, Frontiers in Oncology (SCI)
3. Reviewer, eBioMedicine (SCI)
4. Reviewer, Psychiatry Research (SCI)
5. Reviewer, EClinicalMedicine (SCI)
6. Reviewer, Neural Networks (SCI)
7. Reviewer, Frontiers in Immunology (SCI)
8. Reviewer, Computer in Biology and Medicine (SCI)
9. Reviewer, Radiotherapy and Oncology (SCI)
10. Reviewer, European Radiology (SCI)
11. Reviewer, Computerized Medical Imaging and Graphics (SCI)
12. Reviewer, Biomedical Journal (SCI)
13. Reviewer, Physical and Engineering Sciences in Medicine (SCI)
14. Reviewer, IEEE Journal of Biomedical and Health Informatics (SCI)
15. Reviewer, Computer Methods and Programs in Biomedicine (SCI)
16. Reviewer, Translational Oncology (SCI)
17. Reviewer, Cancers (SCI)
18. Reviewer, Translational Lung Cancer Research (SCI)
19. Reviewer, Heliyon (SCI)
20. Reviewer, Journal of Neuro-Oncology (SCI)
21. Reviewer, Journal of Cancer Research and Clinical Oncology (SCI)
22. Reviewer, Scientific Reports (SCI)
23. Reviewer, Molecular Carcinogenesis (SCI)
24. Reviewer, IEEE Transactions on Neural Systems & Rehabilitation Engineering (SCI)
25. Reviewer, IEEE Transactions on Emerging Topics in Computational Intelligence (SCI)
26. Reviewer, Molecular Diagnosis & Therapy (SCI)
27. Reviewer, Journal of the Chinese Medical Association (SCI)
28. Reviewer, Quantitative Imaging in Medicine and Surgery (SCI)
29. Reviewer, Archives of Gerontology and Geriatrics (SCI)
30. Reviewer, Journal of Personalized Medicine (SCI)
31. Reviewer, Frontiers in Human Neuroscience (SCI)
32. Reviewer, Diagnostics (SCI)
33. Reviewer, Cognitive Neurodynamics (SCI)
34. Reviewer, Sensors (SCI)

35. Reviewer, Brain Sciences (SCI)
36. Reviewer, Consciousness and Cognition (SCI)
37. Reviewer, Entropy (SCI)
38. Reviewer, Applied Sciences (SCI)
39. Reviewer, Journal of Medical and Biological Engineering (SCI)
40. Reviewer, Photonics (SCI)
41. Reviewer, Cognitive and Behavioral Neurology (SCI)
42. Reviewer, EURASIP Journal on Advances in Signal Processing (SCI)
43. Reviewer, Journal of Medical Imaging and Health Informatics (SCI)
44. Reviewer, Biomedical Engineering: Applications, Basis, and Communications (EI, SCI-E, SCI during 2012~2013)
45. Reviewer, International Society of Magnetic Resonance in Medicine (Annual Meeting)

Academic Service

1. Committee member of master degrees

- Department of Electrical Engineering, National Tsing Hua University.
- Department of Electrical Engineering, National Central University.
- Department of Biomedical Imaging and Radiological Sciences, National Yang-Ming University.
- Graduate Institute of Biomedical Engineering, National Taiwan University of Science and Technology.
- Department of Physical Therapy and Assistive Technology, National Yang-Ming University.
- Institute of Biophotonics, National Yang-Ming University.
- Graduate Institute of Biomedical Electronics and Bioinformatics, National Taiwan University.
- Institute of Brain Science, National Yang-Ming University.
- Department of Educational Psychology and Counseling, National Tsing Hua University.

2. Committee member of Ph.D. degrees/candidate qualifying exams

- Institute of Biophotonics, National Yang-Ming University.
- Department of Physical Therapy and Assistive Technology, National Yang-Ming University.
- Institute of Brain Sciences, National Yang-Ming University.
- Department of Biomedical Imaging and Radiological Sciences, National Yang-Ming University.
- Department of Electrical Engineering, National Taiwan University.

3. Ph.D. Dissertation Supervisory Committee

- Graduate Institute of Biomedical Electronics and Bioinformatics, National Taiwan University.

4. Reviewer of Research projects

- National Science and Technology Council (NSTC)/Ministry of Science and Technology (MOST).
- Academic Sinica.
- Kaohsiung Veterans General Hospital.

- Cheng Hsin General Hospital.
- Shu-Zen Junior College of Medicine and Management.
- Tri-Service General Hospital.

Invited Talks – Part I: Research Topics

1. October 2025, Radiomics and deep learning AI Applications in Lung Cancer Diagnosis and Prognosis, ISRRT Medical Imaging and Radiation Therapy workshop, Shing Mark Hospital, Vietnam.
2. August 2025, Development of AI Applications in Radiology and Radiotherapy, 2025 Annual Meeting of the Chung-Hwa Nuclear Society, New Taipei City, Taiwan.
3. March 2025, Medical Image AI for Personalized Outcome Prediction in Cancer Therapy, Hsinchu Cathay General Hospital, Hsinchu, Taiwan.
4. November 2024, Decoding Cerebrovascular Structure Using MATLAB, University of Taipei, Taipei, Taiwan.
5. May 2024, Principles of AI in Medicine, Cathay General Hospital, Taipei, Taiwan.
6. March 2024, New era of "human-AI team" in Radiology, The 38th Joint Annual Conference of Biomedical Science, Taipei, Taiwan.
7. October 2023, fNIRS signal processing and statistical analysis, National Taiwan Normal University, Taipei, Taiwan.
8. December 2022, MR Radiomics and Machine Learning in Brain Tumors, the 22nd Asia-Oceania Congress on Medical Physics, Taipei, Taiwan.
9. October 2022, Machine Learning in Medical Imaging, Taiwan Food and Drug Administration, Taipei, Taiwan.
10. September 2022, Applications of Resting-State fMRI, Far Eastern Memorial Hospital, New Taipei City, Taiwan.
11. June 2022, Decoding Brain Tumors through Radiomics: A Feasible Model for Prognosis Prediction, Taichung Veterans General Hospital, Taichung, Taiwan.
12. March 2022, MR Radiomics and Machine Learning in Brain Tumors, the 36th Joint Annual Conference of Biomedical Science, Taipei, Taiwan.
13. March 2022, AI in Medical Imaging, Department of Electrical Engineering, National Taiwan University, Taipei, Taiwan.
14. March 2022, Innovation and Thinking of Smart Healthcare, the 55th Annual Meeting of TWSRT and the International Conference of Medical Imaging, Taichung, Taiwan.
15. January 2022, Current Development of Smart Healthcare in Radiology, Cathay General Hospital, Taipei, Taiwan.
16. November 2021, MR Radiomics in Predicting Response of Vestibular Schwannoma after Gamma Knife Radiosurgery, the 15th IEEE International Conference on Nano/Molecular Medicine & Engineering, Virtual Conference.

17. October 2021, Decoding Brain Tumors through Radiomics: A Feasible Model for Prognosis Prediction, Shuang Ho Hospital, New Taipei City, Taiwan.
18. May 2021, Research Framework for Clinical and Academic Collaboration, Taipei Veterans General Hospital, Taipei, Taiwan.
19. April 2021, MR Radiomics in Predicting Response of Vestibular Schwannoma after Gamma Knife Radiosurgery, Liuying Chimei Hospital, Tainan, Taiwan.
20. March 2021, Principles and Analysis of fNIRS, National Taiwan Normal University, Taipei, Taiwan.
21. November 2020, AI/ML in Medicine, Department of Electrical Engineering, Fu Jen Catholic University, Taipei, Taiwan.
22. November 2020, MR Radiomics in Predicting Response of Vestibular Schwannoma after Gamma Knife Radiosurgery, the 7th Asian Leksell Gamma Knife Society Meeting & the 14th Asian Epilepsy Surgery Congress (ALGKS & AESC 2020), Taipei, Taiwan.
23. July 2020, Statistical Analysis and Inference in fMRI, Imaging Center for Integrated Body, Mind and Culture Research, National Taiwan University, Taipei, Taiwan.
24. October 2019, Machine Learning in Clinical Radiology, Department of Biomedical Sciences and Engineering, National Central University, Taoyuan, Taiwan.
25. September 2019, Machine Learning based Molecular Subtyping Characterized by MR Radiomics in Gliomas, 11th Bilateral Meeting 2019 between Heidelberg University and National Yang-Ming University, Taipei, Taiwan.
26. July 2019, Machine Learning Applications in Medical Imaging, DeepQ Department, HTC Research & Healthcare, Taipei, Taiwan.
27. July 2019, Machine Learning in Clinical Cancer Imaging, Institute of Epidemiology and Preventive Medicine, National Taiwan University, Taipei, Taiwan.
28. July 2019, Principles and Analysis of fMRI, Imaging Center for Integrated Body, Mind and Culture Research, National Taiwan University, Taipei, Taiwan.
29. June 2019, Connectome Analysis and Machine Learning in Mild Traumatic Brain Injury, Department of Psychology, National Cheng Kung University, Tainan City, Taiwan.
30. May 2019, Introduction of AI in Medicine, Rebuild After PhD's Industrial Skill & Expertise (RAISE) Program, National Yang-Ming University, Taipei, Taiwan.
31. May 2019, Machine Learning in Radiology, Department of Mathematics, National Central University, Taoyuan, Taiwan.
32. March 2019, Artificial Intelligence in Medicine: Principles and Applications, School of Medicine, Taipei Medical University, Taipei, Taiwan.
33. March 2019, Machine Learning in Cancer Imaging. 2019 Symposium on Engineering, Medicine, and Biology Applications (SEMBA), National Central University, Taoyuan, Taiwan.
34. January 2019, Introduction of fMRI Analysis. Imaging Center for Integrated Body, Mind and Culture Research, National Taiwan University, Taipei, Taiwan.

35. January 2019, Multi-Voxel Pattern Analysis (MVPA) of fMRI Data. National Tsing Hua University, Hsinchu, Taiwan.
36. November 2018, Artificial Intelligence in Radiology: beyond Computer-Aided Diagnosis of Cancer Imaging, the 18th Annual Meeting and 2018 Taiwan Association of Medical Radiation Technologists International Forum, Taichung, Taiwan.
37. October 2018, Machine Learning based Subtype Classification and Survival Prediction Characterized by MR Radiomics in Gliomas, Joint Meeting NeuroImaging Summit 2018-Japan-Korea-Taiwan Neuroradiology Workshop, Taipei, Taiwan.
38. July 2018, Signal Processing in Polygraph, New Taipei City Police Department, Xizhi Precinct, Taiwan.
39. March 2018, Workshop of Functional Near Infrared Spectroscopy: from Principles to Practices, Beijing, China.
40. March 2018, Translational Research in Mild Traumatic Brain Injury, XXI Symposium Neuroradiologicum (SNR 2018), Taipei, Taiwan.
41. March 2017, Neuroimage X Humanities and Social Sciences Workshop, Research Institute for the Humanities and Social Sciences, Ministry of Science and Technology, Tainan City, Taiwan.
42. December 2016, Advance in Translational Neuroimaging Research, National Yang-Ming University, Taipei, Taiwan.
43. November 2016, Small-world mystery of human brain, Taipei Medical University Hospital, Taipei, Taiwan.
44. October 2016, Principles and applications of fNIRS in lie detection, National Security Bureau, Taipei, Taiwan.
45. October 2016, Applications of functional near-infrared spectroscopy in neuroscience, National Tsing Hua University, Hsinchu, Taiwan.
46. July 2016, Introduction of translational imaging research, Taipei Medical University Hospital, Taipei, Taiwan.
47. June 2016, What's behind the Data? National Yang-Ming University, Taipei, Taiwan.
48. May 2016, Advanced image analysis in resting-state fMRI, Mind Research and Imaging Center, National Cheng Kung University, Tainan City, Taiwan.
49. December 2015, Clinical applications of medical image and signal analyses, Taipei Medical University Hospital, Taipei, Taiwan.
50. October 2015, Hands-on practice in resting-state fMRI analysis, Mind Research and Imaging Center, National Cheng Kung University, Tainan City, Taiwan.
51. July 2015, August 2015, Principles of polygraph and signal processing in lie detection, National Security Bureau, Taipei, Taiwan.
52. December 2013, Introduction of tissue classification techniques of DSC-MRI and fNIRS applications, Department of Biomedical Imaging and Radiological Science, China Medical University, Taichung, Taiwan.

53. June 2013, Clinical applications of brain circulation monitoring, Stroke and Neurovascular Center, Taipei Veterans General Hospital, Taipei, Taiwan.

Invited Talks – Part II: Education Topics

1. January 2026, Generative-AI Enhanced Teaching and Learning in Higher Education, Chang Gung University, Taipei, Taiwan.
2. September 2025, Interactive EMI to Enhance Teaching and Learning, National Chung Hsing University, Taichung, Taiwan.
3. August 2025, Research Enhancement Workshop, Taiwan Society of Radiological Technologists, Chiayi, Taiwan.
4. April 2025, Journal Writing Workshop, Taiwan Society of Radiological Technologists, Taipei, Taiwan.
5. April 2025, Supporting Strategy for EMI Teachers and Students in the Biomedical Field, Ministry of Education, Taipei, Taiwan.
6. April 2025, Application of ChatGPT for EMI Teaching and Learning, National Taiwan Normal University, Taipei, Taiwan.
7. April 2025, Technology-Enhanced Teaching and Learning in EMI, Feng Chia University, Taichung, Taiwan.
8. March 2025, Interactive EMI to Enhance Teaching and Learning, National Tsing Hua University, Taipei, Taiwan.
9. January 2025, Interaction Design in Bilingual E-Tutor Program, Ministry of Education, Taipei, Taiwan.
10. August 2024, English Presentation Workshop, Taiwan Society of Radiological Technologists, Taipei, Taiwan.
11. July 2024, Conference Abstract Writing Workshop, Taiwan Society of Radiological Technologists, Taipei, Taiwan.
12. July 2024, Application of ChatGPT in Medical Education, National Taiwan University Hospital, Taipei, Taiwan.
13. July 2024, Miro: Co-creation Environment for Higher Education, Chang Gung University, Taoyuan, Taiwan.
14. July 2024, Generative AI to Enhance Teaching and Learning in Medical Education, National Defense Medical Center, Taipei, Taiwan.
15. May 2024, Application of ChatGPT in Medical Education, Cathay General Hospital, Taipei, Taiwan.
16. May 2024, ChatGPT for Higher Education EMI, I-Shou University, Kaohsiung, Taiwan.
17. May 2024, Online Teaching: How To Effectively Capture Students' Attention, The 33rd Annual Meeting & Exhibition of ISMRM, Singapore.
18. March 2024, Do We Really Need EMI? Benefits and Challenges?, I-Shou University,

Kaohsiung, Taiwan.

19. March 2024, Role of ChatGPT and Miro co-creation environment in EMI, Chang Gung University, Taoyuan, Taiwan.
20. November 2023, Technology-Enhanced Learning and ChatGPT in EMI, Tzu Chi University, Hualien, Taiwan.
21. November 2023, EMI Cousre Design and Classroom Interaction, National Chung Hsing University, Taichung, Taiwan.
22. October 2023, EMI Course Design and Technology-Enhanced Learning, Taipei Medical University, Taipei, Taiwan.
23. September 2023, Technology-Enhanced Learning and ChatGPT in Education, China Medical University, Taichung, Taiwan.
24. August 2023, EMI Course Design and Technology-Enhanced Learning, NSYSU-KMU Aim-for-the-Top Alliance: New Faculty Orientation, National Sun Yat-sen University, Kaohsiung, Taiwan.
25. August 2023, EMI Course Design and Technology-Enhanced Learning, Chang Gung University, Taoyuan, Taiwan.
26. June 2023, EMI Course Design and Technology-Enhanced Learning, National Sun Yat-sen University, Kaohsiung, Taiwan.
27. June 2023, EMI Course Design and Technology-Enhanced Learning, Center for Teaching and Learning Development, National United University, Miaoli, Taiwan.
28. May 2023, EMI Course Design and Technology-Enhanced Learning, International Teaching and Learning Center, Shu-Te University, Kaohsiung, Taiwan.
29. May 2023, Technology-Enhanced Learning in EMI Classroom, School of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan.
30. April 2023, Management of Bilingual Classroom: Interaction and Technology-Enhanced Learning, 2023 Taiwan Bilingual Higher Education Forum, Ministry of Education, Taipei, Taiwan.
31. March 2023, EMI Strategy in Biomedical Engineering: Constructive Alignment and Technology Enhancement, Center of Bilingual Education, National Taiwan University, Taipei, Taiwan.
32. October 2022, EMI Promotion Experience Sharing, Yuanpei University of Medical Technology, Hsinchu, Taiwan.
33. October 2022, Challenges and Strategies for EMI Courses in Medical Technology, China Medical University, Taichung, Taiwan.
34. July 2022, Challenges and Strategies for EMI Courses in Medical Technology, Center of Higher Education Accreditation for Teaching, National Yang Ming Chiao Tung University, Taipei, Taiwan.
35. April 2022, Invited Speaker of EMI Faculty Workshop – Experience Sharing, Office of Bilingual Education, National Yang Ming Chiao Tung University, Taipei, Taiwan.

36. March 2022, EMI Teaching Strategy in Medical Technology, China Medical University, Taichung, Taiwan.
37. February 2022, English Presentation at International Conference, Cathay General Hospital, Tainan, Taiwan.
38. October 2021, English Presentation at International Conference, National Cheng Kung University Hospital, Tainan, Taiwan.

Invited Round Table Meeting

1. December 2024, Generative AI in Medicine - Expert Panel Discussion, Industrial Technology Research Institute, Taipei, Taiwan.
2. May 2024, The necessity and demand for students' English proficiency in employment., School of Management, National Taiwan University of Science and Technology, Taipei, Taiwan.
3. November 2022, invited panelist of the EMI Seminar “Fulbright Specialist Dialogue”, Center for Bilingual Education at National Taiwan University, Taipei, Taiwan.
4. April 2021, AI Medical Application - Expert Co-creation Workshop, Industrial Technology Research Institute, Taipei, Taiwan.
5. July 2020, Mental health of youth in the AI Era, Graduate Institute of Social Work, National Taiwan Normal University, Taipei, Taiwan.
6. September 2019, Open Data Design Workshop, Department and Graduate Institute of Library and Information Science, National Taiwan University, Taipei, Taiwan.

Lecturer of Higher Education Pedagogy

1. 2021-2025, Enhancement in Learning and Teaching in Higher Education (ELTHE) Certificate Program, UK Professional Standard Framework, Advance HE x National Yang Ming Chiao Tung University, Taiwan.
2. 2023-2025, Higher Education EMI Professional Development (EMI PD) Certificate Program, Ministry of Education, Taiwan.
3. 2024, Advance HE EMI Training for Professional Academics, Advance HE x National Yang Ming Chiao Tung University, Taiwan.

Research Grants

National Science and Technology Council (NSTC), Taiwan 2024-2027, NT$ 3,420,000
Development of Early Warning System for Intracranial Stenosis: A Serial MRA Study
PI: Chia-Feng Lu
Role: PI

VGH and University of Taiwan, Taiwan 2026-2026, NT$ 710,000
Prediction of radiosurgery-induced edema in ruptured and unruptured cerebral arteriovenous

malformation using component-wise MR radiomics and deep learning (3rd year)
PI: Chia-Feng Lu
Role: PI

VGH and University of Taiwan, Taiwan 2025-2025, NT$ 740,000
Prediction of therapeutic effect and re-hemorrhage after stereotactic radiosurgery in ruptured arteriovenous malformation based on MRI and digital subtraction angiography (2nd year)
PI: Chia-Feng Lu
Role: PI

Cheng Hsin General Hospital and NYCU, Taiwan 2025-2025, NT$ 640,000
Developing an Artificial Intelligence Model for Predicting Cardiovascular Disease Risk Using Low-Dose Computed Tomography Imaging
PI: Chia-Feng Lu
Role: PI

National Science and Technology Council (NSTC), Taiwan 2023-2024, NT$ 880,000
Development of Next Generation Radiomics Platform for Multiple Outcome Prediction in Brain Tumors
PI: Chia-Feng Lu
Role: PI

VGH and University of Taiwan, Taiwan 2024-2024, NT$ 440,000
Prediction of therapeutic effect and complication after stereotactic radiosurgery in arteriovenous malformation: automatic composition analysis and next-generation radiomics study (1st year)
PI: Chia-Feng Lu
Role: PI

National Science and Technology Council (NSTC), Taiwan 2020-2023, NT$ 3,330,000
Association between MR Radiomics and Symptoms Recurrence in Cavernous Malformation: A Study of Longitudinal Follow-up after Gamma Knife Radiosurgery
PI: Chia-Feng Lu
Role: PI

VGH and University of Taiwan, Taiwan 2023-2023, NT$ 350,000
Prediction of Occurrence and Treatment Response of Lung Cancer Brain Metastases: A Longitudinal Follow-up Study Based on Radiomics, EGFR Status, and Treatment Strategy
PI: Chia-Feng Lu

Role: PI

FEMH-NYCU Joint Research Program, Taiwan 2022-2022, NT$ 350,000
The association between the brain network integrity and long-term clinical outcome in ischemic stroke after intra-arterial thrombectomy
PI: Chia-Feng Lu
Role: PI

VGH and University of Taiwan, Taiwan 2021-2021, NT$ 378,500
Risk Prediction of Radiosurgery-Induced Complications in Meningioma Based on MR Radiomic Phenotypes: A Longitudinal Follow-up Study
PI: Chia-Feng Lu
Role: PI

Ministry of Science and Technology (MOST), Taiwan 2017-2020, NT$ 2,711,000
Real-time recognition of motor imagery electroencephalography in brain machine interface and development of neuro-feedback training system
PI: Chia-Feng Lu
Role: PI

Ministry of Science and Technology (MOST), Taiwan 2017-2019, NT$ 2,751,000
Neuroimage Biomarker of Thalamo-cortical Network for Outcome Prediction in Mild Traumatic Brain Injury: A Translational MRI Research
PI: Chia-Feng Lu
Role: PI

Ministry of Science and Technology (MOST), Taiwan 2016-2017, NT$ 850,000
MR radiomics and radiogenomics for characterizing genotypes of breast cancer
PI: Chia-Feng Lu
Role: PI

Ministry of Science and Technology (MOST), Taiwan 2015-2016, NT$ 753,000
Motion-Sensitive MR Imaging in Characterizing Brain Compliance in Cerebral Venous Hypertension: A Translational Study between Humans and Rats
PI: Chia-Feng Lu
Role: PI

Taipei Medical University, Taiwan 2015-2017, NT$ 600,000

Research Grant for New Faculty
PI: Chia-Feng Lu
Role: PI

Ministry of Science and Technology (MOST), Taiwan 2013-2014, NT$ 605,000
Training Benefit of Gait and Brain Activity Performance during Cognitive and Motor Dual tasks While Walking: A Near-Infrared Spectroscopy Study
PI: Chia-Feng Lu
Role: PI

Taipei City Hospital, Taiwan 2013-2014, NT$ 800,000
Discrimination and prognosis of Alzheimer's disease and mild cognitive impairment using EEG functional connectivity and structural MRI
PI: Chia-Feng Lu
Role: PI

Ministry of Science and Technology (MOST), Taiwan 2019-2020, NT$ 9,400,000
Artificial intelligence driven automatic tumor detection and follow up, and precision medicine model for acoustic neuroma
PI: Yu-Te Wu (National Yang-Ming University)
Role: PI of Subproject 3

Ministry of Science and Technology (MOST), Taiwan 2019-2020, NT$ 14,000,000
Cerebral vasculogenesis and neuroplasticity: connectome-wide network analysis and mechanism
PI: Jiing-Feng Lirng (National Yang-Ming University)
Role: PI of Subproject 2

National Science and Technology Council (NSTC), Taiwan 2025-2028, NT$ 3,613,000
Neural Mechanisms Underlying the Benefits of Early Dialogic Shared Reading
PI: Shin-Ming Wang
Role: Co-PI

National Science and Technology Council (NSTC), Taiwan 2024-2026, NT$ 108,426,000
Installation and Operation of 7T Functional MRI: NeuroSocial and NeuroHumanity Imaging Center
PI: Li-Fen Chen
Role: Co-PI

Ministry of Science and Technology (MOST), Taiwan 2021-2021, NT$7,600,000

Construction and Application of Medical Image Database in TMU Healthcare System
PI: Chao-Ching Huang (Taipei Medical University)
Role: Co-PI

Ministry of Science and Technology (MOST), Taiwan 2017-2020, NT$ 80,000,000
Automatic segmentation of brain tumors on preoperative and postoperative multi-temporal magnetic resonance imaging using artificial intelligence
PI: Yu-Te Wu (National Yang Ming Chiao Tung University)
Role: Co-PI

National Institute of Health, United States &
Ministry of Science and Technology (MOST), Taiwan 2015-2018, NT$ 4,500,000
Characterization of Thalamocortical Dysrhythmia in Mild Traumatic Brain Injury using Simultaneous MRI and EEG Measurements and Preclinical N-acetylcysteine Treatment Response
PI: Cheng-Yu Chen (Taipei Medical University)
Role: Co-PI

National Health Research Institute (NHRI), Taiwan 2018-2020, NT$ 7,500,000
Multi-site Radiogenomics and Radioproteomics of Gliomas
PI: Cheng-Yu Chen (Taipei Medical University)
Role: Co-PI

Ministry of Science and Technology (MOST), Taiwan 2016-2019, NT$ 3,073,000
MRI study on Trans-Neuronal Degeneration of the Thalamic Networks after Ischemic Stroke
PI: Cheng-Yu Chen (Taipei Medical University)
Role: Co-PI

Ministry of Science and Technology (MOST), Taiwan 2016-2018, NT$2,400,000
Remodeling of Neuronal Network after Mild Traumatic Brain Injury: Small Animal MRI
PI: Yu-Chieh Kao (Taipei Medical University)
Role: Co-PI

Ministry of Science and Technology (MOST), Taiwan 2017-2018, NT$1,200,000
In vivo Early Neuroimage Profiles of Injurious and Protective Responses in Neonatal Hypoxic-Ischemic Models Using 7T MRI (1/3)
PI: Yu-Chieh Kao (Taipei Medical University)
Role: Co-PI

Ministry of Science and Technology (MOST), Taiwan 2015-2016, NT$ 800,000
Restoration of thalamocortical oscillation as a potential treatment for mTBI: a small animal MRI research
PI: Yu-Chieh Kao (Taipei Medical University)
Role: Co-PI

Ministry of Science and Technology (MOST), Taiwan 2017-2020, NT$ 4,050,000
Dementia-Related Brain Abnormalities and Theta-Burst Stimulation in Major Depression with Prominent Cognitive Impairments.
PI: Cheng-Ta Li (Taipei Veteran General Hospital)
Role: Co-PI

Ministry of Science and Technology (MOST), Taiwan 2014-2017, NT$ 4,050,000
Clinical biomarkers for diagnosing and predicting treatment outcome in major depressive disorders and generalized anxiety disorder: a study combing inhibitory neurocognition, paired-pulse transcranial magnetic stimulation, and near-infrared spectroscopy
PI: Cheng-Ta Li (Taipei Veteran General Hospital)
Role: Co-PI

Ministry of Science and Technology (MOST), Taiwan 2014-2017, NT$ 2,678,000
Using diffusion modularity analysis to cluster the degenerative features from the EEG, structural MRI and DTI of SCA3 patients for establishing copula model among brain regions
PI: Yu-Te Wu (National Yang-Ming University)
Role: Co-PI

Ministry of Science and Technology (MOST), Taiwan 2017-2020, NT$ 2,994,000
Dual task on gait performance and brain activity in pre-frail and mild cognitive impaired elderly
PI: Ray-Yau Wang (National Yang-Ming University)
Role: Co-PI

Ministry of Science and Technology (MOST), Taiwan 2014-2017, NT$ 3,021,000
Effects of dual task on gait performance and brain activities-exploration of age and neurological diseases
PI: Ray-Yau Wang (National Yang-Ming University)
Role: Co-PI

Ministry of Science and Technology (MOST), Taiwan 2017-2018, NT$ 1,020,000

Radiogenomic Mapping of Angiogenesis in Glioblastoma
PI: Li-Chun Hsieh (Taipei Medical University Hospital)
Role: Co-PI

Ministry of Science and Technology (MOST), Taiwan 2016-2017, NT$ 840,000
Radiogenomic Mapping of Angiogenesis in Glioblastoma
PI: Li-Chun Hsieh (Taipei Medical University Hospital)
Role: Co-PI

Ministry of Science and Technology (MOST), Taiwan 2017-2018, NT$ 1,198,000
The role of IL-15 system in immune response to cerebral ischemia-reperfusion and in the development of stroke immunotherapy
PI: Gilbert Aaron Lee (Taipei Medical University Hospital)
Role: Co-PI

Ministry of Science and Technology (MOST), Taiwan 2016-2017, NT$ 851,000
Investigating the early MR biomarkers of the brain demyelination using myelin water imaging, diffusion kurtosis imaging, and chemical exchange saturation transfer (CEST) schemes: a translational study
PI: Ping-Hua Tsai (Taipei Medical University)
Role: Co-PI

National Health Research Institutes (NHRI), Taiwan 2016-2019, NT$ 8,000,000
Development of Industry for Personalized Genomic Medicine, Subproject 3: Precision Medicine on Brain Tumor
PI: Cheng-Yu Chen (Taipei Medical University)
Role: Research Investigator

Ministry of Health and Welfare (MOHW), Taiwan 2015-2017, NT$ 900,000
Taipei Medical University, Center of Excellence for Cancer Research (CECR): Imaging Core
PI: Yun Yen (Taipei Medical University)
Role: Research Investigator

Teaching Funds

National Yang-Ming University, Taiwan 2018-2019, NT$ 50,000
MATLAB Programming in Medical Image Processing
推動教學精進與課程改革計劃－程式設計創新教學
Role: Coordinator and Lecturer (主授教師)

National Yang-Ming University, Taiwan 2018-2019, NT$ 30,000
Applications of Virtual Reality in Clinical Practice
推動教學精進與課程改革計劃－虛擬實境於跨領域臨床醫學技術之應用與實務共授課程
Role: Lecturer (共授教師)

Supervising Research Projects

National Science and Technology Council (NSTC), Taiwan 2025-2026, NT$ 48,000
Research Project of Undergraduate Student (大專生研究計畫)
Prediction of Brain Metastases and Patient Outcomes in Lung Cancer
Supervisor: Chia-Feng Lu
Undergraduate Student: Yu-Chieh Tsai (Department of Biomedical Imaging and Radiological Sciences/National Yang Ming Chiao Tung University)

National Science and Technology Council (NSTC), Taiwan 2024-2025, NT$ 48,000
Research Project of Undergraduate Student (大專生研究計畫)
Prediction of Peritumoral Edema after Gamma Knife Radiosurgery in Meningioma Based on the Lesion Location and Imaging Features
Supervisor: Chia-Feng Lu
Undergraduate Student: Pei-Yun Wu (Department of Biomedical Imaging and Radiological Sciences/National Yang Ming Chiao Tung University)

Ministry of Science and Technology (MOST), Taiwan 2022-2023, NT$ 48,000
Research Project of Undergraduate Student (大專生研究計畫)
Auto-segmentation and Re-Hemorrhage Prediction after Gamma Knife Radiosurgery in Cavernous Malformation: A Deep Learning Study
Supervisor: Chia-Feng Lu
Undergraduate Student: Tzu-Chen Chiu (Department of Biomedical Imaging and Radiological Sciences/National Yang Ming Chiao Tung University)

Ministry of Science and Technology (MOST), Taiwan 2020-2021, NT$ 48,000
Research Project of Undergraduate Student (大專生研究計畫)
Predicting Treatment Response of Vestibular Schwannoma after Gamma Knife Radiosurgery Using Deep Learning
Supervisor: Chia-Feng Lu
Undergraduate Student: Chang-Min Chen (Department of Biomedical Imaging and Radiological Sciences/National Yang-Ming University)

Ministry of Science and Technology (MOST), Taiwan 2019-2020, NT$ 48,000
Research Project of Undergraduate Student (大專生研究計畫)
Combining Radiomics and Machine Learning for Predicting Therapeutic Effects and Clinical Symptoms after Gamma Knife Radiosurgery in Cavernous Malformation
Supervisor: Chia-Feng Lu
Undergraduate Student: Man-Chin Chen (Department of Biomedical Imaging and Radiological Sciences/National Yang-Ming University)

Graduate and Undergraduate Courses

1. Principles and applications of magnetic resonance imaging (Undergraduate & Graduate)
2. Magnetic resonance imaging in medicine (Undergraduate), EMI
3. Medical imaging processing and analysis (Intern, Resident)
4. MATLAB programming for medical image process (Undergraduate & Graduate), EMI
5. Advanced MATLAB programming for machine learning (Graduate), EMI
5. MATLAB programming for medical signal analysis (Graduate)
6. MATLAB graphic user interface for biomedical signal analysis (Graduate)
7. The principles and applications of functional near-infrared spectroscopy (Graduate)
8. Principles and practice in fMRI analysis (Graduate), EMI
9. Introduction of Computer Science (Undergraduate), EMI
10. Computer Architecture for Dentists (Undergraduate)
11. Neuroanatomy (Undergraduate)
12. Human Dissection (Undergraduate)

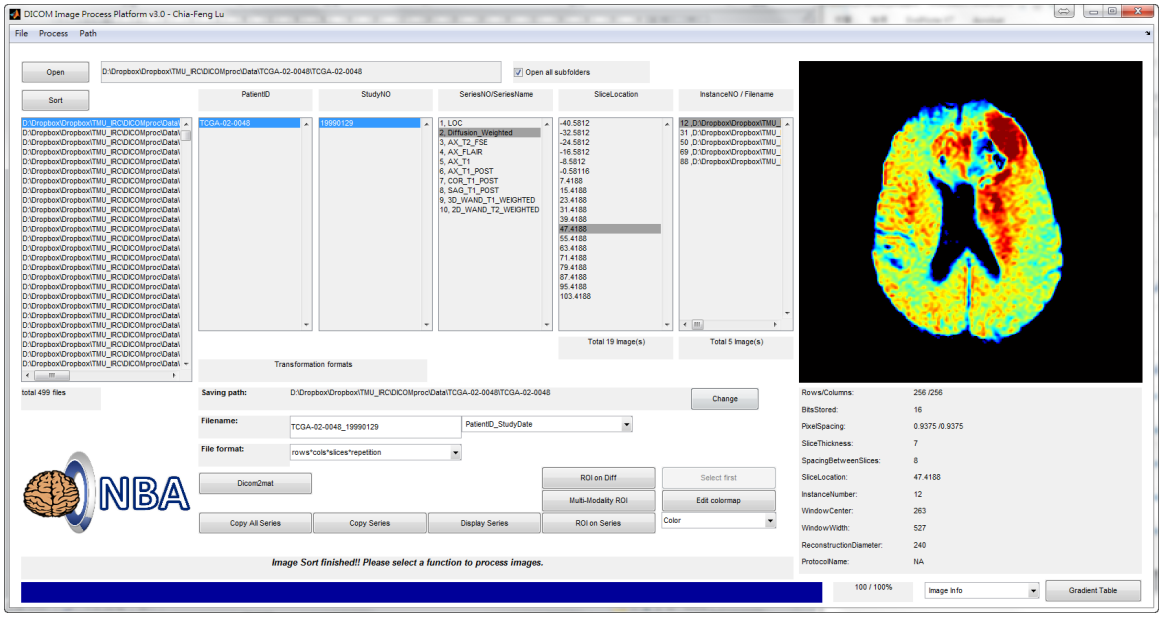
Course outlines & materials: http://cflu.lab.nycu.edu.tw/CFLu_course.html
Online videos (Chinese): https://www.youtube.com/user/AlvinLu4016

Last updated 1/ 27/ 2026

Platform Development

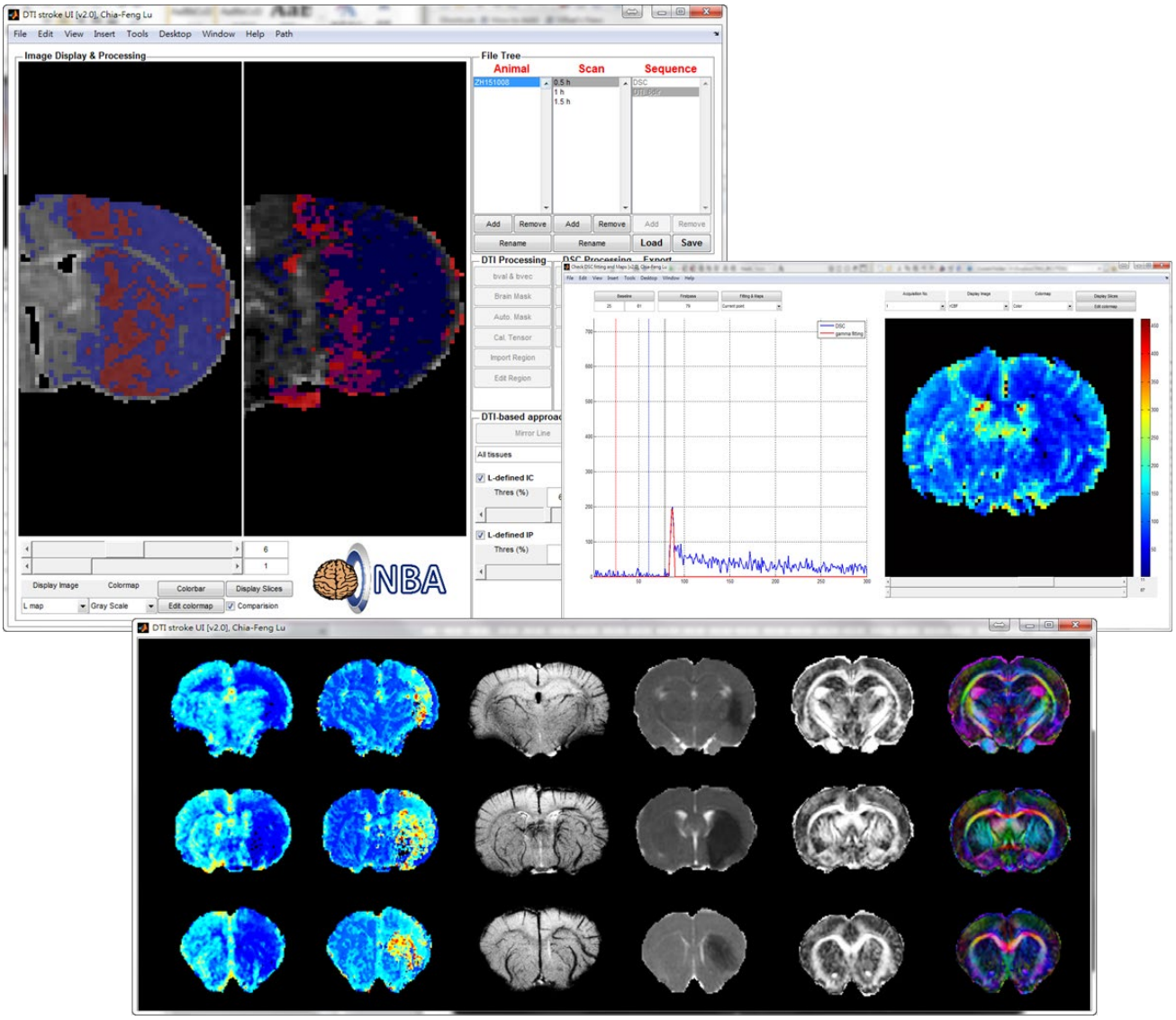
< Multimodal Radiomics Platform V5.0, MRP 2018-2024 >

http://cflu.lab.nycu.edu.tw/MRP_MLinglioma.html



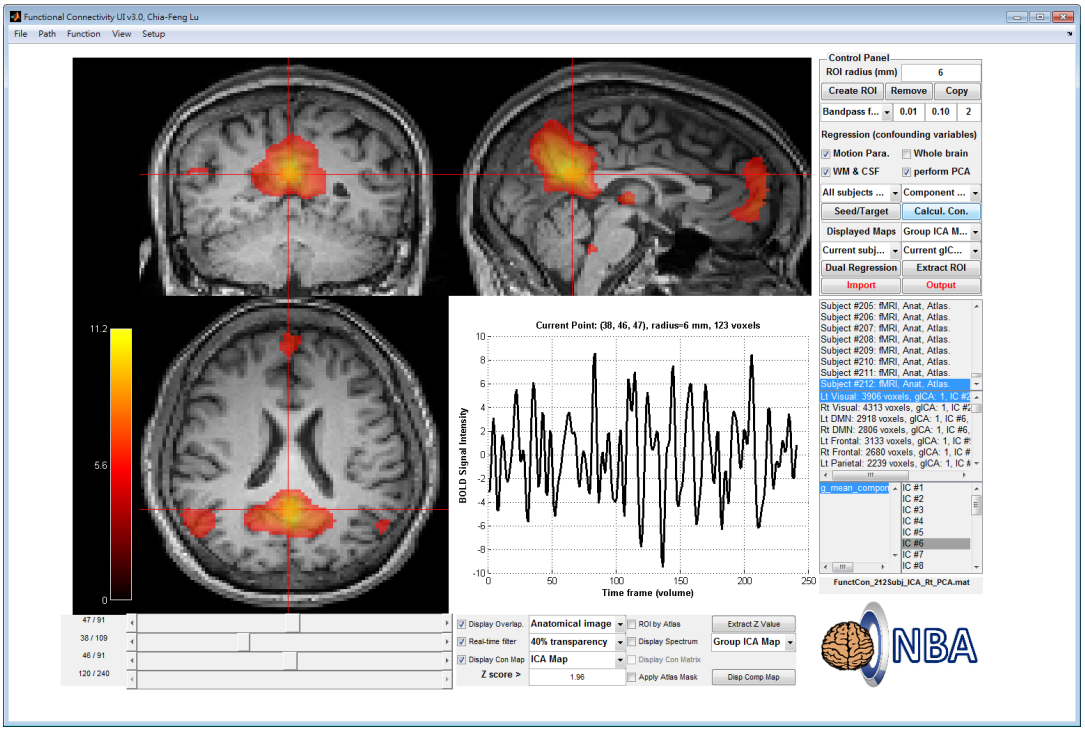
- DICOM read for MRI, CT, and PET images, optimized for brain, breast, and chest imaging.
- Cross-modality image co-registration and interpolation.
- Multi-modality operation of region of interest (ROI) and thresholding.
- Deep-learning automatic segmentation (3D U-Net) of brain metastasis, cavernous malformation, and vestibular schwonnoma on brain MRI; left/right atrium, pericardium, and peri-cardiac fat on contrast-enhanced cardiac CT.
- Computation of 497 Radiomic features, including intensity-based, geometry-based, textural analyses, and wavelet decomposition for each MR modality (CET1, T2W, T2 FLAIR, ADC, Cp/rCBV, Ktrans/K2 maps), up to 2942 Radiomic features.
- Correlation and multivariate linear regression analyses between image features and gene expression of tumors.
- Series images crop, zoom, window/contrast adjustment, and print.
- Output processed results as Excel sheets.

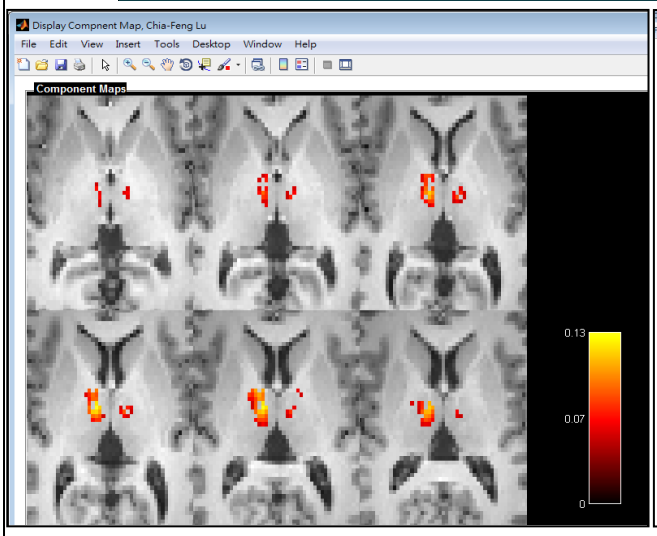
< Animal MRI processing platform, AMPP 2015-2016 >

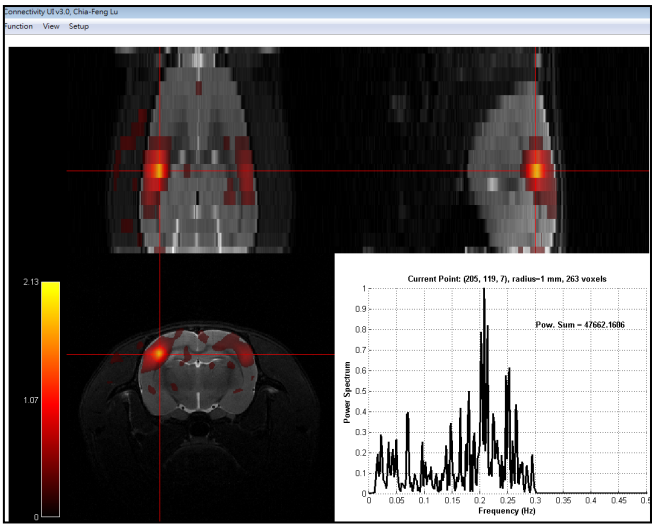


- Support image import of Brucker 2dseq, sdt/spr file, and Nifti formats.
- Design of "file tree" organization for longitudinal dataset processing.
- Analyses of dynamic susceptibility contrast (DSC) imaging, diffusion tensor imaging (DTI), susceptibility-weighted imaging (SWI), and functional MRI.
- Brain extraction and ROI operation.
- Atlas-based brain tissue classification and brain region identification.
- Tissue-based analysis and value extraction/export.
- Series images crop, zoom, window/contrast adjustment, and print.
- Export as mat-file, Nifti formats and direct output to Matlab workspace.

<Functional Connectivity Analysis Platform, FCAP 2016>

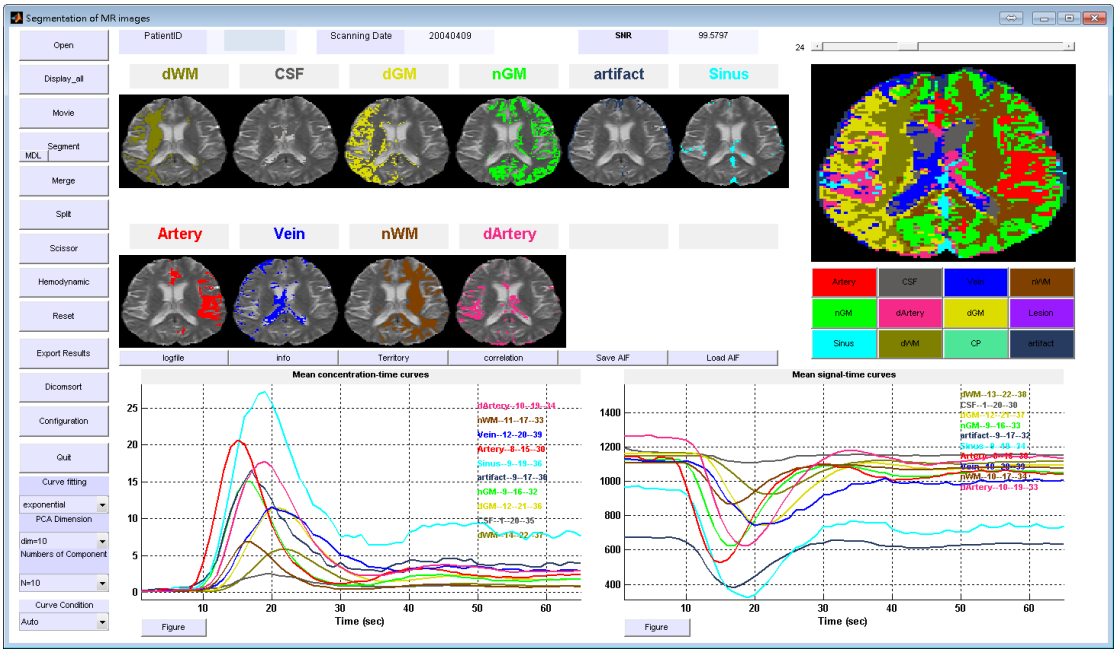


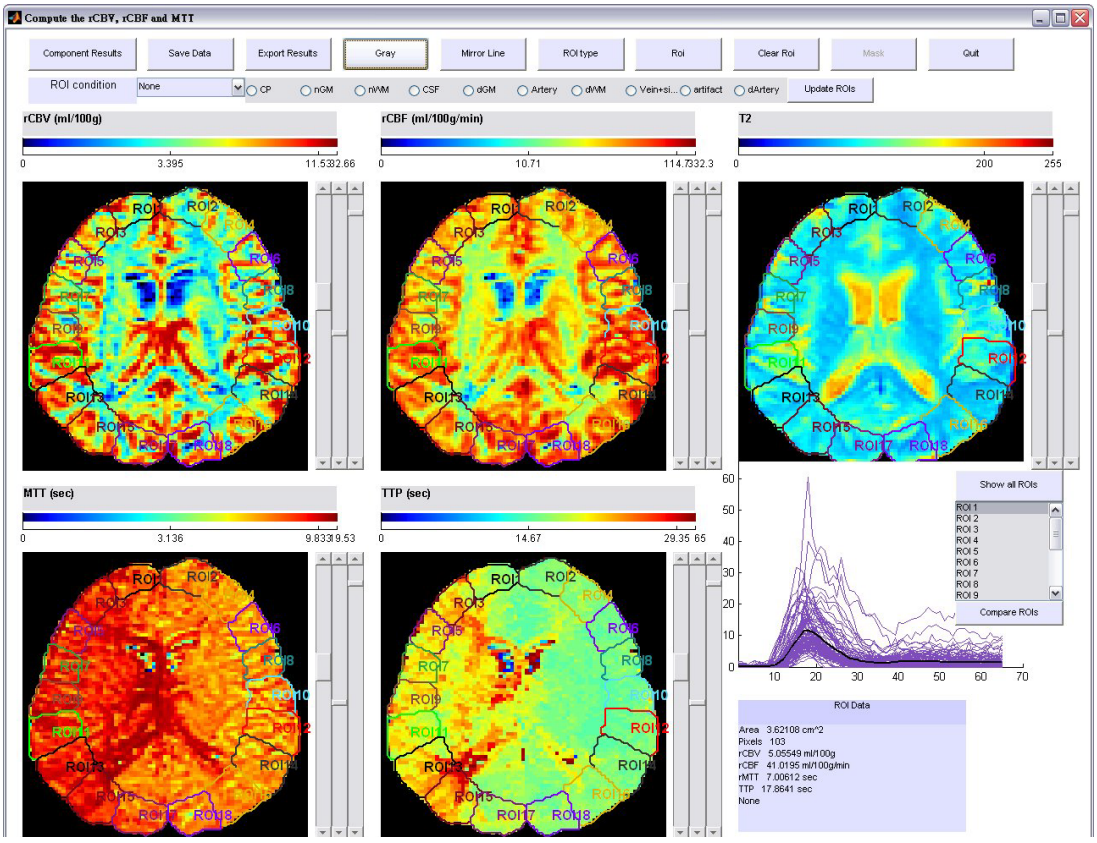




- Batch functional connectivity analyses on human brain or animal BOLD fMRI data.
- Preprocessing functions comprise skull stripping, bandpass filtering, head motion regression, whole-brain signal regression, WM/CSF regression, and principal component analysis (PCA) for noise reduction.
- Estimations of functional connectivity based on the group/subject independent component anlysis (ICA), total correlation analysis, partial correlation analysis, and spectrum analysis.
- Three modes for connectivity construction, including the construction of connectivity map (1 ROI to all voxels), connectivity matrix (ROIs to ROIs), and component map (voxels within specific ROIs to other ROIs), are built in.

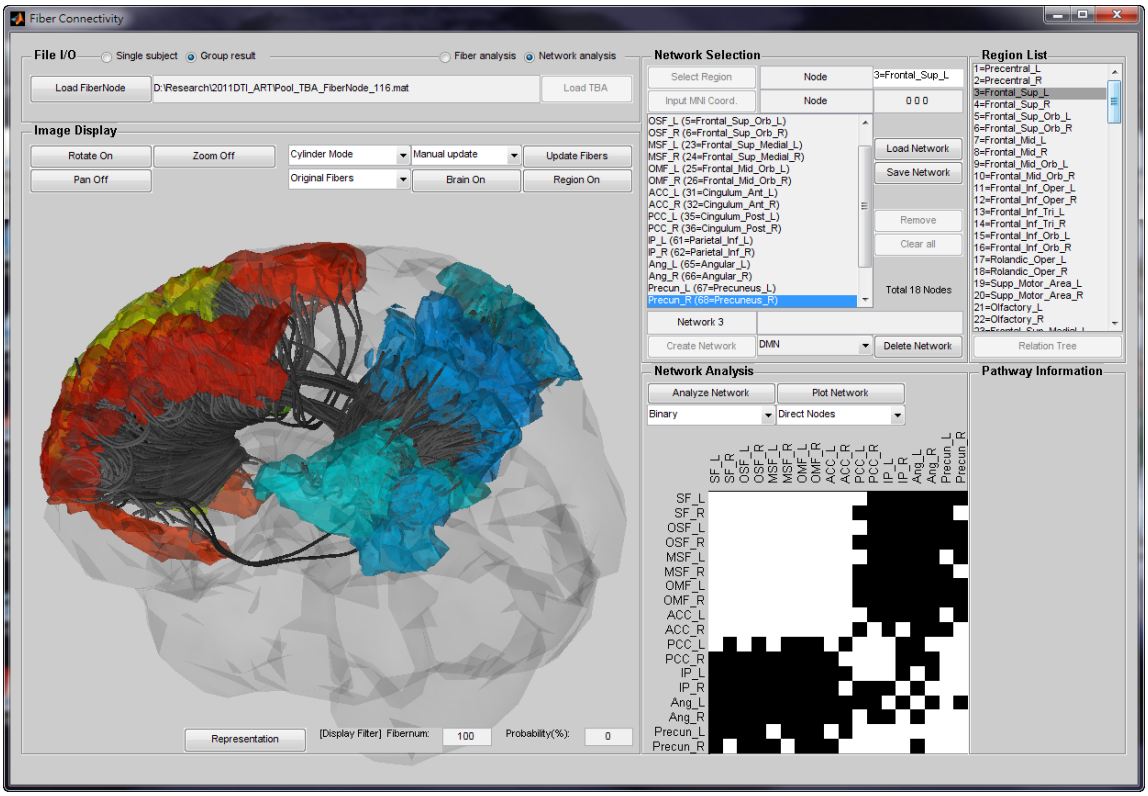
< Perfusion Analysis Platform, PAP 2014>

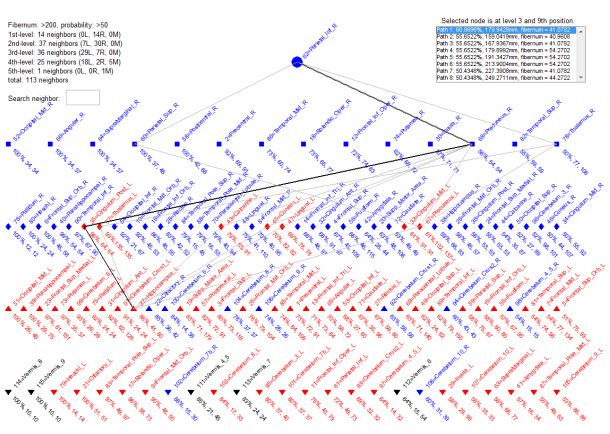


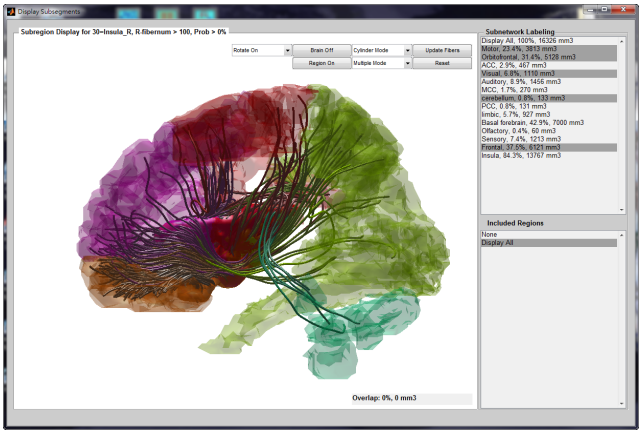


- Automatic tissue Classification based on signal time curve using hierarchical clustering initialized expectation-maximization (HC-EM) algorithm.
- Quantification features for user-defined ROI or tissue-based region analysis.
- File Input/Output, logfile tracking, and report generator.

< Tractography-Based Connectivity Analysis Platform, TBCAP 2013>

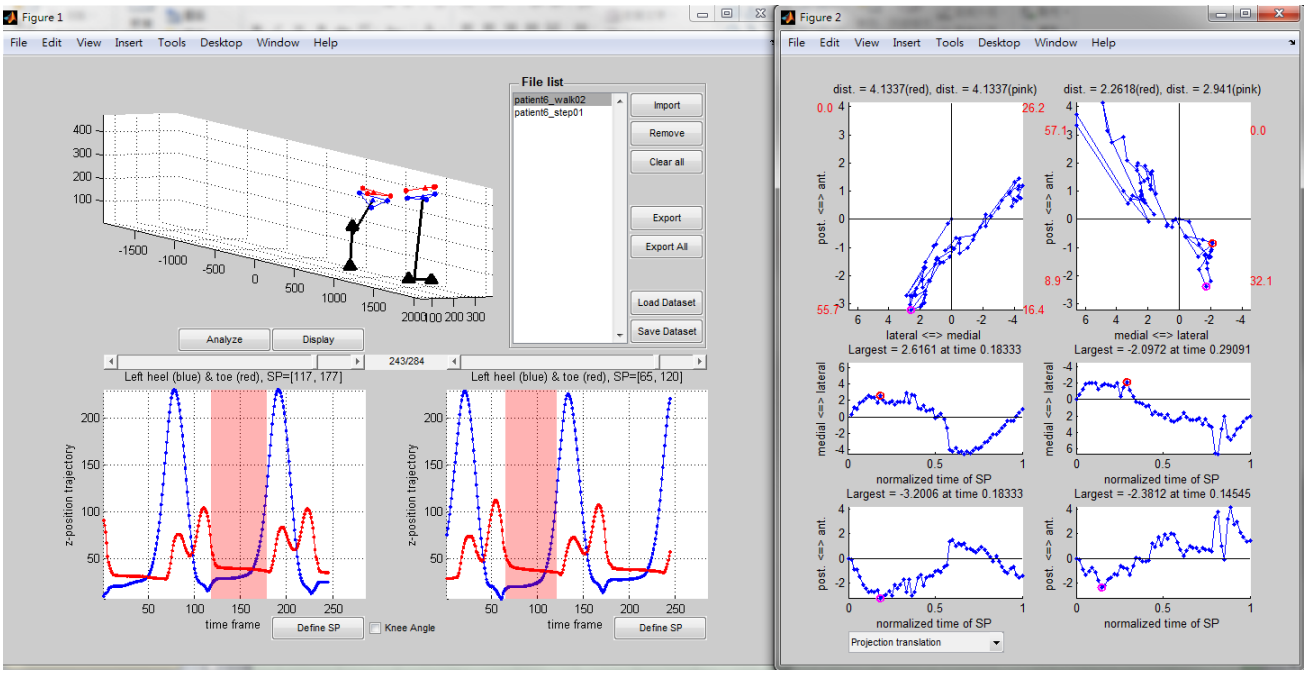






- Visualization of whole-brain structural connectivity (based on DTI tractrography), region-based connectivity, and user-defined network connectivity.
- Connectivity-based parcellation of brain region and subregion classification.
- 3D representative fiber tract for group analysis.
- Hierarchical analysis of region-specific network, interpreting the concept of secondary pathways.
- Small-world analysis (computation of topological properties based on graph theory).

<Motion Analysis Platform, MAP 2014>



- Visualization of VICON motion tracking system, multiple data integration and analyses.
- Interactive interface for assessing gait traits and determining gait cycles.
- Quantitative analyses of knee joint stability characterized by joint-plane translations, angular changes, velocity, and accelerations.
- Analytic data export in Excel format for the subsequent statistics.

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