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**Education :**

2001 博士， Medical Physics and Bioengineering, University College London, UK  
1996 碩士， Engineering and Physical Science in Medicine, Imperial College London, UK  
1993 學士， Power Mechanical Engineering, National Tsing Hua University, Taiwan

**Professional Experiences**

2012- 教授  
醫學影像暨放射科學系，長庚大學  
2009-2012 副教授  
醫學影像暨放射科學系，長庚大學  
2003-2009 助理教授  
醫學影像暨放射科學系，長庚大學  
2002-2003 助理教授  
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**研究領域(Research Interest):**

1. Diffusion Imaging optimization and oncology characteristics
2. Function Molecular Imaging using multi-imaging

## Recent Publications:

### 2014:

1. Lin YC, Wang CC, Lin G, Lin YP, Wai YY, Ng SH, Ma HY, Tsao HH, **Wang JJ\***, "A simple method to improve the quality of diffusion-weighted magnetic resonance imaging with rapid histologic correlation in a murine model" *Molecular Imaging*, 2014 Nov 1;13(0):1-8.
2. Chai WY, Chu PC, Tsai MY, Lin YC, **Wang JJ**, Wei KC, Wai YY, Liu HL\*, "Magnetic-Resonance Imaging for Kinetic Analysis of Permeability Changes during Focused Ultrasound-Induced Blood-Brain Barrier Opening and Brain Drug Delivery," *Journal of Controlled Release*, Volume 192, 28 October 2014, Pages 1–9 ,2014, DOI: 10.1016/j.jconrel.2014.06.023
3. Wai YY, Hsu WC, Fung HC, Lee JD, Chan HL, Tsai ML, Lin YC, Wu YR, Ying L, **Wang JJ\***, "Tract-based spatial statistics: application to mild cognitive impairment.", *BioMed Research International*, Volume 2014 (2014), Article ID 713079, 8 pages DOI: 10.1155/2014/713079
4. Lin SC, Chen CPC, Tang SFT, Chen CW, **Wang JJ**, Hsu CC, Hsieh JH, Chen WP. "Stress distribution within the plantar aponeurosis during walking - A dynamic finite element analysis", *Journal of Mechanics in Medicine and Biology*, Volume 14, Issue 4, August 2014, DOI: 10.1142/S0219519414500535
5. Ng SH, Lin CY, Chan SC, Lin YC, Yen TC, Liao CT, Chang JT, Ko SF, Wang HM, Chang CJ, **Wang JJ\***, Clinical Utility of Multimodality Imaging with Dynamic Contrast-Enhanced MRI, Diffusion-Weighted MRI, and <sup>18</sup>F-FDG PET/CT for the Prediction of Neck Control in Oropharyngeal or Hypopharyngeal Squamous Cell Carcinoma Treated with Chemoradiation, *PLoS One*. 2014 Dec 22;9(12):e115933. DOI: 10.1371/journal.pone.0115933. eCollection 2014.

### 2013:

6. Ng SH, Hsu WC, Wai YY, Lee JD, Chan HL, Chen YL, Fung HC, Wu YR, Tsai ML, **Wang JJ\***. Sex dimorphism of cortical water diffusion in normal aging measured by magnetic resonance imaging. *Frontiers in aging neuroscience* 2013;5:71 DOI: 10.3389/fnagi.2013.00071
7. Lin YC, **Wang JJ**, Hong JH, Lin YP, Lee CC, Wai YY, Ng SH, Wu YM, Wang CC\*. Noninvasive monitoring of microvascular changes with partial irradiation using dynamic contrast-enhanced and blood oxygen level-dependent magnetic resonance imaging. *International journal of radiation oncology, biology, physics*. 2013 Apr 1;85(5):1367-74. \*(equal contribution as the first author)
8. Wong AM\*, Wang HS, Schwartz ES, Toh CH, Zimmerman RA, Liu PL, Wu YM, Ng SH, **Wang JJ**. Cerebral diffusion tensor MR tractography in tuberous sclerosis complex: correlation with neurologic severity and tract-based spatial statistical analysis. *American Journal of Neuroradiology*. 2013. DOI: 10.3174/ajnr.A3507.
9. Juang JH\*, Shen CR, **Wang JJ**, Kuo CH, Chien YW, Kuo HY, Chen FR, Chen MH, Yen TC, Tsai ZT\*. Magnetic resonance imaging of mouse islet grafts labeled with novel chitosan-coated superparamagnetic iron oxide nanoparticles. *PloS one*. 2013;8(4):e62626. (The first three authors contributed equally to this work)
10. Chu PC, Chai WY, Hsieh HY, **Wang JJ**, Wey SP, Huang CY, Wei KC, Liu HL.

Pharmacodynamic Analysis of Magnetic Resonance Imaging-Monitored Focused Ultrasound-Induced Blood-Brain Barrier Opening for Drug Delivery to Brain Tumors. *BioMed Research International*. vol 2013, Article ID 627496, 13 pages, 2013.  
DOI:10.1155/2013/627496.

11. Ng SH, Lin CY, Chan SC, Lin YC, Yen TC, Liao CT, Chang TC, Ko SF, Wang HM, Huang SF, **Wang JJ\***. Dynamic Contrast-Enhanced MR Imaging Predicts Local Control in Hypopharyngeal or Oropharyngeal Squamous Cell Carcinoma Treated with Chemoradiotherapy. *Plos One*. 2013;8(8):e722230
12. Yang ST, Lee JD, Chang TC, Huang CH, **Wang JJ**, Hsu WC, Chan HL, Wai YY, Li KY. Discrimination between Alzheimer's disease and mild cognitive impairment using SOM and PSO-SVM. *Computational and Mathematical Methods in Medicine*. Volume 2013 (2013), Article ID 253670, 10 pages.

#### 2012:

13. Wai YY, **Wang JJ\***, Weng YH, Lin WY, Ma HK, Ng SH, Wan YL, Wang CH\*. Cortical involvement in a gait related imagery task: comparison between Parkinson's disease and normal aging. *Parkinsonism & Related Disorders* 2012; vol 18(5): P 537-542. (equal contribution as the corresponding author)
14. Huang CC, Wei HJ, Yeh YC, **Wang JJ**, Lin WW, Lee TY, Hwang SM, Xia Y, Chang Y\*, Sung HW\*. Injectable PLGA Porous Beads Cellularized by hAFSCs for Cellular Cardiomyoplasty. *Biomaterials*, Volume 33, Issue 16, June 2012, Pages 4069–4077
15. Lee WY, Wei HJ, **Wang JJ**, Lin WW, Chen DY, Huang CC, Lee TY, Hwang SM, Chang Y, Sung HY\*. Vascularization and restoration of heart function in rat myocardial infarction using transplantation of human cbMSC/HUVEC core-shell bodies. *Biomaterials* 2012; vol 33(7): P 2127-2136. (The first three authors contributed equally to this work.)
16. Yang ST, Lee JD\*, Huang CH, **Wang JJ**, Hsu WC, Wai YY. Computer-aided diagnosis of neurodegenerative disease using multiple image features with hybrid PSO-SVM. *ICIC Express Letters* 2012(3); vol 6(3): P 797-802. (EI)
17. Lin YC, Chan TH, Chi CY, Ng SH, Liu HL, Wei KC, Wai YY, Wang CC, **Wang JJ\***. Blind estimation of the arterial input function in dynamic contrast-enhanced MRI using purity maximization. *Magnetic Resonance in Medicine*, Volume 68, Issue 5, pages 1439–1449, 2012. DOI: 10.1002/mrm.24144

#### 2011:

18. Chan HL\*, Chu JH, Fung HC, Tsai YT, Meng LF, Huang CC, Hsu WC, Chao PK, **Wang JJ**, Lee JD, Wai YY, Tsai MT. Brain connectivity of patients with Alzheimer's disease by coherence and cross mutual information of electroencephalograms during photic stimulation. *Medical Engineering & Physics* 2011, Volume 35, Issue 2, February 2013, Pages 241–252
19. Chang CC, Chang WN, Lui CC, Huang SH, Lee CC, Chen C, **Wang JJ\***. Clinical significance of the pallidoreticular pathway in patients with carbon monoxide intoxication. *Brain* 2011; vol 134(12): P 3632-3646. DOI:10.1093/brain/awr287
20. Wu MC, Lin YC, Shieh CC, Wan YL, Yen TH, Ng KK, Wai YY, **Wang JJ\***. Measuring anisotropic diffusion in kidney using MRI. *Academic Radiology* 2011; vol 18(9): P 1168-1174.
21. **Wang JJ**, Lin WY, Lu CS, Weng YH, Ng SH, Wang CH, Liu HL, Hsieh RH, Wan YL, Wai

- YY\*. Parkinson disease: diagnostic utility of diffusion kurtosis imaging. *Radiology* 2011; vol 261(1): P 210-217.
  22. Chan SC, Wang HM, Yen TC, Lin CY, Chin SC, Liao CT, Wai YY, **Wang JJ**, Ng SH\*. <sup>18</sup>F-FDG PET/CT and 3.0 Tesla Whole-body MRI for the Detection of Distant Metastases and Second Primary Tumors in Patients with Untreated Oropharyngeal/Hypopharyngeal Carcinoma: A Comparative Study. *European Journal of Nuclear Medicine and Molecular Imaging* 2011, Volume 38, Issue 9, pp 1607-1619
  23. Lee WY, Wei HJ, Lin WW, Yeh YC, Hwang SM, **Wang JJ**, Tsai MS, Chang Y, Sung SW\*. Enhancement of cell retention and functional benefits in myocardial infarction using human amniotic-fluid stem-cell bodies enriched with endogenous ECM. *Biomaterials*, Volume 32, Issue 24, August 2011, Pages 5558–5567
  24. Shen CR, Wu ST, Tsai ZT, **Wang JJ**, Yen TC, Tsai JS , Liu CL\*. Characterization of the Quaternized Chitosan-Stabilized Iron-Oxide Nanoparticles as a Novel Potential MRI Contrast Agent for Cell Tracking. *Polymer International* 2011.
- 2010:**
25. Juang JH\*, Shen C R, **Wang JJ**, Kuo CK, Lin MY, Wu ST, Tsai ZT, Yen TC. Magnetic Resonance Imaging Study of Mouse Islet Allotransplantation. *Transplantation Proceedings* 2010; vol 42: P 4217-4220.
  26. Liu HL, Hua MY, Yang HY, Huang CY, Chu PC, Wu JS, Tseng IC, **Wang JJ**, Yen T C, Chen P Y, Wei K C\*. Magnetic resonance monitoring of focused ultrasound/magnetic nanoparticle targeting delivery of therapeutic agents to the brain. *Proceedings of the National Academy of Sciences of the United States of America* 2010.
  27. Kiran S, Chen MC, Lin KJ, **Wang JJ**, Mi FL, Chen CT, Juang JH, Sung HW\*. Self-assembled pH-sensitive Nanoparticles: A Platform for Oral Delivery of Peptide/Protein Drugs. *Advanced Functional Materials* 2010; vol 20: P 3695-3700.
  28. Shen CR\*, Juang JH, Tsai ZT, Wu ST, Tsai FY, **Wang JJ**, Yen TC. Preparation, characterization and application of superparamagnetic iron oxide encapsulated with N-[(2-hydroxy-3-trimethylammonium) propyl] chitosan chloride Carbohydrate Polymers. *Carbohydrate Polymers* 2010.
  29. Yu JF, Chen CK, Wang SR, Wu CM, Ng SH, Ying L, Huang YZ, **Wang JJ**\*. Activation of the Auditory Cortex in Subjects with Unilateral Sensorineural Hearing Impairment in Response to Hearing Their Own Names. *Journal of Medical and Biological Engineering* 2010; vol 30(4): P 215-219.
  30. Chang CC, Lui CC, **Wang JJ**, Huang SH, Lu CH, Chen C, Chen CF, Tu MC, Huang CW, Chang WN\*. Multi-parametric Neuroimaging Evaluation of Cerebrotendinous Xanthomatosis and its Correlation with Neuropsychological Presentations. *BMC Neurology* 2010. vol 10(59).
  31. Chen PY, Liu HL, Hua MY, Yang HW, Huang CY, Chu PC, Lyu LA, Tsai HC, Chen SM, Lu YJ, **Wang JJ**, Yen TC, Ma YH, Wu Tony, Chen JP, Chuang JI, Shin J , Hsueh C, and Wei KC\*. Novel magnetic/ultrasound focusing system enhances nanoparticle drug delivery for glioma treatment. *Neuro-Oncology* 2010; vol 00: P 1-12.
  32. **Wang JJ**, Wai YY, Lin WY, Ng SH, Wang CH, Hsieh RH, Hsieh CH, Chen RS, Lu CS\*. Microstructural Changes in Patients with Progressive Supranuclear Palsy: A Diffusion Tensor

- Imaging Study. *Journal of Magnetic Resonance Imaging* 2010; vol 32: P 69-75.
33. Juang JH\*, **Wang JJ**, Shen CR, Kuo CH, Chien YW, Kuo HY, Tsai ZT, Yen TC. Magnetic resonance imaging of transplanted mouse islets labeled with chitosan-coated superparamagnetic iron oxide nanoparticles. *Transplantation Proceedings* 2010; vol 42: P 2104-2108. \* (equal contribution as the first author)
  34. Liu HL, Hua MY, Cheng PY, Chu PC, Pan CH, Yang HW, Huang CY, **Wang JJ**, Yen TC, Wei KC\*. Blood–Brain Barrier Disruption by Using Focused US Enhances Delivery of Chemotherapeutic Drugs for Glioblastoma Treatment. *Radiology* 2010; vol 255: P 415-425.
  35. Huang YZ, Rothwell JC, Lu CS, **Wang JJ**, Chen RS\*. Restoration of motor inhibition through an abnormal premotor-motor connection in dystonia. *Movement Disorders* 2010; vol 25: P 696-703.
  36. Chang CC\*, Chang WN, Lui CC, Lee YC, **Wang JJ**, Chen SS, Lin MH, Lin YT, Wang YL. Longitudinal Study of Carbon Monoxide Intoxication by Diffusion Tensor Imaging with Neuropsychiatric Correlation. *Journal of Psychiatry & Neuroscience* 2010; vol 35: P 115-125.
  37. Lin YC, Wang CC, Wai YY, Wan YL, Ng SH, Chen YL, Liu HL, **Wang J J**\*. Significant Temporal Evolution of Diffusion Anisotropy for Evaluating Early Response to Radiosurgery in Patients with Vestibular Schwannoma: Findings from Functional Diffusion Maps. *American Journal of Neuroradiology* 2010; vol 31: P 269-274.
  38. Lee PW, Hsu SH, **Wang JJ**, Tsai JS, Lin KJ, Wey SP, Chen FR, Lai CH, Yen TC, Sung HW\*. The Characteristics, Biodistribution, Magnetic Resonance Imaging and Biodegradability of Superparamagnetic Core-shell Nanoparticles. *Biomaterials* 2010; vol 31: P 1316-1324.
  39. Tsai ZT, Wang JF, Kuo HY, Shen CR, **Wang JJ**, Yen TC\*. In situ preparation of high relaxivity iron oxide nanoparticles by coating with chitosan: A potential MRI contrast agent useful for cell tracking. *Journal of Magnetism and Magnetic Materials* 2010; vol 322: P 208-213.
  40. Liu HL, Wai YY, Hsu PH, Lyu LA, Wu JS, Shen CR, Chen JC, Yen TC, **Wang JJ**\*. In Vivo Assessment of Macrophage CNS Infiltration during Disruption of the Blood-brain Barrier with Focused Ultrasound: A Magnetic Resonance Imaging Study. *Journal of Cerebral Blood Flow and Metabolism* 2010; vol 30: P 177-186