Yong Hu, PhD

Tenured Associate professor, Director of Lab of Neural Engineering and Clinical Electrophysiology, Department of Orthopaedics & Traumatology, The University of Hong Kong

Principle Investigator, Research Professor, HKU-Shenzhen Hospital, HKU-Shenzhen Institute of Research and Innovation

Dr Hu has been working in the research area of neural engineering and clinical electrophysiology for more than 30 years. He has conducted more than 30 research projects with granted from Hong Kong RGC, S.K. Yee Medical Foundation, NSFC etc. He published 10 book chapters, and more than 300 journal paper with SCI citation (about 10 papers per year).
He is a senior member of IEEE and Chinese BME society; Council Board member of International Association of Neurorestoratology(IANR); Vice Chairmen of Chinese Committee of IANR; Vice president of basic science sub-committee, Spine and spinal cord committee of Chinese Rehabilitation Medicine Society, Vice president of Chinese Committee of Biomedical Sensor Technology, Chinese BME society, Council committee member in Chinese Sub-society of Medical Neural Engineering, Chinese BME society. Dr. Hu was awarded several international prizes for his academic contributions, including Macnab/Larocca Research Fellowship twice from the International Society for the Study of the Lumbar Spine (ISSLS); Universitas 21 Fellowship; Oldendorf Award from American Society of Neuroimaging; and Sino-UK Fellowship.

RGC GRF (Exercise Year 2016/2017,HKU 17656116): The neural bases of multi-task training for promoting automaticity of technical skills in surgery. (Outcome: funded, amount: 472K HK$) (1/12/2016-31/5/2019)

Hong Kong ITF Tier 3 (ITS/148/17, 1,397K): A Novel Measurement System of Hand Function (1/1/2018-30/6/2019)

S.K. Yee Medical Foundation(2161216, 2017-2020, 770,800HK$): Provision of diffusion tensor imaging for cervical spondylotic myelopathy diagnosis in elderly (1/5/2017-30/4/2020)

Hong Kong Midstream Research Programme for Universities (1/04/2018-31/03/2020, MRP/092/17X, 500K Hk$): Development of Wolfberry as Herbal Medicine to Modulate Systemic Inflammation and Neuroinflammation for Alzheimer's Disease.

Hong Kong ITF Tier 2 (01/09/2017-31/08/2019, ITS/406/16FP, 655,784 HK$). Anticipatory Control of Exoskeletons using Multi-modal Human Machine Interfaces

NSFC General Project (81871768): Precise detection of mode and location in spinal cord injury by feature analysis of evoked potentials
NSFC General Project (81572193): Pathological mechanism of using dynamics of somatosensory evoked potentials to indicate the timing of surgical intervention for cervical spondylotic myelopathy
NSFC Key project (61431007): Computational neurofeedback model based on electrical neural signals and its application

National Key Research and Development Program of China (2017YFB1300301)，Multi-modal and High Resolution Neural Signal Detection Technology in 'Bio-mechanical Intelligent Interaction and Bio-mechanical Integration Robot Technology'; 国家重点研发计划资助（2017YFB1300301）'生-机智能交互与生机电一体化机器人技术（课题一：多模态高分辨率的神经信号检测技术研究，2017YFB1300301）

National Key Research and Development Program of China (2017YFB1302305)：Clinical trial and demonstration research in 'Development and Demonstration of Key Technologies of Paraplegic Exoskeleton System'. 国家重点研发计划：临床训练测试与示范应用（截瘫助行外骨骼系统关键技术研究及示范应用）

JOURNAL PUBLICATIONS IN DIFFERENT RESEARCH TOPICS:

MRI/fMRI and neuroimaging related

1. Jin R, Luk KD, Cheung JPY, Hu Y. Prognosis of cervical myelopathy based on diffusion tensor imaging with artificial intelligence methods. NMR Biomed. 2019 Aug;32(8):e4114.
2. Jin R, Hu Y. Effect of segmentation from different diffusive metric maps on diffusion tensor imaging analysis of the cervical spinal cord. Quant Imaging Med Surg. 2019 Feb;9(2):292-303
3. Hu Y, Jin R, Li G, Luk KD, Wu EX. Robust spinal cord resting-state fMRI using independent component analysis-based nuisance regression noise reduction. J Magn Reson Imaging. 2018 2018 Nov;48(5):1421-1431.
4. Wang S, Hu Y, Shen Y, Li H. Classification of Diffusion Tensor Metrics for the Diagnosis of a Myelopathic Cord Using Machine Learning. Int J Neural Syst. 2018 March. 28(2):1750036.
5. Jin RC, Huang YC, Luk KD, Hu Y.A computational measurement of cartilaginous endplate structure using ultrashort time-to-echo MRI scanning. Comput Methods Programs Biomed. 2017 May;143:49-58
6. Liu X, Qian W, Jin R, Li X, Luk KD, Wu EX, Hu Y. Amplitude of Low Frequency Fluctuation (ALFF) in the Cervical Spinal Cord with Stenosis: A Resting State fMRI Study. PLoS One. 2016 Dec 1;11(12):e0167279.
7. Liu X, Zhou F, Li X, Qian W, Cui J, Zhou IY, Luk KD, Wu EX, Hu Y. Organization of the intrinsic functional network in the cervical spinal cord: A resting state functional MRI study. Neuroscience. 2016 Nov 12; 336:30-38.
8. Qian W., Chan K.H., Hui S.K., Lee C.Y., Hu Y. and Mak H.K.F. Application of diffusional kurtosis imaging to detect occult brain damages in multiple sclerosis and neuromyelitis optica. NMR in Biomedicine. 2016 Nov; 29(11):1536-1545.

9. Chan TY, Li X, Mak KC, Cheung JP, Luk KD, ***Hu Y****†.. Normal values of cervical spinal cord diffusion tensor in young and middle-aged healthy Chinese. Eur Spine J. 2015 Dec;24(12):2991-8.

10. Zhou F, Wu L, Liu X, Gong H, Luk KD, ***Hu Y****†. Characterizing Thalamocortical Disturbances in Cervical Spondylotic Myelopathy: Revealed by Functional Connectivity under Two Slow Frequency Bands. PLoS One. 2015 Jun 8;10(6):e0125913

11. Wang SQ, Li X, Cui JL, Li HX, Luk KD, ***Hu Y****†. Prediction of myelopathic level in cervical spondylotic myelopathy using diffusion tensor imaging. J Magn Reson Imaging. 2015 Jun;41(6):1682-8.

12. Cui JL, Li X, Chan TY, Mak KC, Luk KD, ***Hu Y****†. Quantitative assessment of column-specific degeneration in cervical spondylotic myelopathy based on diffusion tensor tractography. Eur Spine J. 2015 Jan;24(1):41-7.

13. Wen CY, Cui JL, Mak KC, Luk KD, ***Hu Y****†. Diffusion tensor imaging of somatosensory tract in cervical spondylotic myelopathy and its link with electrophysiological evaluation. Spine J. 2014 Aug 1;14(8):1493-500.
14. Zhou F, Gong H, Liu X, Wu L, Luk KD, ***Hu Y****†. Increased low-frequency oscillation amplitude of sensorimotor cortex associated with the severity of structural impairment in cervical myelopathy. PLoS One. 2014 Aug 11;9(8):e104442
15. Li X, Cui JL, Mak KC, Luk KD, ***Hu Y****†. Potential use of diffusion tensor imaging in level diagnosis of multilevel cervical spondylotic myelopathy. Spine (Phila Pa 1976). 2014 May 1;39(10):E615-22.
16. Zhou IY, Liang YX, Chan RW, Gao PP, Cheng JS, Hu Y***, So KF, Wu EX. Brain resting-state functional MRI connectivity: Morphological foundation and plasticity. Neuroimage. 2014 Jan;84:1-10.
17. Wen CY, Cui JL, Liu H, Mak KC, Cheung WY, Luk KD, ***Hu Y****†. Is Diffusion Anisotropy A Biomarker for Disease Severity and Surgical Prognosis of Cervical Spondylotic Myelopathy? Radiology. 2014 Jan;270(1):197-204.
18. Wen CY, Cui JL, Lee MP, Mak KC, Luk KD, Hu Y*†. Quantitative analysis of fiber tractography in cervical spondylotic myelopathy. Spine J. 2013 Jun;13(6):697-705.
19. Cui JL, Wen CY, Hu Y*†, Mak KC, Mak KH, Luk KD. Orientation entropy analysis of diffusion tensor in healthy and myelopathic spinal cord. Neuroimage. 2011 Oct 15; 58(4):1028-33.
20. Cui JL, Wen CY, Hu Y*†, Li TH, Luk KD. Entropy-based analysis for diffusion anisotropy mapping of healthy and myelopathic spinal cord. Neuroimage. 2011 Feb 1;54(3):2125-31.
21. Zhu FF, Maxwell JP, ***Hu Y,*** Zhang ZG, Lam WK, Poolton JM, Masters RS. EEG activity during the verbal-cognitive stage of motor skill acquisition. Biol Psychol. 2010 Feb 1
22. Hu L, Mouraux A, ***Hu Y***, Iannetti GD.A novel approach for enhancing the signal-to-noise ratio and detecting automatically event-related potentials (ERPs) in single trials. Neuroimage. *In press*
23. ***Hu Y***, Shiu S, Mak JN, Luk KD. Lumbar Muscle Electromyographic Dynamic Topography During Flexion-extension. J Electromyogr Kinesiol. 2010, 20 (2):246 – 255
24. Ng MC, Hua J, ***Hu Y,*** Luk KD, Lam EY. Magnetization transfer (MT) asymmetry around the water resonance in human cervical spinal cord. J Magn Reson Imaging. 2009 Mar;29(3):523-8.

25. Li Yz, Wang LQ, ***Hu Y***. Localizing P300 generators in high-density event- related potential with fMRI. Med Sci Monit. 2009 Mar;15(3):MT47-53.
26. Ng MC, Wu EX, Lau HF, ***Hu Y***, Lam EY, Luk KD. Cervical spinal cord BOLD fMRI study: Modulation of functional activation by dexterity of dominant and non-dominant hands. Neuroimage. Jan 15, 2008; 39(2): 825-831
27. Li Yz, Xu T, WANG Lq, ***Hu Y***. fMRI-constrained Source Analysis of Visual P300 in Landolt Ring task. Chinese Science Bulletin. JAN 2008; 53(1): 76-86
28. Ng MC, Ho Frcr JT, Ho SL, Lee Frcr R, Li G, Cheng TS, Song YQ, Ho PW, Fong GC,Mak W, Chan KH, Li LS, Luk KD, ***Hu Y,*** Ramsden DB, Leong Frcr LL. Abnormal diffusion tensor in nonsymptomatic familial amyotrophic lateral sclerosis with a causative superoxide dismutase-1 mutation. J Magn Reson Imaging. 2008 Jan;27(1):8-13
29. Ng MC, Wong KK, Li G, Lai S, Yang ES, ***Hu Y***, Luk KD. Proton-density-weighted spinal fMRI with sensorimotor stimulation at 0.2 T. Neuroimage. 2006 Feb 1;29(3):995-999.

Artificial/Computer Intelligence

1. Wang SQ, Shen YY, Shi CH, Yin P, Wang ZH, Cheung P, Cheung J, Luk KDK, Hu Y. Skeletal Maturity Recognition Using a Fully Automated System With Convolutional Neural Networks. Access, IEEE,2018, 6, 29979-29993.
2. Wang S, Hu Y, Shen Y, Li H. Classification of Diffusion Tensor Metrics for the Diagnosis of a Myelopathic Cord Using Machine Learning. Int J Neural Syst. 2018 March. 28(2):1750036.
3. Jiang N, Luk KD, Hu Y.A Machine Learning Based Surface Electromyography Topography Evaluation for Prognostic Prediction of Functional Restoration Rehabilitation in Chronic Low Back Pain. Spine (Phila Pa 1976). 2017 Nov 1;42(21):1635-1642
4. Deng Lm, Hu Y, Cheung JPY, Luk KDK. A Data-Driven Decision Support System for Scoliosis Prognosis. IEEE Access, 2017, June; 5:7874-7884
5. Jin RC, Huang YC, Luk KD, Hu Y.A computational measurement of cartilaginous endplate structure using ultrashort time-to-echo MRI scanning. Comput Methods Programs Biomed. 2017 May;143:49-58
6. Fan B, Li HX, ***Hu Y****. An Intelligent Decision System for Intraoperative Somatosensory Evoked Potential Monitoring. IEEE Trans Neural Syst Rehabil Eng. 2016 Feb;24(2):300-7
7. Wang Y, Cui H, Pu J, Luk KD, ***Hu Y****†. Time-frequency patterns of somatosensory evoked potentials in predicting the location of spinal cord injury. Neurosci Lett. 2015 Aug 31;603:37-41.
8. Wang Y, Zhang Z, Li X, Cui H, Xie X, Luk KD, ***Hu Y****†. Usefulness of time-frequency patterns of somatosensory evoked potentials in identification of the location of spinal cord injury. J Clin Neurophysiol. 2015 Aug;32(4):341-5.
9. Wang SQ, Li X, Cui JL, Li HX, Luk KD, ***Hu Y****†. Prediction of myelopathic level in cervical spondylotic myelopathy using diffusion tensor imaging. J Magn Reson Imaging. 2015 Jun;41(6):1682-8.
10. Liu A, Wang ZJ, Hu Y**. Network modeling and analysis of lumbar muscle surface EMG signals during flexion-extension in individuals with and without low back pain. J Electromyogr Kinesiol. 2011 Dec; 21(6):913-21.
11. Yang JL, Li HX, Hu Y**: A Probabilistic SVM based Decision System for Pain Diagnosis. Expert Systems With Applications, August 2011, 38(8):9346-9351.

Robotic related

1. Li X, Wen R, Shen Z, Wang Z, Luk KDK, Hu Y. A Wearable Detector for Simultaneous Finger Joint Motion Measurement. IEEE Trans Biomed Circuits Syst. 2018 Jun;12(3):644-654.
2. Peng MJ, Chen HY, Hu Y, Ju X, Bai B. Finite Element Analysis of porously punched prosthetic short stem virtually designed for simulative uncemented Hip Arthroplasty. BMC Musculoskelet Disord. 2017 Jul 11;18(1):295.
3. Shen Z, Yi J, Li X, Lo MH, Chen MZ, Hu Y, Wang Z. A soft stretchable bending sensor and data glove applications. Robotics Biomim. 2016;3(1):22.
4. Ming D, Bai Y, Liu X, Qi H, Cheng L, Wan B, ***Hu Y***, Wong Y, Luk KD, Leong JC. A gait stability investigation into FES-assisted paraplegic walking based on the walker tipping index. J Neural Eng. 2009 Dec;6(6):066007
5. Ming, D; ***Hu Y***, Zhang G.J.; Xue Z.J.; Li L.Y.; Liu X.Y.; Bai Y.R.; Cheng L.L.; Qi H.Z.; Wan B.K.; Luk K.D.-K.; Measurement of upper extremity joint moments in walker-assisted gait. IET Science, Measurement & Technology, September 2009, 3(5):343 – 353
6. Ming D, ***Hu Y***, Wong Y, Wan B, Luk KD, Leong JC. Risk-tendency graph (RTG): a new gait-analysis technique for monitoring FES-assisted paraplegic walking stability. Med Sci Monit. 2009 Aug;15(8):MT105-12.

Intraoperative spinal cord monitoring related

1. Wang S, Yang Y, Li Q, Zhu J, Shen J, Tian Y, Hu Y, Li Z, Xu W, Jiao Y, Cao R, Zhang J. High-Risk Surgical Maneuvers for Impending True-Positive Intraoperative Neurologic Monitoring Alerts: Experience in 3139 Consecutive Spine Surgeries. World Neurosurg. 2018 May 3. pii: S1878-8750(18)30882-9. doi:10.1016/j.wneu.2018.04.162.
2. Huang Z, Li R, Liu J, Huang Z, Hu Y, Wu X, Zhu Q. Longitudinal electrophysiological changes after cervical hemi-contusion spinal cord injury in rats. Neurosci Lett. 2017 Nov 11;664:116-122.
3. Fan B, Li HX, ***Hu Y***[*]. An Intelligent Decision System for Intraoperative Somatosensory Evoked Potential Monitoring. IEEE Trans Neural Syst Rehabil Eng. 2016 Feb;24(2):300-7
4. Chen, W.; Chang, C.; ***Hu Y***[*†]**.** Single-Trial Extraction of Pure Somatosensory Evoked Potential Based on Expectation Maximization Approach. IEEE Transactions on Neural Systems and Rehabilitation Engineering. 2016 Jan;24(1):10-19.
5. Hu L, Zhang ZG, Liu HT, Luk KD, ***Hu Y***[*†]**.** Single-trial detection for intraoperative somatosensory evoked potentials monitoring. Cogn Neurodyn. 2015 Dec;9(6):589-601.
6. Wang Y, Cui H, Pu J, Luk KD, ***Hu Y***[*†]**.** Time-frequency patterns of somatosensory evoked potentials in predicting the location of spinal cord injury. Neurosci Lett. 2015 Aug 31;603:37-41.
7. Wang Y, Zhang Z, Li X, Cui H, Xie X, Luk KD, ***Hu Y***[*†]**.** Usefulness of time-frequency patterns of somatosensory evoked potentials in identification of the location of spinal cord injury. J Clin Neurophysiol. 2015 Aug;32(4):341-5.
8. Cui H, Wang Y, Li X, Xie X, Xu S, Hu Y. Trial-to-trial latency variability of somatosensory evoked potentials as a prognostic indicator for surgical management of cervical spondylotic

myelopathy. J Neuroeng Rehabil. 2015 May 29;12:49.

9. Cui, HY. Wang, YZ. Xie, XB. Xu, SP. Hu, Y. Single Trial Extraction of Somatosensory Evoked Potentials for Monitoring Spinal Cord Injury: An Animal Study. Journal of Medical Imaging and Health Informatics, 2015. 5(2): p. 385-390
10. Liu H, Xie X, Xu S, Wan F, Hu Y*†. One-unit Second Order Blind Identification (SOBI) with Reference for Short Transient Signals. Information sciences. 2013 April; 227:90–101
11. Hu L, Zhang ZG, Hu Y*†. A time-varying source connectivity approach to reveal human somatosensory information processing. Neuroimage. 2012 Aug 1;62(1):217-28.
12. Yang J, Huang Z, Shu H, Chen Y, Sun X, Liu W, Dou Y, Xie C, Lin X, Hu Y*†. Improving successful rate of transcranial electrical motor-evoked potentials monitoring during spinal surgery in young children. Eur Spine J. 2012 May;21(5):980-4.
13. Hu Y*†, Liu H, Luk KD. Time-frequency analysis of somatosensory evoked potentials for intraoperative spinal cord monitoring. J Clin Neurophysiol. 2011 Oct;28(5):504-11.
14. Ma Y, Hu Y, Valentin N, Geocadin RG, Thakor NV, Jia X. Time jitter of somatosensory evoked potentials in recovery from hypoxic-ischemic brain injury. J Neurosci Methods. 2011 Oct 15;201(2):355-60
15. Liu H, Chang CQ, Luk KD, Hu Y*†. Comparison of blind source separation methods in fast somatosensory-evoked potential detection. J Clin Neurophysiol. 2011 Apr; 28(2):170-7.
16. Hu Y, Wen CY, Li TH, Cheung MM, Wu EX, Luk KD. Somatosensory-Evoked Potentials as An Indicator for the Extent of Ultrastructural Damage of Spinal Cord after Chronic Compressive Injuries in a Rat Model. Clin Neurophysiol. 2011 Jul;122(7):1440-7
17. Zhang Z, Luk KD, Hu Y*†. Identification of detailed time-frequency components in somatosensory evoked potentials. IEEE Trans Neural Syst Rehabil Eng. 2010 Jun;18(3):245-54.
18. ***Hu Y***, Liu H, Luk KD. Signal-to-Noise Ratio of Intraoperative Tibial Nerve Somatosensory-Evoked Potentials. J Clin Neurophysiol. 2010 Feb;27(1):30-3.
19. Cui HY, ***Hu Y***, Luk KD. Effects of Physiological Parameters on Intraoperative Somatosensory Evoked Potential Monitoring: Results from a Multifactor Analysis. Medical Science Monitor, 2009 May;15(5):CR226-30
20. Zhang ZG, Yang JL, Chan SC, Luk KD, ***Hu Y.*** Time-frequency component analysis of somatosensory evoked potentials in rats. Biomed Eng Online. 2009 Feb 9;8:4.
21. Fung NY, ***Hu Y***, Irwin MG, Chow BE, Yuen MY. Comparison between sevoflurane/remifentanil and propofol/remifentanil anaesthesia in providing conditions for somatosensory evoked potential monitoring during scoliosis corrective surgery. Anaesth Intensive Care. 2008 Nov;36(6):779-85.
22. ***Hu Y,*** Leung HB, Lu WW, Luk KD. Histological and electrophysiological changes of the Paraspinal Muscle after Spinal Fusion: an Experimental Study. Spine, 2008 Jun 1;33(13):1418-22.
23. ***Hu Y***, Ding Y, Ruan D, Wong YW, Cheung KM, Luk KD. Prognostic value of somatosensory-evoked potentials in the surgical management of cervical spondylotic

myelopathy. Spine. 2008 May 1;33(10):E305-10.
24. ***Hu Y,*** Leung HB, Lu WW, Luk KD. Consequence of Paraspinal Muscle after Spinal Fusion: An Experimental Study. Stud Health Technol Inform. 2006;123:461-466.
25. Qiu W, Chang C, Liu W, Poon PW, ***Hu Y***, Lam FK, Hamernik RP, Wei G, Chan FH. Real-time data-reusing adaptive learning of a radial basis function network for tracking evoked potentials. IEEE Trans Biomed Eng. 2006 Feb;53(2):226-37.
26. ***Hu Y***, Lam BSC, Chang CQ, Chan FHY, Lu WW, Luk KD: Adaptive Signal Enhancement of Somatosensory Evoked Potential for Spinal Cord Compression Detection: An Experimental Study. Comput Biol Med. 2005. Nov;35(9):814-28
27. Lam WK, Leong JCY, Li YH, ***Hu Y***, Lu WW: Biomechanical and electromyographic evaluation of ankle foot orthosis and dynamic ankle foot orthosis in spastic cerebral palsy. Gait Posture. 2005 Nov;22(3):189-97.
28. Yuan L, Ni GX, Luk KK, Cheung KM, Lu DS, ***Hu Y***, Dai JX, Wong YW, Lu WW. Effect of Segmental Artery Ligation on the Blood Supply of the Thoracic Spinal Cord During Anterior Spinal Surgery: A Quantitative Histomorphological Fresh Cadaver Study. Spine. 2005 Mar 1;30(5):483-486.
29. Lam BSC, ***Hu Y***, Lu WW, Luk KD, Chang CQ, Qiu W, Chan FHY: Multi-Adaptive Filtering Technique For Surface Somatosensory Evoked Potentials Processing. Medical Engineering & Physics. 2005, April. 27(3):257-266
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32. ***Hu Y***, Luk KD, Lu WW, Leong JC. Application of time-frequency analysis to somatosensory evoked potential for intraoperative spinal cord monitoring. J Neurol Neurosurg Psychiatry. 2003 Jan;74(1):82-7.
33. Ku AS, ***Hu Y***, Irwin MG, Chow B, Gunawardene S, Tan EE, Luk KD. Effect of sevoflurane/nitrous oxide versus propofol anaesthesia on somatosensory evoked potential monitoring of the spinal cord during surgery to correct scoliosis. Br J Anaesth. 2002 Apr;88(4):502-7.
34. ***Hu Y***, Luk KDK, Lu WW, Leong JCY. Comparison of time-frequency analysis techniques in intraoperative somatosensory evoked potential (SEP) monitoring. Comput Biol Med. 2002 Jan;32(1):13-23.
35. ***Hu Y***, Luk KDK, Lu WW, Holmes A, Leong JCY. Prevention of spinal cord injury with time-frequency analysis of evoked potentials: an experimental study. J Neurol Neurosurg Psychiatry. 2001 Dec;71(6):732-40.
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41. ***Hu Y,*** Leung HB, Lu WW, Luk KD. Consequence of Paraspinal Muscle after Spinal Fusion: An Experimental Study. Stud Health Technol Inform. 2006;123:461-466.
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45. ***Hu Y***, Yu J: The theoretical study on the field of nerve electrical stimulation under surface nerve stimulation electrodes. Biomed. Eng. and Clin.(Chinese), 2000 Dec., 4(1):25-30.
46. ***Hu Y***., Hu CY, Luk KDK.: Determination of baseline for intraoperative spinal cord monitoring during scoliosis surgery. Chin. J. Orthop. 2000 Sep., 20(9):555-8.
47. ***Hu Y***, Qu X, Yu J: Modeling and simulating study on distribution of the electrical stimulation for Somatosensory Evoked Potential (SEP) Detection. J. Tianjin University 2000 March,33(2): 176-9.
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Low back pain rehabilitation related

1. Jiang N, Luk KD, Hu Y.A Machine Learning Based Surface Electromyography Topography Evaluation for Prognostic Prediction of Functional Restoration Rehabilitation in Chronic Low Back Pain. Spine (Phila Pa 1976). 2017 Nov 1;42(21):1635-1642
2. ***Hu Y***[*†], Kwok JW, Tse JY, Luk KD. Time-varying surface electromyography topography as a prognostic tool for chronic low back pain rehabilitation. Spine J. 2014 Jun 1;14(6):1049-56
3. Peng W, Hu L, Zhang Z, Hu Y. Causality in the association between P300 and alpha event-related desynchronization. PLoS One. 2012; 7(4):e34163.
4. Valentini E, Hu L, Chakrabarti B, Hu Y, Aglioti SM, Iannetti GD. The primary somatosensory cortex largely contributes to the early part of the cortical response elicited by nociceptive stimuli. Neuroimage. 2012 Jan 16;59(2):1571-81
5. Hu L, Liang M, Mouraux A, Wise RG, Hu Y**, Iannetti GD. Taking into account latency, amplitude and morphology: improved estimation of single-trial ERPs by wavelet filtering

and multiple linear regression. J Neurophysiol. 2011 Dec;106(6):3216-29.
6. Liu A, Wang ZJ, Hu Y**. Network modeling and analysis of lumbar muscle surface EMG signals during flexion-extension in individuals with and without low back pain. J Electromyogr Kinesiol. 2011 Dec; 21(6):913-21.
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11. Hu Y, Wong YL, Lu WW, Kawchuk GN.Creation of an asymmetrical gradient of back muscle activity and spinal stiffness during asymmetrical hip extension. Clin Biomech (Bristol, Avon). 2009 Dec;24(10):799-806.
12. ***Hu Y***, Mak JN, Luk KD. Effect of electrocardiographic contamination on surface electromyography assessment of back muscles. J Electromyogr Kinesiol. 2009 Feb;19(1):145-56.
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17. Cao Yuzhen, Chen Cheng, ***Hu Yong***, Jin Shijiu, Evaluation of Back Muscle Function Based on EMG Time-frequency Spectrogram Analysis. J Biomed Eng. 2006; 23 (2) ：271-274
18. Cao YZ, Chen C, ***Hu Y***. Application of independent component analysis to ECG cancellation in surfaceelectromyography measurement. Sheng Wu Yi Xue Gong Cheng Xue Za Zhi, 2005, Vol 22(No 4) 686-689
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