

Curriculum Vitae

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November 19, 2021

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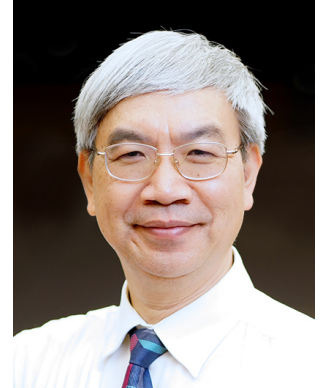
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Education

Ph. D. in Statistics, Cornell University, U. S. A., 1994.

M. S. in Statistics, Cornell University, U. S. A., 1990.

B. S. in Electric Engineering, National Taiwan University, Taiwan, 1986.

Professional Experiences and Honors

Professor, Institute of Statistics, College of Science, National Chiao Tung University /
National Yang Ming Chiao Tung University, Taiwan, 2002/2-present.

Elected member, International Statistical Institute (ISI), 2011-present.

Principal Fellow, Higher Education Academy (PFHEA), UK, 2020–present.

Section Editor, Public Library of Science (PLOS) Digital Health, 2021-present.

Editorial Board, Wiley Interdisciplinary Reviews (WIREs) Computational Statistics, 2018-
present.

Associate Editor, Journal of the American Statistical Association (JASA), Theory and
Methods, 2017-2020.

Reviewer Board, Entropy, 2020-present.

Co-editor for *Handbook of Big Data Analytics*, Springer-Verlag, published in 2018.

Board of Directors, International Chinese Statistical Association (ICSA), 2012-2014.

Vice President for Academic Affairs, National Chiao Tung University, Taiwan, 2016/1-2021/1.

Director, Big Data Research Center, National Chiao Tung University, Taiwan, 2015/7-2018/1.

Dean, College of Science, National Chiao Tung University, Taiwan, 2011/8- 2014/7.

Chairman, Interdisciplinary Sciences Degree Program, College of Science, National Chiao Tung University, Taiwan, 2008/2-2011/7.

Director, Institute of Statistics, College of Science, National Chiao Tung University, Taiwan, 2002/8-2005/7.

Associate Professor, Institute of Statistics, College of Science, National Chiao Tung University, Taiwan, 1994/8-2002/2.

Editorial Board, *Journal of Applied Mathematics*, International Scholarly Research Network, 2014-2017.

Co-editor for *Handbook of Statistical Bioinformatics*, Springer-Verlag, published in 2011.

Guest Editor for the Special Issue in *International Journal of Systems and Synthetic Biology*, 2010.

Guest Editor for the Special Issue in *Journal of Data Science*, July, 2008.

Associate Editor for *Statistica Sinica*, 2005-2008.

Associate Editor for *Journal of the Chinese Statistical Association*, 1995-1997, 2008-2010.

Teaching and Research Assistant, Cornell University, U. S. A., 1989-1994.

Visiting Scholar, Institute of Pure and Applied Mathematics, UCLA, U. S. A., 2000/09-2000/12.

Visiting Scholar, Department of Biostatistics, Harvard University, U. S. A., 2001/01-2001/08.

Visiting Scholar, Department of Ecology and Evolution, University of Chicago, U. S. A., 2006/02-2007/01.

Program Committee, IEEE International Conference on Healthcare Informatics, Imaging, and Systems Biology (HISB), 2011-2012.

Organizing Committee, NCTS International Conference on Probability and Statistics with Applications in Biology, July 14-16, 2010, Hsienhu, Taiwan.

Keynote speaker, Chinese Week for the celebrations of the 200th anniversary of the Humboldt-Universität zu Berlin, Germany, July 20-23, 2010.

Invited talks at Cornell University, UCLA, University of Chicago, University of Tokyo...

Reviewers for Journal of the American Statistical Association, Journal of Multivariate Analysis, Statistica Sinica, IEEE Transactions on Image Processing, Bioinformatics...

Member, International Statistical Institute, American Statistical Association, International Chinese Statistical Association, IEEE...

Research Interests

Statistics, Image Science, Bioinformatics,

Data Science, Machine Learning, Scientific Computation

Publication

A. Journal Papers:

1. Lu, H. H.-S., Wells, M. T., and Tiwari, R. C., 1994: Inference for Functions in the Two-Sample Problem with Right Censored Data: With Applications. *Journal of the American Statistical Association*, 89, 427, 1017-1026.
2. Chang, Y. L. C., Lander, L. C., Lu, H.-S., and Wells, M. T. 1994: Bayesian Analysis for Fault Location in Distributed Systems. *IEEE Transactions on Reliability*, 43, 3, 457-465.
3. Lu, H. H.-S., and Hsieh, F. 1997: Transformation Models for Interval Scale Grouped Data with Applications, *Statistica Sinica*, 7, 4, 841-854.
4. Lu, H. H.-S., Chen, C.-M., and Yang, I.-H. 1998: Cross-Reference Weighted Least Square Estimates for Positron Emission Tomography. *IEEE Transactions on Medical Imaging*, 17, 1, 1-8.
5. Lu, H. H.-S. 1998: On the Random Number Generator in the Bootstrap. *Journal of the Chinese Statistical Association*, 36, 2, 127-144.
6. Chen, C.-M., Lu, H.-S., and Lin, Y.-C. 1998: Evolutionary Snake Model for Ultrasound Image Segmentation: A Preliminary Study. *Biomedical Engineering-Applications, Basis and Communications*, 10, 2, 110-118.
7. Tu, K.-Y., Chen, T.-B., Lu, H. H.-S., Liu, R.-S., Chou, K.-L., and Chen, J.-C. 1999: Iterative Image Reconstruction with Random Correction for PET Studies. *Annals of Nuclear Medicine and Sciences*, 12, 4, 195-200.
8. Chen, C.-M., Lu, H. H.-S., and Lin, Y.-C. 2000: An Early Vision Based Snake Model for Ultrasound Image Segmentation. *Ultrasound in Medicine and Biology*, 26, 2, 273-285.
9. Huang, S.-Y., and Lu, H. H.-S. 2000: Bayesian Wavelet Shrinkage for Nonparametric Mixed-Effects Models. *Statistica Sinica*, 10, 4, 1021-1040.
10. Huang, S.-Y., and Lu, H. H.-S. 2001: Extended Gauss-Markov Theorem for Nonparametric Mixed-Effects Models. *Journal of Multivariate Analysis*, 76, 2, 249-266.
11. Chen, C.-M., and Lu, H. H.-S. 2001: An Adaptive Snake Model for Ultrasound Image Segmentation: Modified Trimmed Mean Filter, Ramp Integration and Adaptive Weighting Parameters. *Ultrasonic Imaging*, 22, 214-236.
12. Chen, C.-M., Lu, H. H.-S., and Han, K.-C. 2001: A Textural Approach Based on Gabor Functions for Texture Edge Detection in Ultrasound Images. *Ultrasound in Medicine and Biology*, 27, 4, 513-534.

13. Huang, H.-C., Chen, C.-M., Wang, S.-D., and Lu, H. H.-S. 2001: Adaptive Symmetric Mean Filter: A New Noise Reduction Approach Based on the Slope Facet Model. *Applied Optics*, 40, 29, 5192-5205.
14. Tu, K. Y., Chen, T. B., Lu, H. H. S., Liu, R. S., Chen, K. L., Chen, C. M., and Chen, J. C. 2001: Empirical Studies of Cross-Reference Maximum Likelihood Estimate Reconstruction for Positron Emission Tomography. *Biomedical Engineering-Applications, Basis and Communications*, 13, 1, 1-7.
15. Chen, C.-M., Lu, H. H. S., and Hsu, Y.-P. 2001: Cross-Reference Maximum Likelihood Estimate Reconstruction for Positron Emission Tomography. *Biomedical Engineering-Applications, Basis and Communications*, 13, 4, 190-198.
16. Chen, C.-M., Lu, H. H.-S., and Hsiao, A.-T. 2001: A Dual Snake Model of High Penetrability for Ultrasound Image Boundary Extraction. *Ultrasound in Medicine and Biology*, 27, 12, 1651-1665.
17. Gu, Z., Nicolae, D., Lu, H. H.-S., and Li, W.-H. 2002: Rapid divergence in expression between duplicate genes inferred from microarray data. *Trends in Genetics*, 18, 12, 609-613.
18. Chen, C.-M., Lu, H. H.-S., and Huang, Y.-S. 2002: Cell-Based Dual Snake Model: A New Approach to Extracting Highly Winding Boundaries in The Ultrasound Images. *Ultrasound in Medicine and Biology*, 28, 8, 1061-1073.
19. Chen, C.-M., Lu, H. H.-S., and Su, B.-S. 2002: Cell-Based Region Competition for Ultrasound Image Segmentation. *Journal of Medical and Biological Engineering*, 22, 2, 59-66.
20. Chen, C.-M., Lu, H. H.-S., and Chen, Y.-L. 2003: A Discrete Region Competition Approach Incorporating Weak Edge Enhancement for Ultrasound Image Segmentation. *Pattern Recognition Letters*, 24, 693-704.
21. Lu, H. H.-S., Huang, S.-Y., and Lin, F.-J. 2003: Generalized Cross-Validation for Wavelet Shrinkage in Nonparametric Mixed-Effects Models. *Journal of Computational and Graphical Statistics*, 12, 3, 714-730.
22. Qin, H., Lu, H. H.-S., Wu, W. B., and Li, W.-H. 2003: Evolution of the yeast protein interaction network. *PNAS (Proceedings of the National Academy of Sciences of the United States of America)*, 100, 22, 12820-12824.
23. Wu, H.-M., and Lu, H. H.-S. 2004: Supervised Motion Segmentation by Spatial-Frequential Analysis and Dynamic Sliced Inverse Regression. *Statistica Sinica*, 14, 413-430.
24. Chen, L., Lu, H. H.-S., and Chang, H.-C. 2004: Utilization rates of preventive health services provided for children by the National Health Insurance Program, 1996-2001. *Taiwan Journal of Public Health*, 23, 1, 37-44.
25. Zhang, L., Lu, H. H.-S., Chung, W.-Y., Yang, J., and Li, W.-H. 2005: Patterns of Segmental Duplications in the Human Genome. *Molecular Biology and Evolution*, 22, 1, 135-141.
26. Li, L. M., and Lu, H. H.-S. 2005: Explore Biological Pathways from Noisy Array Data by Directed Acyclic Boolean Networks. *Journal of Computational Biology*, 12, 2, 170-185.
27. Tsai, H.-K., Lu, H. H.-S., and Li, W.-H. 2005: Statistical methods for identifying yeast cell cycle transcription factors. *PNAS (Proceedings of the National Academy of Sciences of the United States of America)*, 102, 38, 13532-13537.
28. Ho, J., Hwang, W.-L., Lu, H. H.-S., and Lee, D. T. 2006: Gridding Spot Centers of Smoothly Distorted Microarray Images. *IEEE Transactions on Image Processing*, 15, 2, 342-354.
29. Tsai, H.-K., Huang, G. T.-W., Chou, M.-Y., Lu, H. H.-S., and Li, W.-H. 2006: Method for identifying transcription factor binding sites in yeast. *Bioinformatics*, 22, 14, 1675-1681.

30. Wu, H.-M., and Lu, H. H.-S. 2007: Iterative Sliced Inverse Regression for Segmentation of Ultrasound and MR Images. *Pattern Recognition*, 40, 12, 3492-3502.
31. Chen, T.-B, Chen, J.-C., Lu, H. H.-S., and Liu, R.-S. 2008: MicroPET Reconstruction with Random Coincidence Correction via a Joint Poisson Model. *Medical Engineering & Physics*, 30, 6, 680-686.
32. Tzeng, J., Lu, H. H.-S., and Li, W.-H. 2008: Multidimensional Scaling for Large Genomic Data Sets. *BMC Bioinformatics*, 9:179.
33. Chen, T.-B., Lu, H. H.-S., Lee, Y.-S., and Lan, H.-J. 2008: Segmentation of cDNA Microarray Images by Kernel Density Estimation. *Journal of Biomedical Informatics*, 41, 1021–1027.
34. Lu, H. H.-S., Chen, C.-M., Huang, Y.-M., and Wu, J.-S. 2008: Computer-Aided Diagnosis of Liver Cirrhosis by Simultaneous Comparisons of the Ultrasound Images of Liver and Spleen. *Journal of Data Science*, 6, 429-448.
35. Tu, K. K.-W., Lee, J. C.-s., and Lu, H. H.-S. 2009: A Novel Statistical Method for Automatically Partitioning Tools According to Engineers' Tolerance Control in Process Improvement. *IEEE Transactions on Semiconductor Manufacturing*, 22, 3, 373-380.
36. Scharfe, C., Lu, H. H.-S., Neuenburg, J. K., Allen, E. A., Li, G.-C., Klopstock, T., Cowan, T. M., Enns, G. M., and Davis, R. W. 2009: Mapping Gene Associations in Human Mitochondria using Clinical Disease Phenotypes. *PLoS Computational Biology*, 5(4): e1000374.
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38. Deng, L.-Y. , Lu, H. H.-S., and Chen, T.-B. 2010: 64-Bit and 128-bit DX random number generators. *Computing*, 89, 1, 27-43.
39. Cheng, J. H., Wang, Y., Chen, P. Y., Chen, T.-B., Chen, C.-J., Li, G.-C., and Lu, H. H.-S. 2010: Mine Barcode of Life: Information Visualization and Fusion for the Environment and Society. *International Journal of Systems and Synthetic Biology*, 1(1), 63-70.
40. Lu, H. H.-S., and Wu, H. M. 2010: Visualization, Screening, and Classification of Cell Cycle-Regulated Genes in Yeast. *International Journal of Systems and Synthetic Biology*, 1(2), 185-198.
41. Wang, H., Lu, H. H.-S., and Chueh, T.-H. 2011: Constructing Biological Pathways by a Two-Step Counting Approach, *PLoS ONE* 6(6): e20074.
42. Deng, L.-Y. , Shiau, J.-J. H., and Lu, H. H.-S. 2011: Large-order multiple recursive generators with modulus $2^{31}-1$, *INFORMS Journal on Computing*, Published online before print, October 17, 2011.
43. Deng, L.-Y. , Shiau, J.-J. H., and Lu, H. H.-S. 2012: Efficient computer search of large-order multiple recursive pseudo-random number generators, *Journal of Computational and Applied Mathematics*, 236, 3228– 3237.
44. Chiang, S, Swamy, K. B., Hsu, T. W., Tsai, Z. T., Lu, H. H.-S., Wang, D., and Tsai, H. K. 2012: Analysis of the association between transcription factor binding site variants and distinct accompanying regulatory motifs in yeast, *Gene*. 491(2):237-45.
45. Chueh, T.-H., and Lu, H. H.-S., 2012: Inference of Biological Pathway from Gene Expression Profiles by Time Delay Boolean Networks, *PLoS ONE* 7(8): e42095.
46. Suen, S., Lu, H. H.-S., and Yeang, C. H.. 2012: Evolution of domain architectures and catalytic functions of enzymes in metabolic systems, *Genome Biology and Evolution*, 2012.
47. Chen, T.-B, Chen, J.-C., and Lu, H. H.-S. 2012: Segmentation of 3D microPET Images of the Rat Brain via the Hybrid Gaussian Mixture Method with Kernel Density Estimation, *Journal of X-ray Science and Technology*, 20, 339-349.

48. Chueh, T.-H., Chen, T.-B., Lu, H. H.-S., Ju, S.-S., Tao, T.-H., and Shaw, J. H. 2012: Statistical Prediction of Emotional States by Physiological Signals with MANOVA and Machine Learning, *International Journal of Pattern Recognition and Artificial Intelligence*, 26, 1250008.
49. Chen, T.-B., Lu, H. H.-S., Kim, H.-K., Son, Y.-D., and Cho, Z. H. 2014: Accurate 3D reconstruction by a new PDS-OSEM algorithm for HRRT, *Radiation Physics and Chemistry*, 96, 107–114.
50. Helou, E. S., Censor, Y., Chen, T. B., Chen, I.-L., De Pierro, A.R., Jiang, M., Lu, H. H.-S. 2014: String-Averaging Expectation-Maximization for Maximum Likelihood Estimation in Emission Tomography, *Inverse Problems*, 30 055003.
51. Hung, H., Liu, C.-Y., Lu, H. H.-S. 2016: Sufficient dimension reduction with additional information. *Biostatistics*, 17, 3, 405-421.
52. Lin, C.-M., Chang, Y.-J., Liu, C.-K., Yu, C.-S., Lu, H. H.-S. 2016: Role of Extracranial Carotid Duplex and Computed Tomography Perfusion Scanning in Evaluating Perfusion Status of Pericarotid Stenting, *BioMed Research International*, Article ID 7051856.
53. Yu, C.-S., Lin, C.-M., Liu, C.-K., Lu, H. H.-S., 2016: Impact of baseline characteristics on outcomes of carotid artery stenting in acute ischemic stroke patients, *Therapeutics and Clinical Risk Management*, 12 495–504.
54. Lin, C.-M., Chang, Y.-J., Liu, C.-K., Yu, C.-S., Lu, H. H.-S., 2016: First-ever ischemic stroke in elderly patients: predictors of functional outcome following carotid artery stenting, *Clinical Interventions in Aging*, 11:985-995.
55. Chen, S., Deng, L.-Y., Bowman, D., Shiau, J.-J. H., Wong, T.-Y., Madahian, B., Lu, H. H.-S., 2016: Phylogenetic tree construction using trinucleotide usage profile (TUP), *BMC Bioinformatics*, 17(Suppl 13):381.
56. Chen, C.-H., Tu, C.-C, Kuo, H.-Y., Zeng, R.-F., Yu, C.-S., Lu, H. H.-S., Liou, M.-L., 2017: Dynamic change of surface microbiota with different environmental cleaning methods between two wards in a hospital, *Applied Microbiology and Biotechnology*, 101, 2, 771–781.
57. Yang, S.-H., Chen, Y.-Y., Lin, S.-H., Liao, L.-D., Lu, H. H.-S., Wang, C.-F., Chen, P.-C., Lo, Y.-C., Phan, T. D., Chao, H.-Y., Lin, H.-C., Lai, H.-Y., Huang, W.-C., 2016: A sliced inverse regression (SIR) decoding the forelimb movement from neuronal spikes in the rat motor cortex, *Frontiers in Neuroscience*.
58. Lin, C.-M., Su, J.-C., Chang, Y.-J., Liu, C.-K., Lu, H. H.-S., Jong, Y.-J., 2017: Is carotid sonography a useful tool for predicting functional capabilities in ischemic stroke patients following carotid artery stenting?, *Medicine*, 96, 12, e6363.
59. Hung, H., Lu, H. H.-S., 2017: A review on the generalization of sufficient dimension reduction methods with the additional information, *Wiley Interdisciplinary Reviews: Computational Statistics*.
60. Chen, C.-H., Kuo, H.-Y., Hsu, P.-J., Chang, C.-M., Chen, J.-Y., Lu, H. H.-S., Chen, H. Y., Liou, M.-L., 2018: Clonal spread of carbapenem-resistant *Acinetobacter baumannii* across a community hospital and its affiliated long-term care facilities: A cross sectional study, *Journal of Microbiology, Immunology and Infection*, 51, 3, 377-384.
61. Simak, M., Yeang, C.-H, Lu, H. H.-S., 2017: Exploring Candidate Biological Functions by Boolean Function Networks for *Saccharomyces cerevisiae*, *PLoS ONE* 12(10): e0185475.
62. Chen, P. J., Lin, M. C., Lai, M. J., Lin, J. C., Lu, H. H. S., Tseng, V. S., 2018: Accurate Classification of Diminutive Colorectal Polyps Using Computer-aided Analysis, *Gastroenterology*, 154, 3, 568–575.
63. Chen, C.-C., Juan, H.-H., Tsai, M.-Y., Lu, H. H.-S., 2018: Unsupervised Learning and Pattern Recognition of Biological Data Structures with Density Functional Theory and Machine Learning, *Scientific Reports*, 8, Article number: 557.

64. Chen, S.-H., Kuo, W.-Y., Su, S.-Y., Chung, W.-C., Ho, J.-M., Lu, H. H.-S. , Lin, C.-Y. 2018: A gene profiling deconvolution approach to estimating immune cell composition from complex tissues, *BMC Bioinformatics*, 19(Suppl 4):154.
65. Deng, L.-Y., Shiau, J.-J. H., Lu, H. H.-S., and Bowman, D., 2018: Secure and Fast Encryption (SAFE) with Classical Random Number Generators, *ACM Transactions on Mathematical Software*, 44, 4, Article No. 45.
66. Ko, M. L., Wei, K. L., Ho, Y.-J., Peng, P. H., Lu, H. H.-S., 2019: Knowledge of Medications Among Patients with Glaucoma in Taiwan, *Journal of the Formosan Medical Association*, 118, 1, 457-462.
67. Fang, S. T., Cheng, D. E., Huang, Y. T., Hsu, T. Y., Lu, H. H.-S., 2018: A Pilot Study of the Influence of Probiotics on Hair Toxic Element Levels After Long-Term Supplement with Different Lactic Acid Bacteria Strains, *Journal of Probiotics and Health*, 6(1): 203.
68. Huang, W.-Q., Lin, W.-W., Lu, H. H.-S., Yau, S. T., 2019: iSIRA: Integrated Shift-Invert Residual Arnoldi Method for Graph Laplacian Matrices from Big Data, *Journal of Computational and Applied Mathematics*, 346, 518-531.
69. Lin, C.-M., Liu, C.-K., Chang, Y.-J., Chen, W.-L., Lu, H. H.-S., 2018: Reversed ophthalmic artery flow following ischemic stroke: A possible predictor of outcomes following carotid artery stenting, *Neurological Research*, 132-138.
70. Chen, C.-C., Tsai, M.-Y., Kao, M.-Z., Lu, H. H.-S., 2019: Medical Image Segmentation with Adjustable Computational Complexity Using Data Density Functionals, *Applied Sciences*, 9(8), 1718.
71. Simak, M., Lu, H. H.-S., Yang, J.-M. 2019: Boolean function network analysis of time course liver transcriptome data to reveal novel circadian transcriptional regulators in mammals, *Journal of the Chinese Medical Association*, 82, 11, 872–880.
72. Su, F.-Y., Wang, S.-H., Lu, H. H.-S., Lin, G.-M. 2020: Association of Tobacco Smoking with Physical Fitness of Military Males in Taiwan: The CHIEF Study, *Canadian Respiratory Journal*, Article ID 5968189.
73. Chen, H.-H., Liu, C.-M., Chang, S.-L., Chang, P. Y.-C., Chen, W.-S., Pan, Y.-M., Fang, S.-T., Zhan, S.-Q., Chuang, C.-M., Lin, Y.-J., Shiu, Y.-C., Chen, S.-A., Lu, H. H.-S., 2020: Automatized Extraction of Left Atrium Volume from 2-D CT Images Using Deep Learning Techniques, *International Journal of Cardiology*, 316, 272-278.
74. Lin, G.-M., Lu, H. H.-S., 2020: A 12-Lead ECG-Based System With Physiological Parameters and Machine Learning to Identify Right Ventricular Hypertrophy in Young Adults, *IEEE Journal of Translational Engineering in Health and Medicine*, Article ID 5968189.
75. Chen, K.-C., Yu, H.-R., Chen, W.-S., Lin, W.-C., Lee, Y.-C., Chen, H.-H., Jiang, J.-H., Su, T.-Y., Tsai, C.-K., Tsai, T.-A., Tsai, C.-M., Lu, H. H.-S., 2020: Diagnosis of common pulmonary diseases in children by X-ray images and deep learning, *Scientific Reports*, 10, Article number: 17374.
76. Liu, C.-M., Chang, S.-L., Chen, H.-H., Chen, W.-S., Lin, Y.-J., Lo, L.-W., Hu, Y.-F., Chung, F.-P., Chao, T.-F., Tuan, T.-C., Liao, J.-N., Lin, C.-Y., Chang, T.-Y., Wu, C.-I., Kuo, L., Wu, M.-H., Chen, C.-K., Chang, Y.-Y., Shiu, Y.-C., Lu, H. H.-S., Chen, S.-A., 2020: The Clinical Application of the Deep Learning Technique for Predicting Trigger Origins in Patients With Paroxysmal Atrial Fibrillation With Catheter Ablation, *Circulation: Arrhythmia and Electrophysiology*, Vol 13, No: 11.
77. Wu, C.-H., Lu, H. H.-S., Hang, H.-M., 2020: Budgeted Passive-Aggressive Learning for Online Multiclass Classification, *IEEE Access*, 8, 227420-227437.
78. Chen, J.-J., Su, T.-Y., Chen, W.-S., Chang, Y.-H., Lu, H. H.-S., 2021: Convolutional Neural Network in the Evaluation of Myocardial Ischemia from CZT SPECT Myocardial Perfusion Imaging: Comparison to Automated Quantification, *Applied Sciences*, 11(2), 514.

79. Tai, Y.-L., Huang, S.-J., Chen, C.-C., Lu, H. H.-S., 2021: Computational Complexity Reduction of Neural Networks of Brain Tumor Image Segmentation by Introducing Fermi–Dirac Correction Functions, *Entropy*, 23(2), 223.
80. Chou, Y.-B., Hsu, C.-H., Chen, W.-S., Chen, S.-J., Hwang, D.-K., Huang, Y.-M., Li, A.-F., Lu, H. H.-S., 2021: Deep Learning and Ensemble Stacking Technique for Differentiating Polypoidal Choroidal Vasculopathy from Neovascular Age-Related Macular Degeneration, *Scientific Reports*.
81. Li, Y.-C., Chen, H.-H., Lu, H. H.-S., Wu, H.H.-T., Chang, M.-C., Chou, P.-H., 2021: Can a Deep-learning Model for the Automated Detection of Vertebral Fractures Approach the Performance Level of Human Subspecialists?, *Clinical Orthopaedics and Related Research*, Issue - 10.1097/CORR.0000000000001685.
82. Huang, T.-Y., Zhan, S.-Q., Chen, P.-J., Yang, C.-W., Lu, H. H.-S., 2021: Accurate diagnosis of endoscopic mucosal healing in ulcerative colitis using deep learning and machine learning, *Journal of the Chinese Medical Association*, 84, 7, 678-681.
83. Li, C.-C., Wu, M.-Y., Sun, Y.-C., Chen, H.-H., Wu, H.-M., Fang, S.-T., Chung, W.-Y., Guo, W.-Y., Lu, H. H.-S., 2021: Ensemble classification and segmentation for intracranial metastatic tumors on MRI images based on 2D U-nets, *Scientific Reports*, 11, Article number: 20634.
84. Chou, P.-H., Jou, T. H.-T., Wu, H.-T. H., Yao, Y.-C., Lin, H.-H., Chang, M.-C., Wang, S.-T., Lu, H. H.-S., Chen, H.-H., 2021: Ground truth generalizability affects performance of the artificial intelligence model in automated vertebral fracture detection on plain lateral radiographs of the spine, *The Spine Journal*, DOI:<https://doi.org/10.1016/j.spinee.2021.10.020>
85. Sun, Y.-C., Hsieh, A.-T., Fang, S.-T., Wu, H.-M., Kao, L.-W., Chung, W.-Y., Chen, H.-H., Liou, K.-D., Lin, Y.-S., Guo, W.-Y., Lu, H. H.-S., 2021: Can 3D artificial intelligence models outshine 2D ones in the detection of intracranial metastatic tumors on magnetic resonance images?, *Chinese Medical Association*, 84, 10, 956-962.

B. Conference Papers:

1. Chang, Y. L. C., Lander, L. C., Lu, H.-S., and Wells, M. T. 1993a: Bayesian Analysis for Fault Location in Homogeneous Distributed Systems. *Proceedings of the IEEE Symposium on Reliable Distributed Systems*, 44-53, Princeton, New Jersey.
2. Chang, Y. L. C., Lander, L. C., Lu, H.-S., and Wells, M. T. 1993b: Bayesian Inference for Fault Diagnosis in Real-Time Distributed Systems. *The Second Asian Test Symposium (ATS'93)*. 333-338, Beijing.
3. Lu, H. H.-S., and Chang, Y. L. C. 1995: Issues in the Assignment of Fault Diagnosis Time for Responsive Computing Systems. *Proceedings of ISSAT International Conference of Reliability and Quality in Design*, 238-242, Orlando, Florida.
4. Lu, H. H.-S., and Tseng, W.-J. 1997: On Accelerated Cross-Reference Maximum Likelihood Estimates for Positron Emission Tomography. *Proceedings of the IEEE Nuclear Science Symposium*, Volume 2, 1484 -1488.
5. Chen, J. C., Tu, K. Y., Lu, H. H.-S., Chen, T. B., Chou, K. L., and Liu, R. S. 1998: Statistical Image Reconstruction for PET Studies. *The Biomedical Engineering Society 1998 Annual Symposium*, 71-72.
6. Tu, K. Y., Chen, J. C., Lu, H. H.-S., Chen, T. B., Chou, K. L., and Liu, R. S. 1999: Iterative Image Reconstruction with Random Coincidence Correction for PET Studies. *The Biomedical Engineering Society 1999 Annual Symposium*, 357-358.
7. Chen, J. C., Liu, R. S., Tu, K. Y., Lu, H. H. S., Chen, T. B., and Chou, K. L. 2000: Iterative Image Reconstruction with Random Correction for PET studies. *Proceedings of the Society of Photo-Optical Instrumentation Engineers*, 3979, 1218-1229.
8. Chen, J. C., Tu, K. Y., Lu, H. H.-S., Chen, T. B., Chou, K. L., and Liu, R. S. 2000:

- Iterative Image Reconstruction with Random Correction for PET Studies. SPIE medical imaging 2000 symposium.
9. Tu, K. Y., Chen, J. C., Lu, H. H.-S., Chen, T. B., Chou, K. L., and Liu, R. S. 2000: Random Correction Using Iterative Reconstruction for PET. European Association of Nuclear Medicine Annual Congress.
 10. Lu, H. H.-S., Chen, C.-M., and Wu, J.-S. 2001: Statistical Analysis of Liver Cirrhosis in Ultrasound Images by Fractal Dimension, Dimension Reduction and Classification Trees. The 5th World Multi-Conference on Systemics, Cybernetics and Informatics (SCI 2001), Vol. XIII, Part II, 351-356.
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