

I. Full Publication List

Refereed Journals

1. Ramachandran, S., Ma, T., Ng, N., Foskolou, I.P., Hwang, M.-S., Victori, P., **Cheng, W.-C.**, Buffa, F.M., Leszczynska, K.B., Gromak, N., Hammond, E.M.: Hypoxia-induced SETX links replication stress with the unfolded protein response. Submitting, doi: <https://doi.org/10.1101/2020.08.26.268565>
2. Lord, S.R., Collins, J.M., **Cheng, W.-C.**, Haider, S., Wigfield, S., Gaude, E., Fielding, B.A., Pinnick, K.E., Harjes, U., Segaran, A., Jha, P., Hoefler, G., Pollak, M.N., Thompson, A.M., Roy, P.G., English, R., Adams, R.F., Frezza, C., Buffa, F.M., Karpe, F., Harris, A.L. Transcriptomic analysis of human primary breast cancer identifies fatty acid oxidation as a target for metformin. *British Journal of Cancer* 122:258–265(2020)
3. Morotti, M, Bridges, E, Valli, A, Choudhry, H, Sheldon, H, Wigfield, S, Gray, N, Zois, CE, Grimm, F, Jones, D, Teoh, EJ, **Cheng, W.-C.**, Lord, S, Anastasiou, D, Haider, S, McIntyre, A, Goberdhan, DCI, Buffa, F, Harris, AL.: Hypoxia-induced switch in SNAT2/SLC38A2 regulation generates endocrine resistance in breast cancer. *Proceedings of the National Academy of Sciences of the United States of America*. 116(25):12452-12461 (2018)
4. Dhawan, A., Barberis, A., **Cheng, W.-C.**, Domingo, E., West, C., Maughan, T., Scott, J., Harris, A.: Guidelines for using sigQC for systematic evaluation of gene signatures. *Nat Protoc.* 14(5):1377-1400 (2019)
5. Lord, S.R., **Cheng, W.-C.**, Liu, D., Gaude, E., Haider, S., Metcalf, T., Patel, N., Teoh, E., Gleeson, F., Bradley, K., Wigfield, S., MCGowan, D., Ah-See, M.-L., Thompson, A.M., Sharma, A., Bidaut, L., Pollak, M., Roy, P.G., Karpe, F., James, T., English, R., Adams, R.F., Frezza, C., Fenwick, J., Buffa, F.M., Harris, A.L.: Integrated Pharmacodynamic Analysis Identifies Two Metabolic Adaption Pathways to Metformin in Breast Cancer. *Cell Metabolism* 28, 679–688 (2018)
6. Yang, L.J., Roberts, D., Takhar, M., Erho, N., Bibby, B., Thiruthaneeswaran, N., Bhandari, V., **Cheng, W.-C.**, Haider, S., McCorry, A., McArt, D., Jain, S., Alshalalfa, M., Ross, A., Schaffer, E., Den, R., Karnes, R.J., Klein, E., Hoskin, P., Lamb, A., Neal, D., Buffa, F., Bristow, R., Boutros, P., Davicioni, E., Choudhury, A.: Development and validation of a 28-gene hypoxia signature for localised prostate cancer. *EBioMedicine*. 31:182–189 (2018)
7. Liou, C.-Y., Simak, A.A., **Cheng, W.-C.**: Complexity analysis of music. *Complexity*. 21:263–268 (2016)
8. Liou, C.-Y., **Cheng, W.-C.**, Liou, J.-W., Liou, D.-R.: Autoencoder for Words. *Neurocomputing*. 139:84–96 (2014)
9. **Cheng, W.-C.**: The genetic landscape on manifold from human genes. *International Journal of Intelligent Information and Database Systems*. 8(3):244-259 (2014)
10. Liou, J.-W., **Cheng, W.-C.**, Huang, J.-C., Liou, C.-Y.: Distributed representation of word by using Elman network. *International Journal of Intelligent Information and Database Systems*. 7(4):373-386 (2013)
11. **Cheng, W.-C.**, Huang, J.-C., and Liou, C.-Y. (2012): Segmentation of DNA using simple recurrent neural network. *Knowledge-Based Systems* 26: 271-280
12. **Cheng, W.-C.**, Cheng, P.E., and Liou, M.: Group factor analysis for Alzheimer's disease. *Computational and Mathematical Methods in Medicine*, volume 2013, Article ID 428385, 8 pages (2013)
13. Liou, C.-Y., Tseng, S.-H., **Cheng, W.-C.**, and Tsai, H.-Y.: Structural complexity of DNA

sequence. Computational and Mathematical Methods in Medicine. volume 2013, Article ID 628036, 11 pages (2013)

14. **Cheng, W.-C.** (2012): Auto-kernel using multilayer perceptron. Journal of Theoretical and Applied Computer Science 6(2):60-71
15. Liou, C.-Y. and **Cheng, W.-C.** (2012): Visualization of influenza A protein segments in distance invariant self-organizing map. International Journal of Intelligent Information and Database Systems 6(1):45-60
16. **Cheng, W.-C.** and Liou, C.-Y. (2010): Manifold construction based on local distance invariance. Memetic Computing 2(2):149-160

Lecture Notes in Computer Science

17. **Cheng, W.-C.** (2013): Analyzing hemagglutinin genes of human H5N1 virus by linear neighborhood embedding. In Selamat, Ali, Nguyen, Ngoc Thanh, and Haron, Habibollah (Eds.) Lecture Notes in Computer Science, Part I, volume 7802, 295-303
18. Liou, C.-Y., **Cheng, W.-C.**, Liou, J.-W., Liou, D.-R. (2013): Autoencoder for polysemous word. In: Yang, J., et al. Eds.: Lecture Notes in Computer Science, volume 7751, 458-465
19. **Cheng, W.-C.** (2012): Intrinsic protein distribution on manifolds embedded in low-dimensional space. **Lecture Notes in Computer Science, Part II, volume 7332, 41-48**
20. **Cheng, W.-C.** (2012): Visualizing human genes on manifolds embedded in three-dimensional space. **Lecture Notes in Computer Science, Part II, volume 7197, 421-430**
21. Huang, J.-C., **Cheng, W.-C.** and Liou, C.-Y. (2011): Distributed representation of word. Lecture Notes in Computer Science, volume 6591, 169-176
22. Liou, C.-Y. and **Cheng, W.-C.** (2010): Visualization of influenza protein segment HA in manifold space. In N.T. Nguyen, M. T. Le, and J. Swiatek Eds.: Lecture Notes in Computer Science, volume 5990, Part I, 150-158
23. **Cheng, W.-C.** and Liou, C.-Y. (2010): Linear replicator in kernel space. Lecture Notes in Computer Science, volume 6064, Part II, 75-82
24. **Cheng, W.-C.** and Liou, C.-Y. (2009): Implementation of the MLP kernel. Lecture Notes in Computer Science, volume 5507, Part II, 378-385
25. Liou, C.-Y. and **Cheng, W.-C.** (2009): A novel method for manifold construction. Lecture Notes in Computer Science, volume 5507, Part II, 3-10
26. Liou, C.-Y., **Cheng, W.-C.** (2008): Manifold training technique to reconstruct high dynamic range image. In Sun, F., et al., Eds.: Lecture Notes in Computer Science, volume 5264, Part II, 402-409
27. **Cheng, W.-C.** and Liou, C.-Y. (2008): Manifold construction using the multilayer perceptron. In Kurkova, V., Neruda, R., and Koutnik, J., Eds.: Lecture Notes in Computer Science, volume 5163, Part I, 119-127
28. Liou, C.-Y., **Cheng, W.-C.** (2008): Resolving hidden representations. In Ishikawa, M., ed.: Lecture Notes in Computer Science, volume 4985, Part II, 254-263
29. Liou, C.-Y., **Cheng, W.-C.** (2008): Manifold construction by local neighborhood preservation. In Ishikawa, M., ed.: Lecture Notes in Computer Science, volume 4985, Part II, 683-692

Conference Proceedings

30. **Cheng, W.-C.**, Kok, S., Pham, H.V., Chieu, H.L., and Chai, K.M.A. (2014): Language

modeling with sum-product networks. Annual Conference of the International Speech Communication Association 15 (INTERSPEECH 2014), Singapore

31. **Cheng, W.-C.**, Liou, J.-W., Liou, C.-Y. (2012): Construct adaptive template array for magnetic resonance images. IEEE World Congress on Computational Intelligence, pp. 1414-1418, Brisbane, Australia
32. **Cheng, W.-C.** and Liou, C.-Y. (2007): Binary kernel in morphological associative memory. Proceedings of International Conference on Cognitive Neurodynamics (ICCN 2007), pp. 963-968, 2008, Shanghai, China

Book Chapter

33. Liou, C.-Y. and **Cheng, W.-C.**: Forced Accretion and Assimilation Based on Self-organizing Neural Network. Self Organizing Maps - Applications and Novel Algorithm Design, ISBN: 978-953-307-546-4, InTech, 683-702 (2011)

Conference Abstracts

1. Choudhury, A., Yang, L.J., Roberts, D., Takhar, M., Vinayak, B., Bibby, B., **Cheng, W.-C.**, Haider, S., Thiruthaneeswaran, N., Hoskin, P., McArt, D., Jain, S., Buffa, F.M., Erho, N., Bristow, R.G., Boutros, P.C., Davicioni, E., West, C.: Hypoxia related mRNA biomarker to predict biochemical failure and metastasis for prostate cancer. Journal of Clinical Oncology 36(6_suppl):5-5 (2018)
2. **Cheng, W.-C.**, Choudhry, H., Leszczynska, K.B., Roberts, D., Hammond, E.M, West, C., Harris, A.L, Buffa F. M.: Extensive global alternative splicing induced by hypoxia across four major cancer types. Molecular Analysis for Personalised Therapy 2017 (Selected oral presentation 8/91)
3. Yang, L., Roberts, D., Takhar, M., Bibby, B., **Cheng, W.-C.**, Haider, S., Buffa, F., Erho, N.G., Hoskin, P., West, C.M.L., Choudhury, A.: Hypoxia Gene Expression Signature Independently Predicts Prognosis for Prostate Cancer Patients. International Journal of Radiation Oncology Biology Physics. October 1, Volume 99, Issue 2, Supplement, Page S201 (2017)
4. Bibby, B., Roberts, D., Lingjian, Y., Haider, S., **Cheng, W.-C.**, O'Reilly, P., McArt, D., Choudhury A., Buffa, F., West, C.: Development of a hypoxia gene signature as a biomarker for treatment stratification in prostate cancer. National Cancer Research Institute (NCRI) Cancer Conference 2016
5. Lord, S., Liu, D., **Cheng, W.-C.**, etc.: Metformin increases 18F-FDG flux and inhibits fatty acid oxidation at clinical doses in breast cancer: Results of a phase 0 clinical trial. European Journal of Surgical Oncology. 42(11):S230 (2016)
6. **Cheng, W.-C.**, Cheng, P.E., Liou, M.: Analyzing the volumetric variation for Alzheimer disease by mixture model of factor analysis. 19th Annual Meeting of the Organization for Human Brain Mapping (2013)
7. Liou, M., **Cheng, W.-C.**, Simak, A.A., Cheng, P.E.: Detecting a local change in brain structures by the matrix normal model. Joint Statistical Meetings (2012)
8. **Cheng, W.-C.**, Cheng, P.E., Liou, M.: Modeling local distortion in shape for brain MR images. 17th Annual Meeting of the Organization for Human Brain Mapping (2011)