Mahmoud Yaseen Al-Sarayreh

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Education and qualifications

- Ph.D. in Computer Engineering (Artificial Intelligence), Auckland University of Technology, New Zealand, 2020.

- M.Sc. in Computer Engineering, Yarmouk University, Jordan, 2013.

- B.Sc. in Computer Engineering, Mut'ah University, Jordan, 2008.

Skills

- **Research Skills:** Machine learning, Deep learning, Data analysis and visualization, Image processing and analysis, Computer vision, Hyper-spectral imaging systems.

- **Technical Skills:** Python, C++, R-analysis, TensorFlow, Keras, PyTorch, scikit-learn, scikit-image, OpenCV, OpenMP.

Work History and Experiences

- Assistant professor (2021 – present), German Jordanian University, Jordan.
- Research Scientist (2019 – 2021), AgResearch, Massey University, New Zealand.
- Teaching Assistant (2016 – 2018), Auckland University of Technology, New Zealand.
- Research & Teaching Assistant (2014 – 2016), German Jordanian University, Jordan.

Research Publications

- Hutchings, C., Dixit, Y., **Al-Sarayreh, M.**, Torrico, D., Realini, E., Jaeger, R., Reis, M.: A critical review of social media research in sensory-consumer science. *Food Research International*, Volume 165, 2023,112494. (Journal Paper)
- Soni, A., **Al-Sarayreh, M.**, Reis, M., Brightwell, G.: Hyperspectral imaging and deep learning for quantification of Clostridium sporogenes spores in food products using 1D-convolutional neural networks and random forest model. *Food Research International*, Volume 147, 2021, 110577. (Journal Paper)

- Li, Y., **Al-Sarayreh, M.**, Irie, K., Hackell, D., Bourdot, G., Reis, M., Ghamkhar K.: Identification of Weeds Based on Hyperspectral Imaging and Machine Learning. *Frontiers in Plant Science,* 2021, 11, 2324. (Journal Paper)

- Dixit, Y., **Al-Sarayreh, M.**, Craigie, C., Reis, M.: A global calibration model for prediction of intramuscular fat and pH in red meat using hyperspectral imaging. *Meat Science*, Volume 181, 2021, 108405. (Journal Paper)

- Soni, A., **Al-Sarayreh, M.**, Reis, M., Smith, J., Tong, K., Brightwell, G.: Identification of cold spots using non-destructive hyperspectral imaging technology in model food processed by coaxially induced microwave pasteurization and sterilization. *Foods*, 2020, 9(6), 837.(Journal Paper)

- **Al-Sarayreh, M.**, M. Reis, M., Qi Yan, W., Klette, R.: Potential of deep learning and snapshot hyperspectral imaging for classification of species in meat. *Food Control,* 2020, 117, 107332. (Journal Paper)

- Reis, M. M., Van Beers, R., **Al-Sarayreh, M.**, Shorten, P., Qi Yan, W., Saeys, W., Klette, R., Craigie, C.: Chemometrics and hyperspectral imaging applied to assessment of chemical, textural and structural characteristics of meat. *Meat Science*, 2018, 144: 100-109. (Journal Paper)

- **Al-Sarayreh, M.**, M. Reis, M., Qi Yan, W., Klette, R.: Detection of Red-Meat Adulteration by Deep Spectral–Spatial Features in Hyperspectral Images. *J. Imaging*, 2018, 4, 63. (Journal Paper)

- **Al-Sarayreh, M.**, Alzoubi, H.: GME of MPEG-4 on Multicore Processors. *International Journal of Computer Vision and Image Processing*, 2017, 7(4): 16-27. (Journal Paper)

- Dixit, Y., **Al-Sarayreh, M.**, Craigie, C., Reis, M.: A rapid method of hypercube stitching for snapshot multi-camera system. *In Proceedings of the International Conference on Image and Vision Computing New Zealand*, 2020, IEEE. (Conference Paper)

- **Al-Sarayreh, M.**, Reis, M., Qi Yan, W., Klette, R.: A Sequential CNN Approach for Foreign Object Detection in Hyperspectral Images. *In Proceedings of Computer Analysis of Images and Patterns*, 2019, Springer. (Conference Paper)

- **Al-Sarayreh, M.**, Reis, M., Qi Yan, W., Klette, R.: Deep Spectral-spatial Features of Snapshot Hyperspectral Images for Red-meat Classification. *In Proceedings of the International Conference on Image and Vision Computing New Zealand*, 2018, IEEE. (Conference Paper)

- Rapson, C., Boon-Chong Seet, B, Lee, K., Naeem, N., **Al-Sarayreh, M.**, Klette, R.: Reducing the Pain: A Novel Tool for Efficient Ground-Truth Labelling in Images. *In Proceedings of the International Conference on Image and Vision Computing New Zealand*, 2018, IEEE. (Conference Paper)

- **Al-Sarayreh, M.**, Reis, M., Qi Yan, W., Klette, R.: Detection of Adulteration in Red Meat Species Using Hyperspectral Imaging. *In Proceedings of the Pacific-Rim Symposium on Image and Video Technology*, 2017, Springer. (Conference Paper)

- **Al-Sarayreh, M**., Moayed, Z., Bollard-Breen, B., Ramond, J. B., Klette, R.: Detection and spatial analysis of fairy circles. *In Proceedings of the International Conference on Image and Vision Computing New Zealand*, 2016, IEEE. (Conference Paper)

Committees and Councils:

- Computer Engineering Department Council, School of Electrical Engineering and Information Technology, German Jordanian University.
- Computer Engineering Department Graduate Studies and Scientific Research Committee.

Teaching Experience

- Machine Learning and Pattern Recognition
- Image Processing
- Computer Architecture and Organization
- Signals and Systems
- Network Protocols
- Computing Fundamentals