

SCIENTIFIC PUBLICATIONS

1. ShanShan, Wei, Tiangang, Yin, Yuan, Bo, **Lai Fern, Ow**, Mohamed Lokman, Mohd Yusof, Jean-Philippe Gastellu-Etchegorry and Andrew Whittle (2024). Estimation of chlorophyll content for urban trees from UAV hyperspectral images. International Journal of Applied Earth Observation and Geoinformation. Vol 126, <https://doi.org/10.1016/j.jag.2023.103617>
2. **Lai Fern Ow** and Eugenie Chan (2022). Managing the turf of an urban golf course: energy consumption and greenhouse gas emission. Advances in Environmental and Engineering Science. Vol 3, (1); doi:[10.21926/aeer.2201003](https://doi.org/10.21926/aeer.2201003)
3. Tran, P.T.M., Kalairasan, M., Beshay, P.F.R., Qi, Y., **Ow, Lai Fern**, Govindasamy, V., Yusof., M.L.M., Ghosh, S., Balasubramanian, R. (2022). Nature-based Solution for Mitigation of Pedestrians' Exposure to Airborne Particles of Traffic Origin in a Tropical City, Sustainable Cities and Society, Volume 87,2022,104264,ISSN 2210-6707 <https://doi.org/10.1016/j.scs.2022.104264>
4. Wenhao Luo, Yee Hui Lee, **Lai Fern Ow.**, Yusof, M.L., Abdulkadir Yucel. (2022). Slice-Connection Clustering Algorithm for Tree Roots Recognition in Noisy 3D GPR Data. IEEE International Symposium on Antennas & Propagation & USNC-URSI Radio Science Meeting, 2022.
5. Dai, Q.Q., Yee Hui Lee, **Lai Fern Ow.**, Yusof, M.L., Abdulkadir Yucel. (2022). A Deep Learning-based Scheme for GPR Image Translation from Simulation to Measurement via a Conditional Generative Adversarial Network. IEEE International Symposium on Antennas & Propagation & USNC-URSI Radio Science Meeting, 2022.
6. Dai, Q.Q., Yee Hui Lee, Haihan Sun, Qian, J., **Lai Fern Ow.**, Yusof, M.L., Abdulkadir Yucel. (2022). A Deep Learning-Based GPR Forward Solver for Predicting B-Scans of Subsurface Objects. IEEE Geoscience and Remote Sensing Letters, vol. 19, pp. 1-5, 2022, Art no. 4025805 <https://doi.org/10.48550/arXiv.2207.06527>
7. Wenhao Luo, Yee Hui Lee, **Lai Fern Ow.**, Yusof, M.L., Abdulkadir Yucel. (2022). Accurate tree roots positioning and sizing over undulated ground surfaces by common offset GPR measurements. IEEE Trans. Instrum. Meas., 2022. <https://doi.org/10.48550/arXiv.2205.13731>
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9. Dai, Q.Q., Yee Hui Lee, Haihan Sun, **Lai Fern Ow.**, Yusof, M.L., Abdulkadir Yucel. (2022). DMRF-UNet: A two-stage deep learning scheme for GPR data inversion under heterogeneous soil conditions. IEEE Trans. Antennas Propagat., 2022. <https://doi.org/10.48550/arXiv.2205.07567>
10. Wenhao Luo, Yee Hui Lee, Haihan Sun, **Lai Fern Ow.**, Yusof, M.L., Abdulkadir Yucel. (2022). Tree roots reconstruction framework for accurate positioning in heterogeneous soil. IEEE J. Sel. Topics Appl. Earth Observ. Remote Sens., vol. 15, pp. 1912-1925, 2022. <https://doi.org/10.1109/JSTARS.2022.3151869>
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- Estimating parameters of the tree root in heterogeneous soil environments via mask-guided multi-polarimetric integration neural network. *IEEE Trans. Geoscience. Remote Sens.*, vol. 60, pp. 1-16, 2022. <https://doi.org/10.1109/TGRS.2021.3138974>
12. **Lai Fern Ow.**, Chan, Eugenie. (2021). Deffering waterlogging through stormwater control and channelling of runoff. *Urban Forestry & Urban Greening*, 65, (1) 27-35. <https://doi.org/10.1016/j.ufug.2021.127351>
 13. Haihan Sun, Yee Hui Lee, Wenhao Luo, **Lai Fern Ow.**, Yusof, M.L., Abdulkadir Yucel. (2021). Dual-Cross-Polarized GPR Measurement Method for Detection and Orientation Estimation of Shallowly Buried Elongated Object. *IEEE Transactions on Instrumentation and Measurement* (Volume: 70). <https://doi.org/10.1109/TIM.2021.3116292>
 14. Haihan Sun, Yee Hui Lee, **Lai Fern Ow.**, Yusof, M.L., Abdulkadir Yucel. (2021). Elogated Object Orientation Estimation Based on Deep Neural Networks. *IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting*.
 15. Wenhao Luo, Haihan Sun, Yee Hui Lee, **Lai Fern Ow.**, Yusof, M.L., Abdulkadir Yucel. (2021). Tree Root Positioning in Heterogeneous Soil Environment Using GPR. *IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting*.
 16. Dai, Q.Q., Yee Hui Lee, Haihan Sun, **Lai Fern Ow.**, Yusof, M.L., Abdulkadir Yucel. (2021). A Deep Learning Scheme for Rapidly Reconstructing 3D Permittivity Maps from GPR C-scans. *IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting*.
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 18. Dai, Q.Q., Yee Hui Lee, **Lai Fern Ow.**, Yusof, M.L., Abdulkadir Yucel. (2021). A Fast 2D GPR Forward Solver for Convex Objects Based on Deep Learning Techniques. *IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting*.
 19. Wojciech, W., Wei, S., Li, W., Yin, T., Li, X-X., **Lai Fern Ow**, Yusof, M. L., Whittle, J. A. (2021) Comparison of Absorbed and Intercepted Fractions of PAR for Individual Trees Based on Radiative Transfer Model Simulations. *Remote Sens*, 13, 1069. <https://doi.org/10.3390/rs13061069>
 20. Haihan Sun, Yee Hui Lee, Wenhao Luo, Abdulkadir Yucel, **Lai Fern Ow**, Mohamed Lokman Mohd. Yusof (2021). The orientation estimation of elongated underground objects via multi-polarization aggregation and selection neural network. *IEEE Geoscience and Remote Sensing Letters*.
 21. **Lai Fern Ow** & Chow, D. (2021). Urban stormwater management: can tree roots and structural soils improve hydraulic conductivity into compacted soils? *Arboriculture & Urban Forestry*: 47(2) 72-84.
 22. Haihan Sun, Yee Hui Lee, Wenhao Luo, Abdulkadir Yucel, **Lai Fern Ow**, Mohamed Lokman Mohd. Yusof (2021). Compact dual-polarized Vivaldi antenna with high gain and high polarization purity for GPR applications. *Sensors*: 21, 503 - <http://doi.org/10.3390/s21020503>

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26. Shanshan Wei, Tiangang Yin, Maria Angela Dissegna, Andrew J. Whittle, **Lai Fern Ow**, Mohamed Lokman Mohd. Yusof, Nicolas Lauret & Jean-Philippe Gastellu-Etchegorry (2020). An assessment study of three indirect methods for estimating leaf area density and leaf area index of individual trees. *Agricultural & Forest Meteorology*: 292-293.
27. Siu Kit Lau, Zhu X. F., & Lu, Z. B. & **Lai Fern Ow** (2020). Enhancement of sound absorption via vegetation with a metasurface substrate. *Applied Acoustics*: 165 1-7.
28. **Lai Fern Ow**, Ghosh, S., & Yusof, M. L. (2020). The benefits of tree shade and turf on globe and surface temperatures in an urban tropical environment. *Arboriculture & Urban Forestry*: 46(3) 228-244.
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