

Publications in Refereed Accredited Journals since 2010

Accepted

1. T. Ren, J. Niu, L. Shu, G. P. Hancke, J. Wu, X. Liu and M. Xu , "Enabling Efficient Model-Free Control of Large-Scale Canals by Exploiting Domain Knowledge, Accepted for publication in the *IEEE Transactions on Industrial Electronics*.
2. J. Chen, D. Yue, C. Dou, S. Weng, Y. Li, G. P. Hancke, "Static and Dynamic Event-triggered Mechanisms for Distributed Secondary Control of Inverters in Low-Voltage Islanded Micro-grids," Accepted for publication in the *IEEE Transactions on Cybernetics*.

Published

1. M.O. Oloyede, G.P. Hancke and H.C Myburgh, " A review on face recognition systems: recent approaches and challenges," *Multimedia Tools and Applications*, July 2020. <https://doi.org/10.1007/s11042-020-09261-2>
2. H. Zhang, D. Yue, C. Dou, X. Xie and G.P. Hancke, "Two-stage optimal operation strategy of isolated power system with TSK fuzzy identification of supply-security", *IEEE Transactions on Industrial Informatics*, vol. 16, no. 6, pp. 3731-3743, June 2020.
3. M. O. Osifeko, G. P. Hancke and A. M. Abu-Mahfouz, "Artificial Intelligence Techniques for Cognitive Sensing in Future IoT: State-of-the-Art, Potentials, and Challenges," *Journal of Sensor and Actuator Networks*, vol. 9, no. 2, p. 21, Apr. 2020.
4. J. M. Marais, A. M. Abu-Mahfouz and G. P. Hancke, "A Survey on the Viability of Confirmed Traffic in a LoRaWAN," *IEEE Access*, vol. 8, pp. 9296-9311, 2020.
5. S.M. Mbiya, G.P. Hancke and B.J. Silva "An Efficient Routing Algorithm for Wireless Sensor Networks based on Centrality Measures", *Acta Polytechnica Hungarica*, vol. 17, no. 1, pp. 83-99, 2020.
6. M.O. Oloyede, G.P. Hancke, H.C. Myburgh and A.J. Onumanyi, "A new evaluation function for face image enhancement in unconstrained environments using metaheuristic algorithms", *EURASIP Journal on Image and Video Processing*, 2019: 27. <https://doi.org/10.1186/s13640-019-0418-7>
7. M. Mukherjee, L. Shu, R.V. Prasad, D. Wang and G.P. Hancke, "Sleep Scheduling for Unbalanced Energy Harvesting in Industrial Wireless Sensor Networks", *IEEE Communications Magazine*, vol. 57 , no. 2, pp. 108 – 115, 2019.
8. M.O. Oloyede, G.P. Hancke and H.C Myburgh "Improving Face Recognition Systems using a new Image Enhancement Technique, Hybrid Features and the Convolutional Neural Network", *IEEE Access*, vol. 6, p. 75181 – 75191, 2018.
9. L. Shu, GP Hancke, D-J. Deng, C. Zhu and M. Mukherjee, "Guest Editorial Fog Computing for Industrial Applications", *IEEE Transactions on Industrial Informatics*, vol. 14, no. 10, pp. 4481 – 4486, 2018.
10. J. Wannenburg, R. Malekian and G.P. Hancke, "Wireless Capacitive Based ECG Sensing for Feature Extraction and Mobile Health Monitoring", *IEEE Sensors Journal*, vol. 18, no. 14, pp. 6023 – 6032, 2018
11. O.A. Osanaiye, A.S. Alfa and G.P. Hancke, "Statistical Approach to Jamming Attack Defense in Wireless Sensor Networks", *Sensors*, vol. 18, no. 6, p. 1691, 2018.
12. O.A. Osanaiye, A.S. Alfa and G.P. Hancke, "Denial of Service Defense for Resource Availability in Wireless Sensor Networks", *IEEE Access*, vol. 6, pp. 6975 – 7004, 2018.
13. Z. Zhou, D. Zhao, G.P. Hancke, L. Shu and Y. Sun, "Cache-Aware Query Optimization in Multi-Application Sharing Wireless Sensor Networks", *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, vol. 48, no. 3, pp. 401 – 417, 2018.
14. M. Mukherjee, L. Shu, L. Hu, G.P. Hancke, C. Zhu, "Sleep Scheduling in Large-scale Industrial Wireless Sensor Networks for Toxic Gas Monitoring", *IEEE Wireless Communications*, vol. 24, no. 4, pp. 106-112, 2017.
15. P. van Rhyn and G.P. Hancke, "Simplified performance estimation of ISM-band, OFDM based WSNs according to the sensitivity/SINAD parameters", *Journal of Applied Research and Technology*, vol. 15 no. 1, pp. 1-13, 2017.
16. M.O. Oloyede and G.P. Hancke, "Unimodal and multimodal biometric sensing systems: a review", *IEEE Access*, vol. 4, pp. 7532-7555, 2016.

17. T. Foster, D.V. Bhatt, G.P. Hancke and B.J. Silva, "A Web-based Office Climate Control System using Wireless Sensors", *IEEE Sensors Journal*, vol. 16, no. 15, pp. 6104 – 6113, 2016.
18. Z.B. Zhou, C. Du, L. Shu, G.P. Hancke, J. Niu and H. Ning, "An Energy-Balanced Heuristic for Mobile Sink Scheduling in Hybrid WSNs", *IEEE Transactions on Industrial Informatics*, vol. 12, no. 1, pp. 28-40, 2016.
19. K. Nellore and G.P. Hancke, "A Survey on Urban Traffic Management System using Wireless Sensor Networks" *Sensors*, vol. 16, no. 2, p. 157, 2016.
20. H.Q. Beyers, M.S. Olivier and G.P. Hancke, "Database Application Schema Forensics", *South African Computer Journal*, vol. 55, pp. 1-11, December 2014.
21. R.C. Coetzer and G.P. Hancke, "Development of a robust active infrared-based eye tracker", *IET Computer Vision*, vol. 8, no. 6, pp. 523 – 534, December 2014.
22. H. Tung, K.F. Tsang, K. Chui, H Chi, G.P. Hancke, and K.F. Man, "The Generic Design of a High Traffic Advance Metering Infrastructure Using ZigBee", *IEEE Transactions on Industrial Informatics*, vol. 10, no. 1, pp. 836 - 844, February 2014.
23. A. Kumar, H. Kim and G.P. Hancke, "Environmental Monitoring Systems: A Review", *IEEE Sensors Journal*, vol. 13, no. 4, pp. 1329 – 1339, April 2013.
24. V.C. Gungor, D. Sahin, T. Kocak, S. Ergüt, C. Buccella, C. Cecati, and G.P. Hancke, "A Survey on Smart Grid Potential Applications and Communication Requirements", *IEEE Transactions on Industrial Informatics*, vol. 9, no. 1, pp. 28 – 42, February 2013.
25. G.P. Hancke, B. de Carvalho e Silva and G.P. Hancke, Jr., "The Role of Advanced Sensing in Smart Cities", *Sensors* 2013, 13(1), pp. 393-425, 2013.
26. V.C. Gungor, D. Sahin, T. Kocak, S. Ergüt, C. Buccella, C. Cecati, and G.P. Hancke, "Smart Grid and Smart Homes: Key Players and Pilot Projects", *IEEE Industrial Electronics Magazine*, vol. 6, no. 4, pp. 18 – 34, December 2012.
27. T.M. Chiwewe and G.P. Hancke, "A Distributed Topology Control Technique for Low Interference and Energy Efficiency in Wireless Sensor Networks", *IEEE Transactions on Industrial Informatics*, vol. 8, no. 1, pp. 11 – 19, February 2012.
28. S. Zhi, I.F. Akyildiz and G.P. Hancke, "Dynamic Connectivity in Wireless Underground Sensor Networks", *IEEE Transactions on Wireless Communications*, vol. 10, no. 12, pp. 4334 – 4344, December 2011.
29. V.C. Gungor, D. Sahin, T. Kocak, S. Ergut, C. Buccella, C. Cecati and G.P. Hancke, "Smart Grid Technologies: Communications Technologies and Standards", *IEEE Transactions on Industrial Informatics*, vol. 7, no. 4, pp. 529 – 539, November 2011. ([IEEE Transactions on Industrial Informatics Best Paper Award for 2012](#)).
30. S. Zhi, I.F. Akyildiz and G.P. Hancke, "Capacity and Outage Analysis of MIMO and Cooperative Communication Systems in Underground Tunnels", *IEEE Transactions on Wireless Communications*, vol. 10, no. 11, pp. 3793 – 3803, November 2011.
31. E. van der Linde and G.P. Hancke, "An investigation of Bluetooth mergece with Ultra Wideband", *Elsevier Ad Hoc Networks*, vol. 9, no. 5, pp. 852 – 863, July 2011.
32. V.C. Gungor, B. Lu and G.P. Hancke, "Opportunities and Challenges of Wireless Sensor Networks in Smart Grid", *IEEE Transactions on Industrial Electronics*, vol. 57, no. 10, pp. 3557 – 3564, October 2010.