

# Author's Publications, Patents, and Technical Disclosures

## Journals

- \*1. Y.L. Sum, V. Rheinheimer, B.H. Soong, P.J.M. Monteiro, "Scalable 2.45 GHz Electrically Small Antenna Design for Metaresonator Array," *IET The J. Eng.*, 2017.
- \*2. Y.L. Sum, V. Rheinheimer, B.H. Soong, P.J.M. Monteiro, "Effects of Cement Paste Enhanced with Iron-Based Magnetic Particles on an Embedded Small Resonator Antenna," *Nature Scientific Report*, 2017.
- \*3. Y.L. Sum, V. Rheinheimer, B.H. Soong, P.J.M. Monteiro, "Effects of Iron (III) Oxide Concentration on an Embedded Small Resonator Antenna," *Submitting to IET Electronics Letter*, 2018.

## Patents

- 1. K.E. Koh, Y.L. Sum, B.H. Soong, "Software-Based Wireless Charging of Vehicular Battery," *Singapore provisional patent application number 10201707827P*, 27th September 2017.

- \*4. Y.L. Sum, B.H. Soong, K.J. Tseng, “Metamaterial Split Ring Resonator, Metamaterial Split Ring Resonator Array and Energy Harvesting Apparatus”, *Patent Cooperation Treaty, PCT/SG2017/050384*, 28th July 2017.
- 3. K.J. Tseng, S.C. Chien, Y.L. Sum, B.H. Soong, “Lighting Control Method and System”, *US Patent No. 9,655,195 B2*, 16<sup>th</sup> May 2017, *SG patent No. 10201600957S*, 20<sup>th</sup> Oct 2017.
- \*4. Y.L. Sum, V. Rheinheimer, B.H. Soong, P.J.M. Monteiro, “Antenna In Enhanced Building Composites”, *US Provisional Patent Application No. 62/430,172*, 5th December 2016.

## Conference Proceedings

- \*1. Y.L. Sum, B.H. Soong, “Design of 2.45 GHz ESA Metaresonator,” in *2017 International Workshop on Antenna Technology: Small Antennas, Innovative Structures, and Applications (iWAT)*, Athens, 2017, pp. 281-284,.
- \*2. Y.L. Sum, B.H. Soong, K.J. Tseng, “Selection of Unit Cell Size for RF Energy Harvesting Metaresonator Array,” in *5th IET International Conference on Renewable Power Generation (RPG)*, London, 2016, pp. 1-6.
- 3. S.C. Chien, Y.L. Sum, E.Y.W. Chan, B.S.H. Chew, B.H. Soong, K.J. Tseng, “An Integrated Cyber-Physical Model Towards High-Performance Lighting Systems Operation,” in *International Commission on Illumination, CIE 2016*, Melbourne, AU, March 2016.
- 4. Y.L. Sum, S.C. Chien, E.Y.W. Chan, B.H. Soong, K.J. Tseng, “High Accuracy and Resolution Illuminance Sensing for Intelligent Energy Management,” in *37th IEEE International Telecommunications Energy Conference (Intelec)*, Osaka, 2015, pp. 1-6.
- 5. Y.L. Sum, S.C. Chien, E.Y.W. Chan, B.H. Soong, K.J. Tseng, “High Performance Illuminance Monitoring for Built Environment,” in *International Commission on Illumination, CIE 2015*, Manchester.
- 6. E.Y.W. Chan, B.S.H. Chew, S.C. Chien, H.T. Nguyen, Y.L. Sum, K.J. Tseng and B.H. Soong, “Pilot Study of LVDC-Based LED Lighting System in Residential Buildings in Singapore,” in *International Commission on Illumination, CIE 2015*, Manchester.
- 7. B.S.H. Chew, E.Y.W. Chan, N.H. Ardiyanto, Y.L. Sum, S.C. Chien B.H. Soong, K.J. Tseng, “Design Considerations for ELVDC Power Distribution System Integrated Directly

with DC Energy Sources for LED Lighting in High-Rise Built Environment,” in *37th IEEE International Telecommunications Energy Conference (Intelec)*, Osaka, 2015, pp. 1-6.

- \*8. Y.L. Sum, B.H. Soong, W. Liu, M.S. Chen, “Wireless Power Transfer Communications for Leg Lengthening/Shortening Procedures,” in *IEEE 79th Vehicular Technology Conference (VTC Spring)*, Seoul, 2014, pp. 1-5.

## Technical Disclosures

1. Y.L. Sum, S.C. Chien, B.H. Soong, K.J. Tseng, “A-la-carte High Performance Sensing Mechanism,” TD/001/15, 6<sup>th</sup> Jan 2015.
2. Y.L. Sum, S.C. Chien, B.H. Soong, K.J. Tseng, “Non-Invasive Blinds Sensing Mechanism with Fault Detection,” TD/014/15, 26<sup>th</sup> Jan 2015.
3. S.C. Chien, Y.L. Sum, B.H. Soong, K.J. Tseng, “Remote Control Wireless Retrofitting Mechanism,” TD/116/15, 3<sup>rd</sup> May 2015.
4. E.Y.W. Chan, Y.L. Sum, J.J. Huang, H.X. Shao, B.H. Soong, “Solar responsive blinds,” TD/119/16, 18<sup>th</sup> Apr 2016.