

Simon Y. Foo

Professor, Electrical and Computer Engineering foo@eng.famu.fsu.edu

<https://eng.famu.fsu.edu/ece/people/foo>



Research Interests

- Machine Learning and Engineering Applications
- High-Efficiency III-V Compound Multi-Junction Solar Cells
- Organic/Polymer Solar Cells
- Quantum Dot Solar Cells

Teaching Interests

- Electronics
- Photovoltaics
- Digital ICs, Analog ICs, Mixed-Signal ICs
- Machine Learning

Highlights

- Funded research with ONR, NSA, AFOSR, NSF, FDOT, Boeing, and so forth.
- Consultant for Airbus in fire detection
- Expert Witness in the areas of VLSI IC design and Photovoltaics
- Holds a US patent in III-V triple junction solar cell design

Recent Representative Publications

- J. J. Khanam, S. Y. Foo, "A comparison of machine learning algorithms for diabetes prediction," ICT Express, ScienceDirect, 2021, ISSN 2405-9595, <https://doi.org/10.1016/j.icte.2021.02.004>.
- DG Moyer, PL Moss, X Chen, W Cao, S. Y. Foo, "Observations on Arrhenius Degradation of Lithium-Ion Capacitors," Materials Sciences and Applications 11 (7), 450-461, 2020.
- H. Szu, S. Y. Foo, et al, "The 3rd wave AI requirements," MedCrave MOJ Applied Bionics and Biomechanics, Vol. 3, Issue 1, pp. 18-22, 2019.
- J. Khanam, and S. Y. Foo, "Modeling of High Efficiency Multijunction Polymer and Hybrid Solar Cells which can absorb Infrared Light," Polymers 2019, Vol. 11, Issue 1, 2019
- D.G. Moyer, P.L. Moss, X.J. Chen, W.J. Cao and S.Y. Foo, "A design-based predictive model for lithium-ion capacitors," J. Power Sources, 435, 226694 (2019).
- J. Khanam and S. Y. Foo, "Modeling of a photovoltaic array in MATLAB simulink and maximum power point tracking using neural network," Electrical & Electronic Technology Journal (2018), Vol. 2, Issue 3, pp. 40-46. <https://medcraveonline.com/EETOAJ/EETOAJ-02-00019.pdf> 2018
- I. J. Ogundana and S. Y. Foo, "Improving the Morphology of the Perovskite Absorber Layer in Hybrid Organic/Inorganic Halide Perovskite MAPbI₃ Solar Cells," Journal of Solar Energy (JSE), vol. 2017, Article ID 8549847, 9 pages, 2017. doi:10.1155/2017/8549847
- I. J. Ogundana, S. Y. Foo, Z. Yu, I Bhattacharya, "Low Cost Fabrication of High Efficiency Polymer Solar Cells," ECS Transactions 07 / 2015: 66(34):1-9. DOI:10.1149/06634.0001ecst



FAMU-FSU College of Engineering
Department of Electrical and Computer Engineering