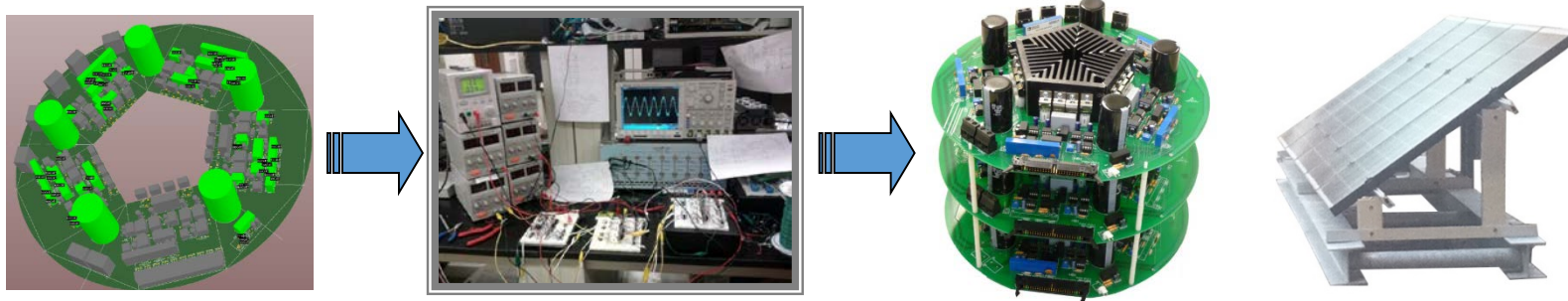**Dr. Faete Filho**
Assistant Professor, Electrical Engineering
Renewable Energy, Grid-Scale Energy Storage, Power Electronics and
Artificial Intelligence

Design, prototyping and application of multilevel inverters to distributed generation resources
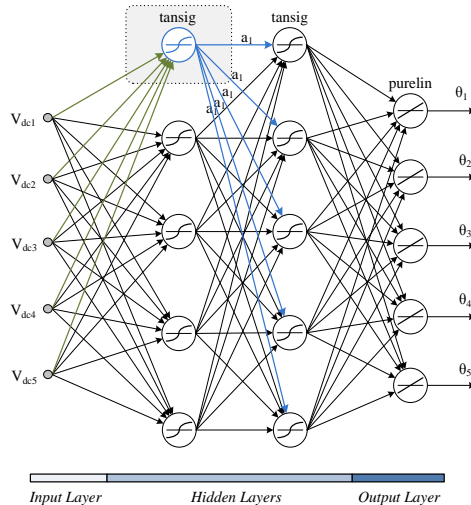

Renewable Energy

- *Selective harmonic elimination*
- *Multilevel inverters & converters*
- *Distributed generation resources*
- *Grid scale energy storage applications*

Artificial neural network based controllers

Multilevel inverters: selective harmonic control

Artificial Intelligence

- *Artificial neural network based selective harmonic control (ANN-SHE)*
- *Fuzzy logic systems*
- *Genetic algorithm optimization*
- *Particle swarm optimization*