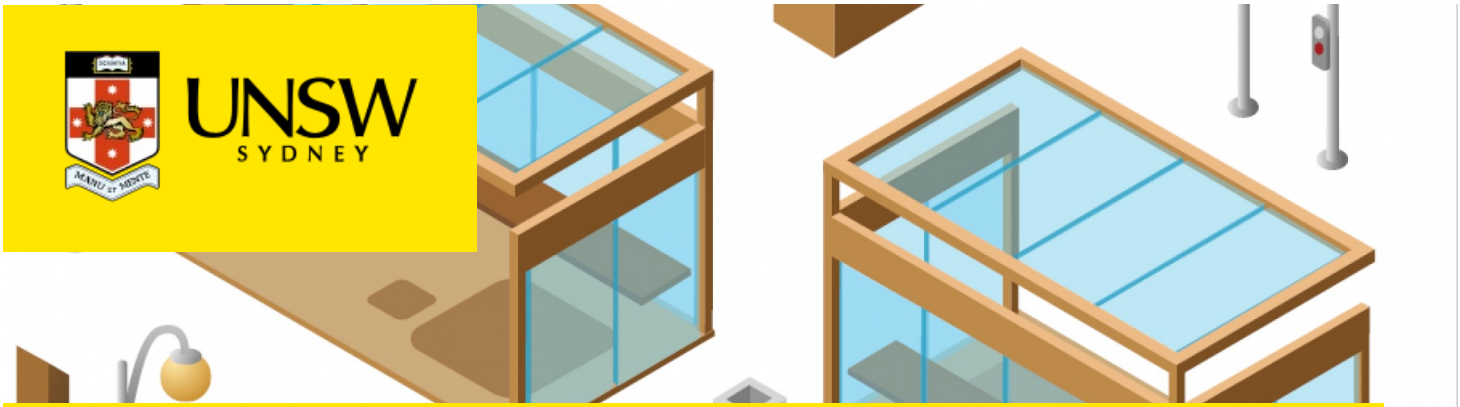

Power Management of Smart Solar-Powered Street Furniture

Developing schemes to manage the power requirements of solar-powered street furniture—such as traffic/warning signs, street lights, interactive street screens, smart bins, park benches for charging mobile devices, home furniture or pavements with integrated solar panels—to ensure it is self-sustaining and integrated with energy storage.

More Information

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Competitive advantage

- Development of power management schemes for self-sustained operation of street furniture
- Ability to maximise the illuminance efficacy of street lighting/traffic signs through the development of converters and modulation techniques
- Expertise in the optimal sizing of solar panels and energy storage for given street furniture load profiles

Impact

- Solar-powered street furniture can be used to develop micro-grids for small apartments, increase safety or improve customer experience.

Successful applications

- Energy consumption optimisation for solar-powered traffic signs.

Capabilities and facilities

- Power electronics laboratory
- PV simulators
- Hardware testing capability up to 50kVA, 1kV, 400A
- Arbin battery and supercapacitor tester with environmental chamber

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