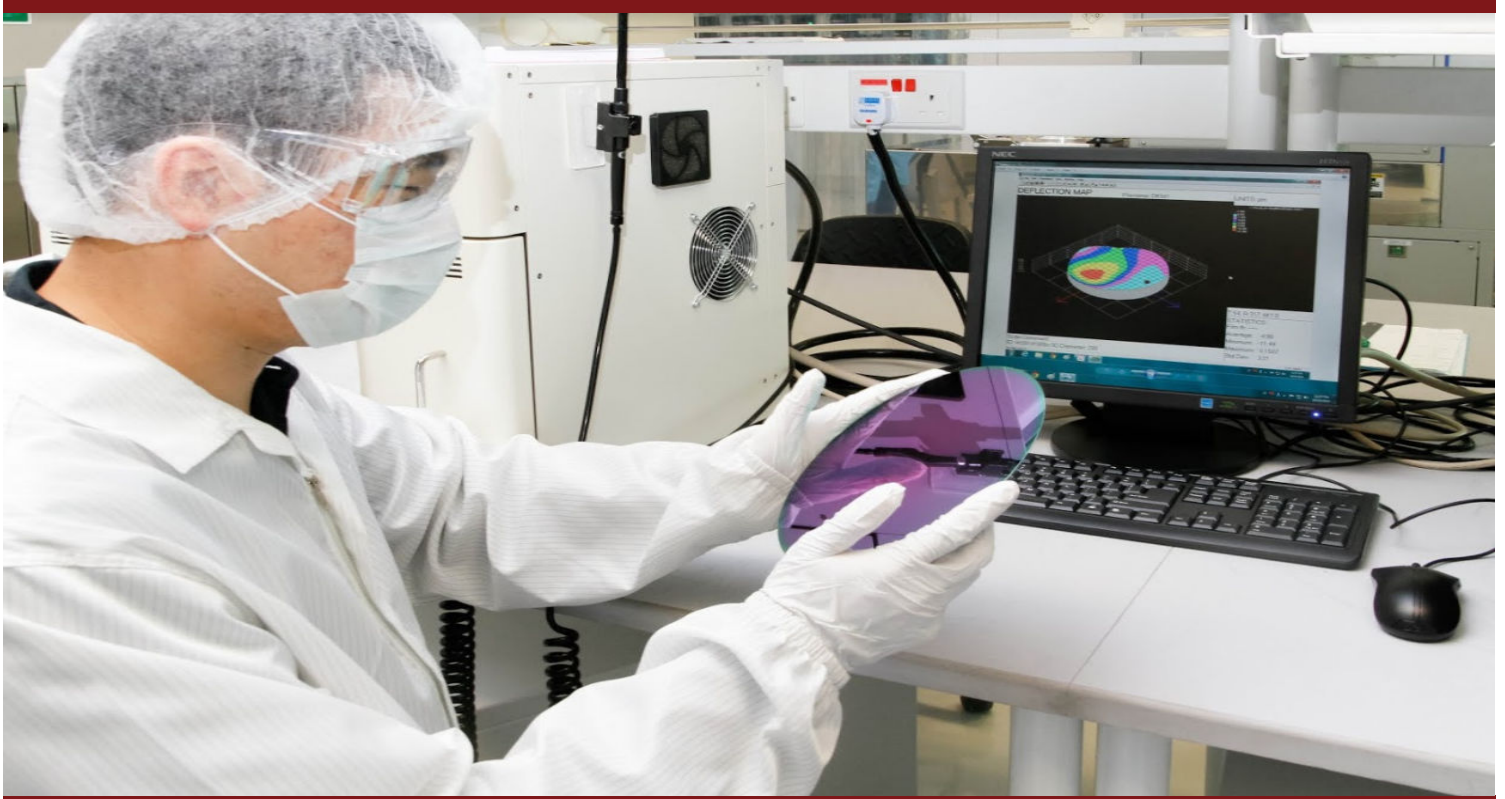


SMART Low Energy Electronic Systems (SMART LEES)



Programme Leader



Prof Eugene Fitzgerald,
Massachusetts Institute of
Technology

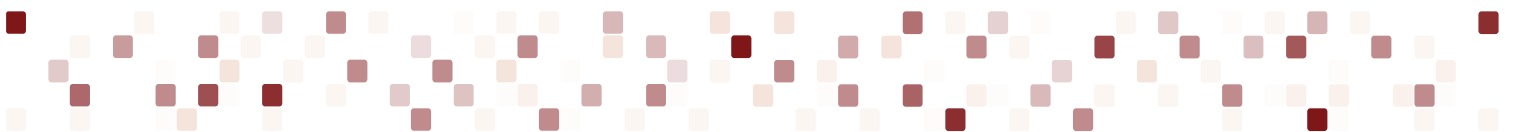
Prof Fitzgerald, the Merton C. Flemings –SMA Professor of Materials Engineering Professor at the Massachusetts Institute of Technology (MIT), is the Lead Principle Investigator for the LEES program. He is known for his distinguished career as an academic, researcher and serial entrepreneur.

LEES IRG is one of the five IRGs in the Singapore-MIT Alliance for Research and Technology (SMART) Centre. LEES IRG started in Jan 2012 and is a research programme funded by the National Research Foundation (NRF), under its Campus for Research Excellence and Technological Enterprise (CREATE) programme.

Research

SMART LEES IRG aims to identify new integrated circuit technologies that become the new added value for reduced energy per function, lower power consumption and higher performance in electronics infrastructure.

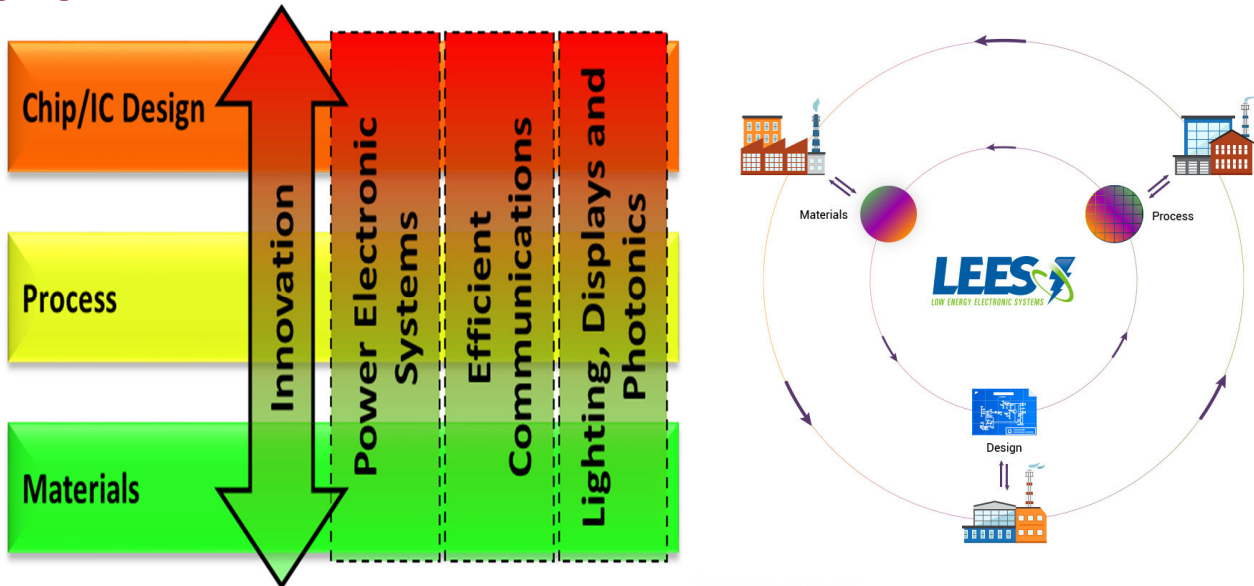
These integrated circuits of the future are expected to impact applications in wireless communication, power electronics, LED lighting, printing, displays and computing. The research is performed by teams that have expertise in materials, devices and circuits, invoking new advances at all levels to produce electronic systems that perform new function while decreasing system energy. The initial technology goals are in the areas of Power Electronic Systems, Efficient Communications, and Multifunctional Displays and Lighting Systems.



Researchers

There are more than 40 researchers in SMART LEES IRG, consisting of post-doctoral fellows, research associates and PhD students. Leading the research teams are a total of 20 Principal Investigators (PIs), from MIT, NUS and NTU Faculty.

Highlights



A vertically-integrated infrastructure is created within SMART LEES IRG to allow research innovation to operate so as to achieve the desired goal. Constant iteration of innovation between distinguished researchers from the fields of material science, novel process technology and cutting-edge integrated circuit design accelerates the journey from conceptualization to implementation.

An innovation model is being pursued in which SMART LEES IRG partners with industry at the materials, process and circuit design level as we execute our research vision and goals. Collaborative agreements have been created with suppliers of innovative process tools, and MOUs have been signed with foundry partners to add innovative materials and devices to their Si CMOS process. Collaboration with IC product companies are being developed.

For more information about the SMART LEES IRG, please contact: Mr Keith Ng (keith@smart.mit.edu)

Website: <http://smart.mit.edu/research/lees/about-lees>

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CREATE
Campus for Research Excellence And Technological Enterprise

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