

University of Strathclyde

People

Prof. Bill Leithead:

Bill is professor of Systems and Control Engineering in the Dept. of Electrical and Electronic Engineering. His research interests include wind energy, control system design, systems analysis, multi-rate hybrid systems and nonlinear systems identification, analysis and design. His research group has been active in Wind Energy since 1988.

Andy Cruden: Andy is senior lecturer and research manager for the Centre for Economic Renewable Power Delivery. His research interests are power electronics for fuel cells and rotating machines (e.g. wind turbines), electrical machine design, hydrogen and fuel cell systems and electric vehicles.

Campbell Booth: Campbell is senior research fellow in the Rolls-Royce UTC in the Institute of Energy and the Environment.

Sergio Dominguez: Sergio is research fellow in the Industrial Control Centre..

Relevant Expertise

The Strathclyde group has expertise in the dynamic analysis, modelling, simulation and control of wind turbines. It has developed its own dynamic and control design tools for wind turbines. The group has extensive practical experience and has collaborated with many manufacturers on control systems and other aspects of wind turbine design. In addition the group has expertise regarding electrical machine and plant condition monitoring techniques. The group has strong links with the industry and has worked with many manufactures including James Howden, Wind Energy Group, Renewable Energy Systems, Garrad Hassan and Vestas/NEG-Micon.

Technical role within the Supergen

The Strathclyde group will contribute to the following:

- Definition of benchmark wind turbine
- Instrumentation of an in situ wind turbine and the subsequent collection and analysis of data.
- Anomaly detection techniques for early identification of fault.
- Active load reduction by regulation of the machine.
- On-line identification of rotor aerodynamics
- Assessment of future prospects for large machines.

The RAE Grade 5 Electronic and Electrical Engineering Department,(EEE) is one of the largest of its kind in the UK and the largest in Scotland. The Dept. has a demonstrable track record of research and development spanning basic, strategic and applied research. It has recently been ranked **4th in the UK for EEE** in the Guardian University League Tables.

