The use of diversified renewable power/waste heat recovery applications has been considered as part of an array of potential solutions for more efficient power generation systems. Turbomachinery performance and its correct evaluation from the early stages of the design process is fundamental for the successful implementation of thermodynamic cycles (Wang et al., 2003) and consequently, power generation.

In his presentation, Carlos will start with an introduction to power generation while addressing the criteria that served as basis for the selection of radial inflow turbines as suitable expanders for renewable power generation (RPG).

This will be followed by an overview of an automated model for the design and performance estimation of these machines that was developed during this thesis. This will cover its definition, validation, integration with a cycle analysis code and the results obtained for a range of working fluids and resource fluid temperatures.

The presentation will finish with a comparison between CFD results and a set of mesh blocking schemes for optimum CFD mesh generation of these machines.

Carlos graduated as a Mechanical Engineer in 2005 and finished his Masters Degree in 2008. He started his PhD in 2009 and was supervised by Dr. Peter Jacobs, Dr. Andrew Rowlands, Dr. Paul Petrie-Repar and Dr. Emilie Sauret.

When
Friday, 7th June 2013, 3-4pm

Where
45-204
Mansergh Shaw Building, St Lucia

School of Mechanical and Mining Engineering

All interested persons are invited to attend
The seminar is free of charge – no RSVP is needed
Enquiries – Phone 3365 3714