

Modelling, Optimisation and Design of Conversion for Offshore Renewable Energy



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Loughborough
University

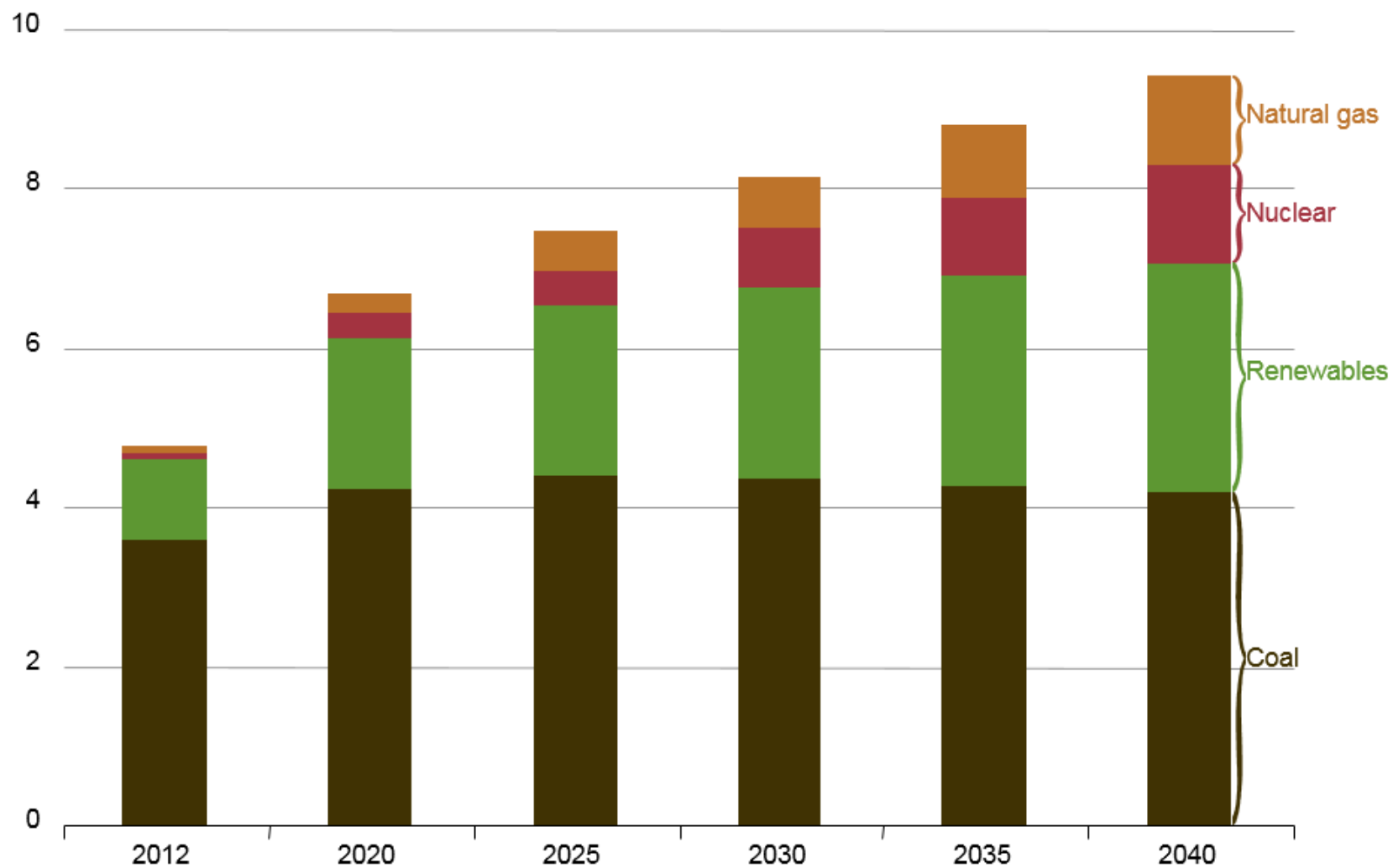


WARWICK
THE UNIVERSITY OF WARWICK



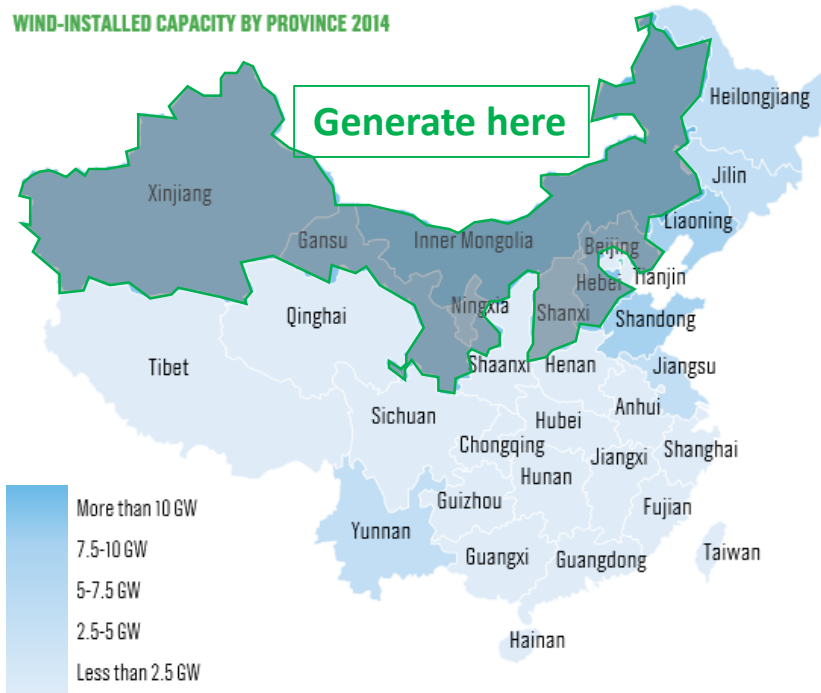
China electricity generation by fuel source, 2012–40

trillion kilowatthours

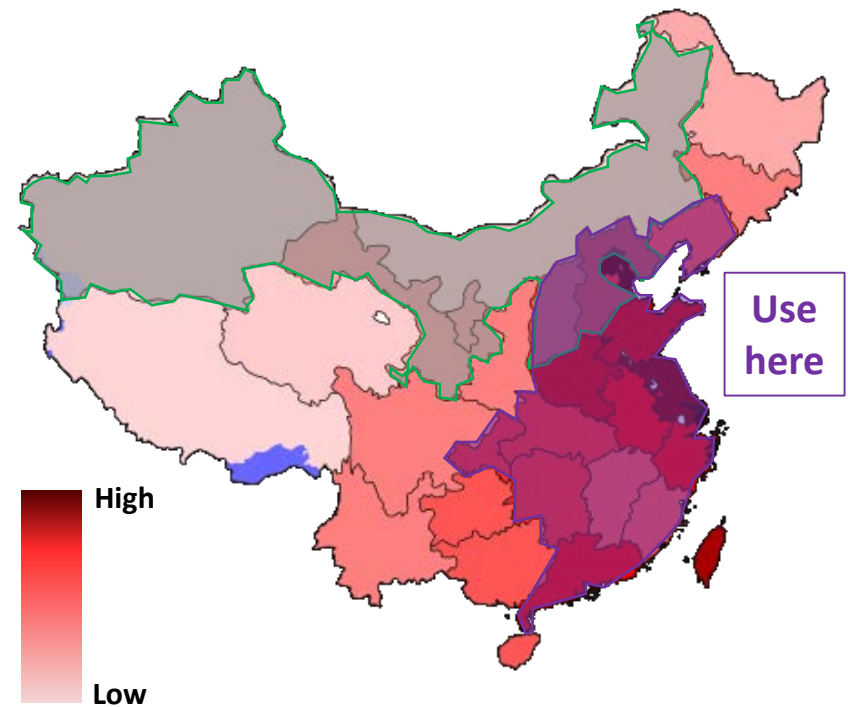


Wind Capacity installed in China

WIND-INSTALLED CAPACITY BY PROVINCE 2014



Population Density in China





EPSRC

Engineering and Physical Sciences
Research Council

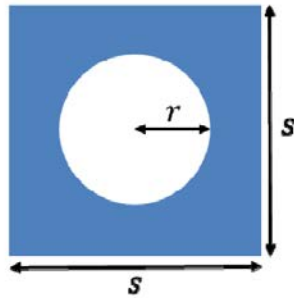
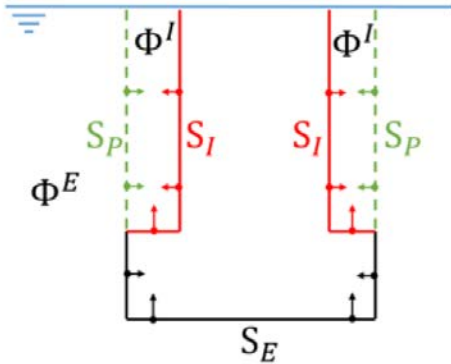
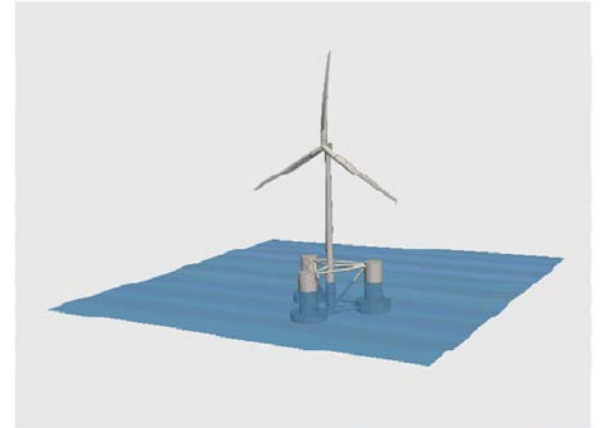
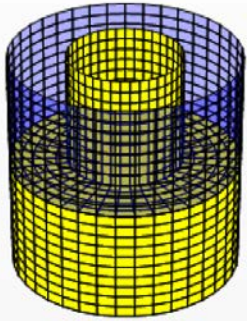
NERC

SCIENCE OF THE
ENVIRONMENT



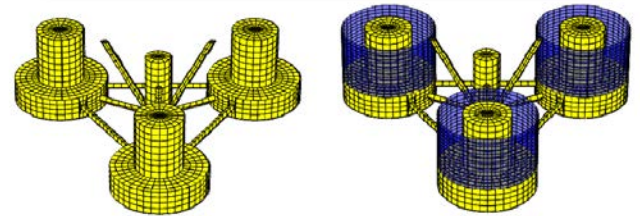


RESIN: Resilient Integrated-Coupled Floating Offshore Wind Platform Design methodology



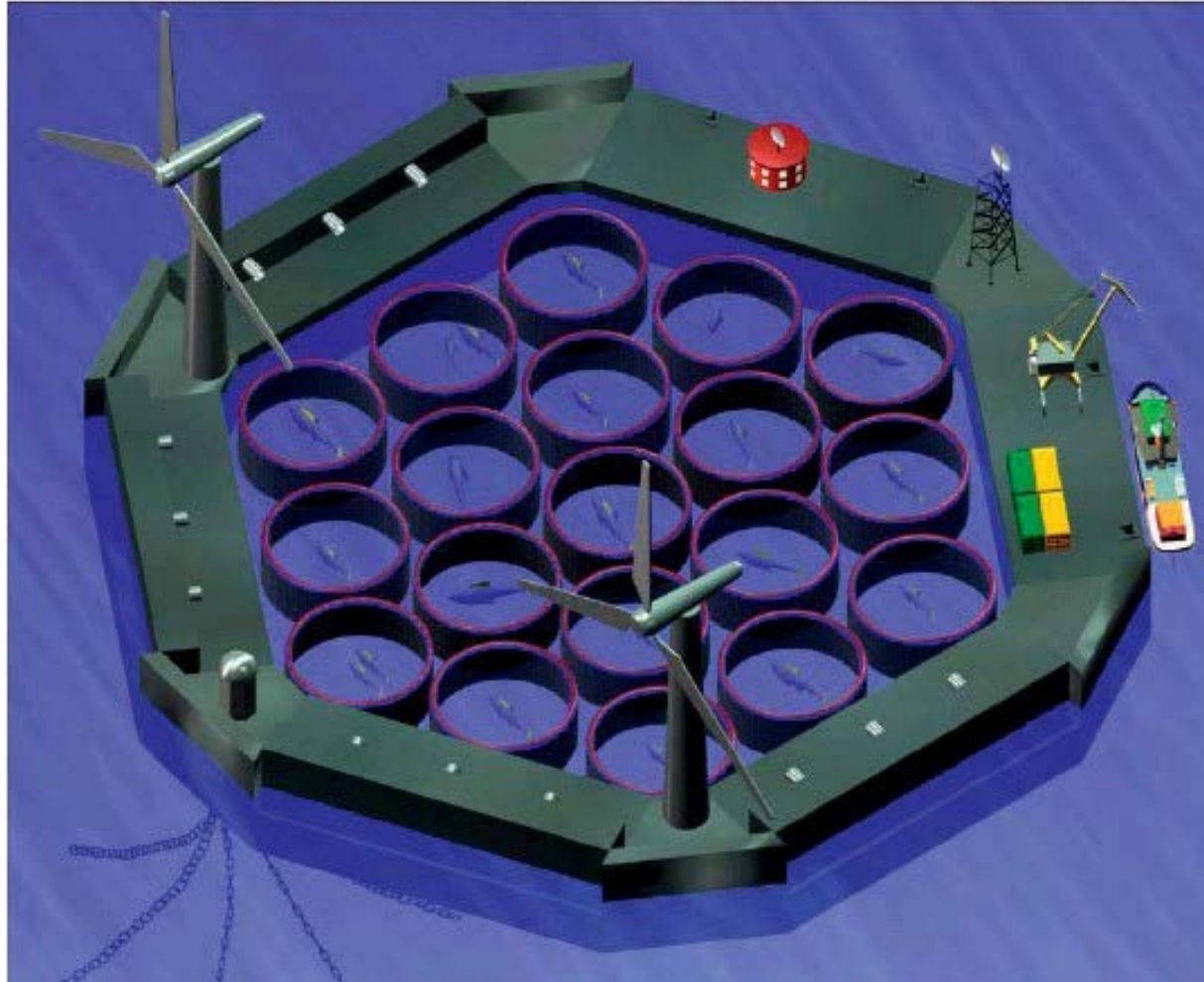
Porosity

$$\tau = \frac{\pi r^2}{s^2}$$



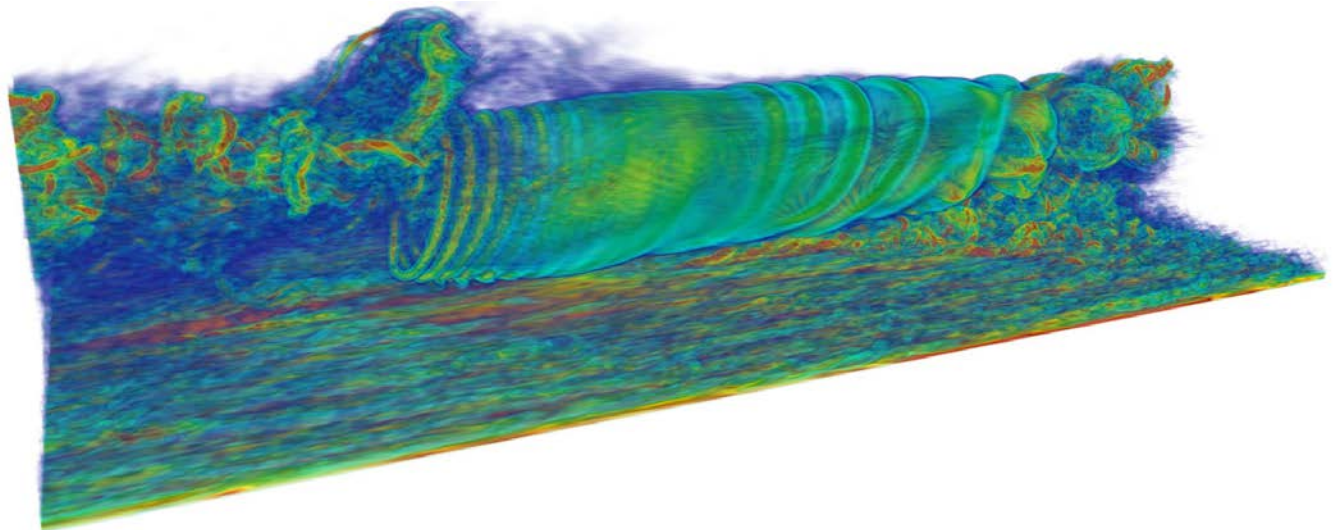


INNO-MPP: Investigation of the novel challenges of an integrated offshore Multi-Purpose Platform



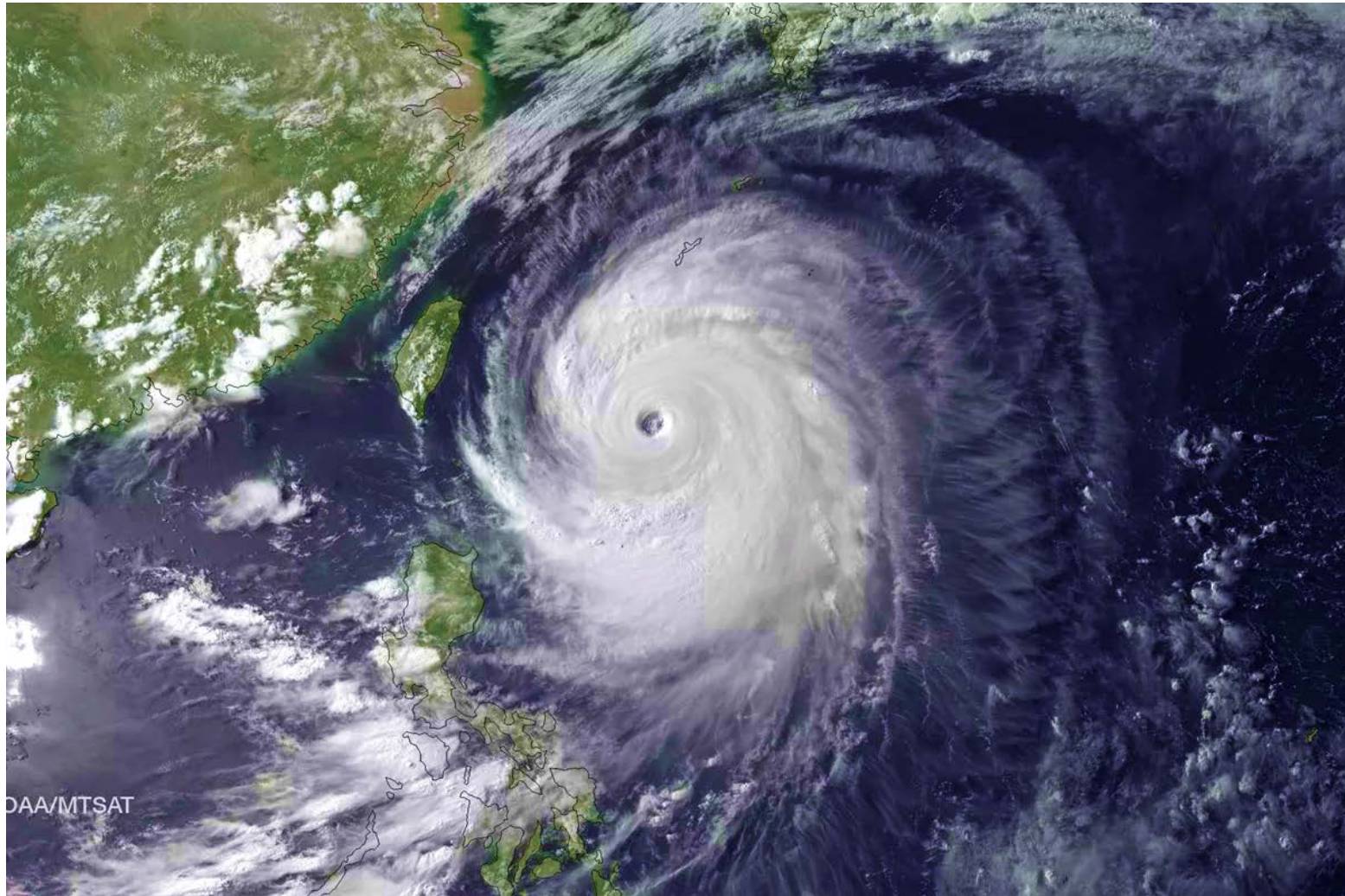


FENGBO-WIND: Farming the Environment into the Grid: Big data in Offshore Wind





Extreme wind and wave loads on the next generation of offshore wind turbines



MOD-CORE: Modelling, Optimisation and Design of Conversion for Offshore Renewable Energy









Modelling, Optimisation and Design of Conversion for Offshore Renewable Energy

UK Partners



McDonald & Parker

Wind Energy and Control

- Powertrain research group



Shek, Sousounis & Mueller

Institute for Energy Systems

- Electrical Power Conversion
- Offshore Renewable Energy



Lepper

Signal Processing Group

- Underwater acoustics & bioacoustics



Mawby

- Power Electronics Applications and Technology in Energy Research

McMahon

- Warwick Manufacturing Group

China Partners



Haifeng Wang

- Electrical Machine Design



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Hui Li & Ran Li

- Power converter design and device reliability
- Powertrain design

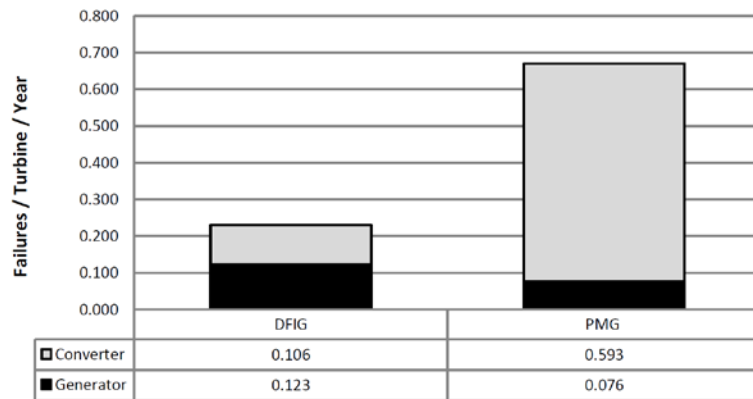


Ming Li & Zhang Liqiang

- Control of Oscillating Water Column PTO
- Energy storage

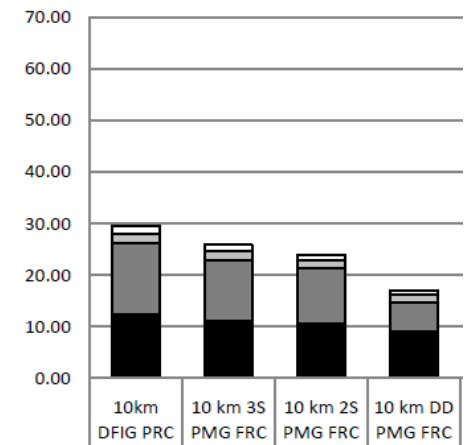




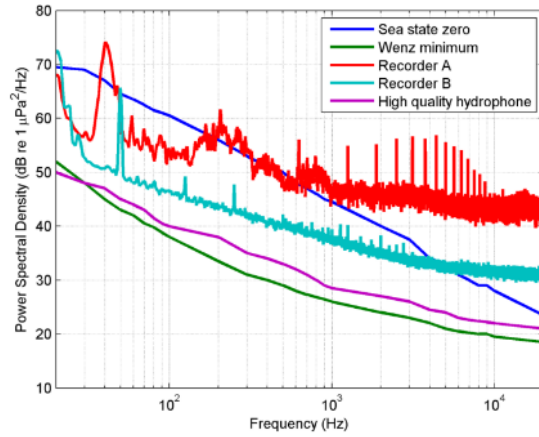


Accessibility
Model

O&M Cost (£/MWh)



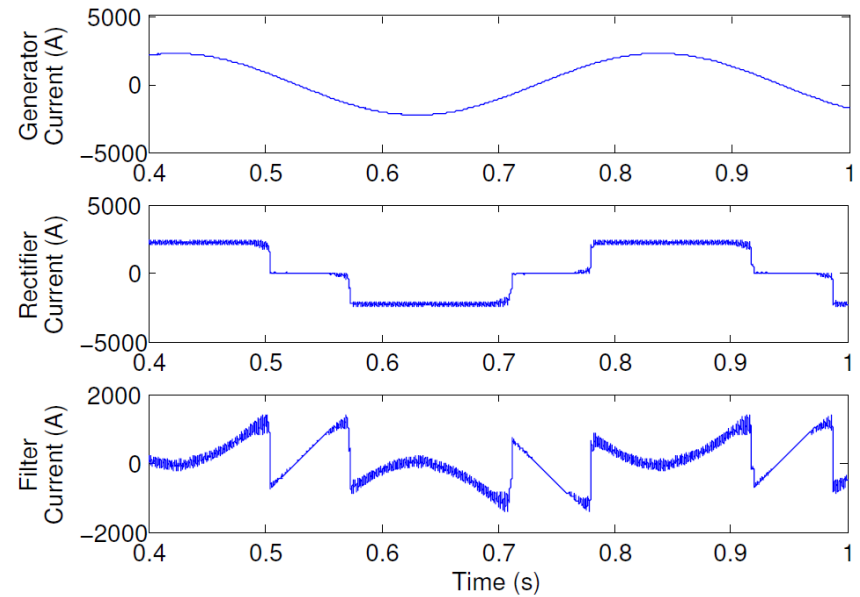
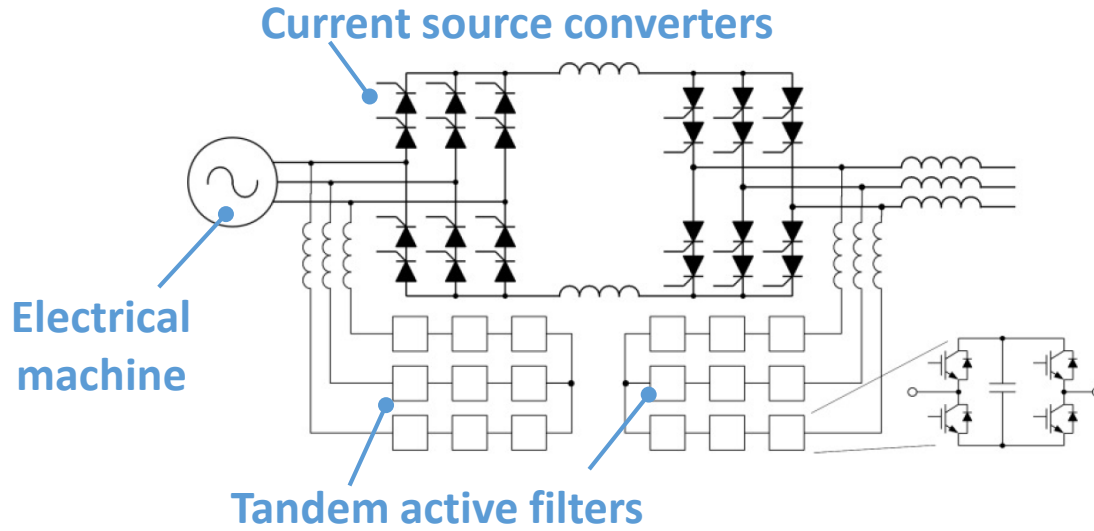




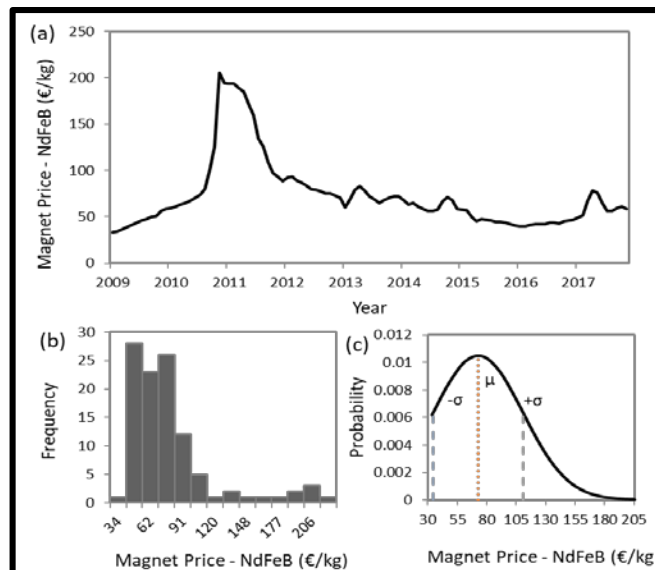
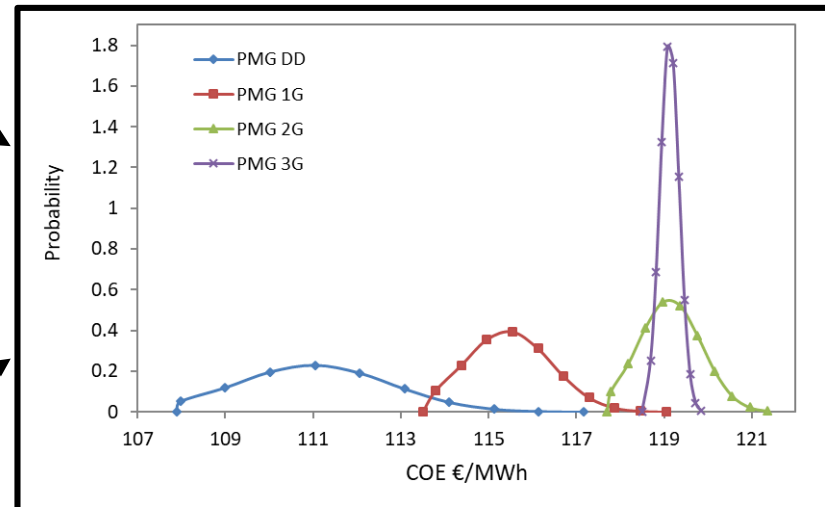
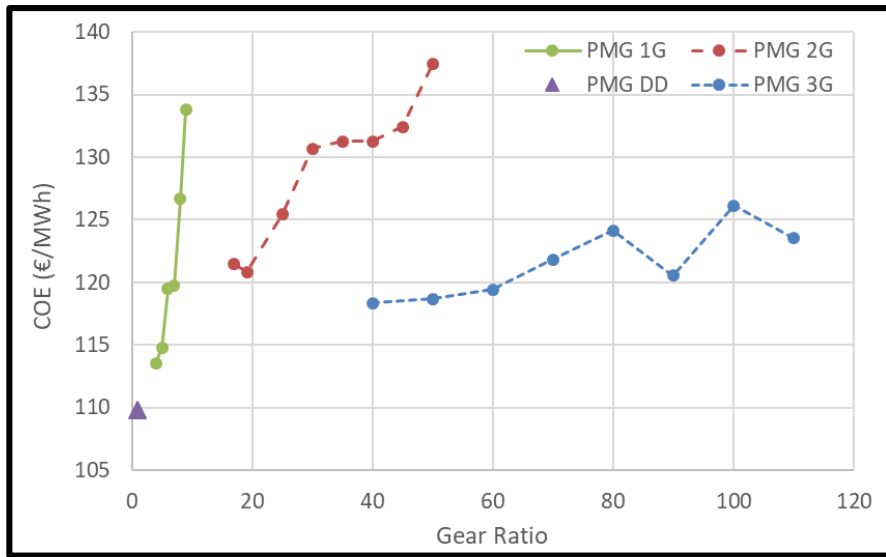
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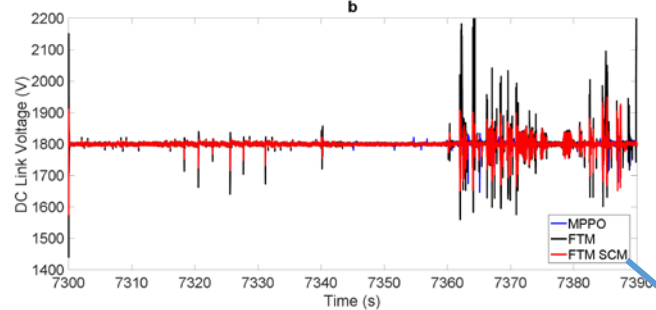
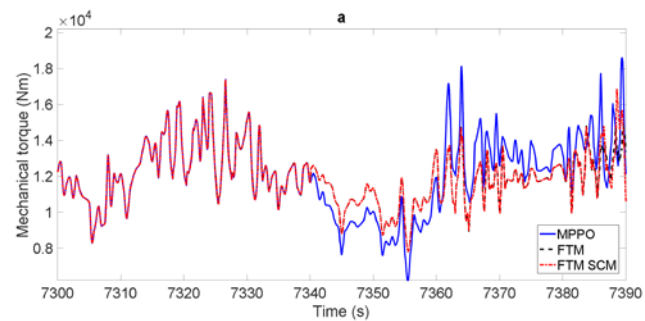




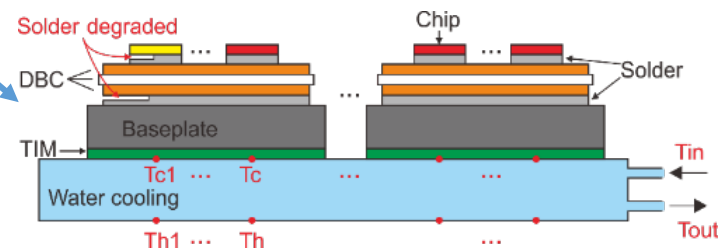








System and
device level
modelling and
control







To find out more:
www.ukchn-core.com



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