











ACADEMIC EXPERTISE – 2016




| Name | Expertise |
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| <p>Prof Alistair Borthwick</p>  <p>Alistair.Borthwick@ed.ac.uk https://www.eng.ed.ac.uk/about/people/prof-alistair-borthwick</p> | <p>Marine Renewables: Environmental fluid mechanics, flood risk management, coastal processes, offshore engineering, and marine renewable energy.</p> |
| <p>Dr. Tom Bruce</p>  <p>Tom.Bruce@ed.ac.uk http://www.eng.ed.ac.uk/about/people/dr-tom-bruce</p> | <p>Marine Renewables: Fluid modelling, coastal erosion, breakwaters.</p> |
| <p>Dr. Hannah Chalmers</p>  <p>Hannah.Chalmers@ed.ac.uk http://www.eng.ed.ac.uk/about/people/dr-hannah-chalmers</p> | <p>CCS: Flexible CCS for electricity/energy system integration, combustion studies, biomass combustion.</p> |

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| <p>Dr. John Chick</p>  <p>John.Chick@ed.ac.uk http://www.eng.ed.ac.uk/about/people/dr-john-chick</p> | <p>Electrical Power Conversion: Noise and vibration, acoustics, thermal modelling.</p> |
| <p>Dr. Angus Creech</p>  <p>A.creech@ed.ac.uk http://www.eng.ed.ac.uk/about/people/dr-angus-creech</p> | <p>Marine Renewables: CFD modelling of wind farms, tidal turbine arrays and coastal systems. Environmental fluid mechanics, including fish farm impacts and urban atmospheric pollution.</p> |
| <p>Dr. Richard Crozier</p>  <p>R.Crozier@ed.ac.uk http://www.eng.ed.ac.uk/about/people/dr-richard-crozier</p> | <p>Electrical Machines: Modelling and optimisation of electrical machines, particularly low speed, high torque permanent magnet machines for renewable energy applications.</p> |

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| <p>Dr. Sasa Djokic</p>  <p>Sasa.Djokic@ed.ac.uk http://www.eng.ed.ac.uk/about/people/dr-sasa-djokic</p> | <p>Power Systems: Power quality, load modelling, microgeneration, reliability, grid integration of renewables, smart grids, resource assessment</p> |
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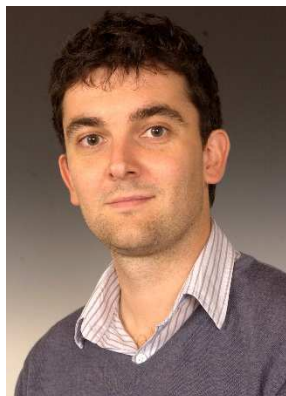
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| <p>Dr. David Forehand</p>  <p>D.Forehand@ed.ac.uk http://www.eng.ed.ac.uk/about/people/dr-david-forehand</p> | <p>Marine Renewables: Hydrodynamic modelling, resource to wire modelling.</p> |
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| <p>Dr. Daniel Friedrich</p>  <p>D.Friedrich@ed.ac.uk http://www.eng.ed.ac.uk/about/people/dr-daniel-friedrich</p> | <p>Energy Storage: Energy storage system modelling, thermal energy storage in buildings, Carbon Capture and Storage, energy systems modelling & optimisation.</p> |
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| <p>Prof Gareth Harrison</p>  <p>Gareth.Harrison@ed.ac.uk http://www.eng.ed.ac.uk/about/people/prof-gareth-harrison</p> | <p>Power Systems, Energy & Climate Change: Power flow analysis, transmission network, network resilience to climate change, grid integration of renewables, hydro, GIS, resource assessment, lifecycle assessment.</p> |
| <p>Prof David Ingram</p>  <p>David.Ingram@ed.ac.uk http://www.eng.ed.ac.uk/about/people/prof-david-m-ingram</p> | <p>Marine Renewables: Fluid modelling, CFD, tank testing.</p> |
| <p>Mr Henry Jeffrey</p>  <p>Henry.Jeffrey@ed.ac.uk http://www.eng.ed.ac.uk/about/people/mr-henry-f-jeffrey</p> | <p>Policy & Innovation: Technology roadmapping, lifecycle assessment, wave and tidal energy.</p> |

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| <p>Dr. Aristides Kiprakis</p>  <p>Aristides.Kiprakis@ed.ac.uk http://www.eng.ed.ac.uk/about/people/dr-aristides-kiprakis</p> | <p>Power Systems, Marine Renewables: Multi-scale modelling and control of power systems, network integration of renewables including marine, wind and solar PV, smart grids, demand-side management, load modelling.</p> |
| <p>Dr Quan Li</p>  <p>Quan.Li@ed.ac.uk http://www.eng.ed.ac.uk/about/people/dr-quan-li</p> | <p>Power Systems: Applied superconductivity, cryogenics, electromagnetics.</p> |
| <p>Prof Mark Linne</p>  <p>Mark.Linne@ed.ac.uk http://www.eng.ed.ac.uk/about/people/prof-mark-linne</p> | <p>Clean Combustion: Experimental gas /liquid phase combustion as related to engines, development of optical diagnostics.</p> |

Dr Mathieu Lucquiaud



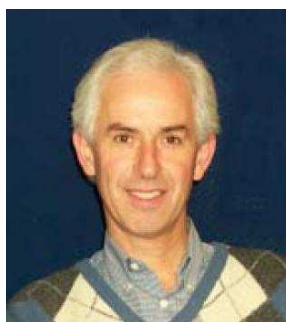
M.Lucquiaud@ed.ac.uk

<http://www.eng.ed.ac.uk/about/people/dr-mathieu-lucquiaud>

<http://www.research.ed.ac.uk/portal/mlucquia>

CCS: Advanced Power Generation Cycles, Carbon Capture, Operational flexibility, Turbomachinery, CO₂ absorption processes and solvents, Low-Carbon Energy Systems with CCS.

Dr. Ewen Macpherson



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<http://www.eng.ed.ac.uk/about/people/dr-donald-ewen-macpherson>

[macpherson](#)

Electrical Power Conversion: Power electronics, hybrid renewable energy systems, HVDC systems.

Dr. Dimitri Mignard



D.Mignard@ed.ac.uk

<http://www.eng.ed.ac.uk/about/people/dr-dimitri-mignard>

Energy Storage: chemical energy storage, biofuels.

Prof Markus Mueller



Markus.Mueller@ed.ac.uk

<https://www.eng.ed.ac.uk/about/people/prof-markus-mueller>

Electrical Power Conversion:

Electrical motors and generators, control, electromagnetic, thermal, structural, superconductors, direct drive for wind, wave and tidal systems.

Dr Grégory Payne



Gregory.Payne@ed.ac.uk

<http://www.eng.ed.ac.uk/about/people/dr-gregory-payne>

Marine Renewables: Marine energy testing, engineering design of wave and tidal energy systems.



Dr Brian Peterson

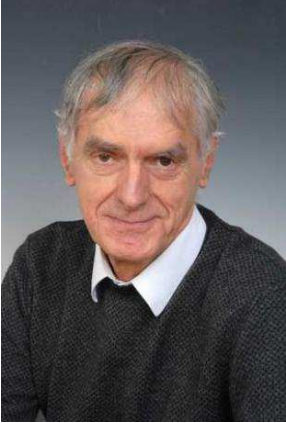







Brian.Peterson@ed.ac.uk

<http://www.eng.ed.ac.uk/about/people/dr-brian-peterson>

Clean Combustion: Laser and Optical diagnostics, Internal combustion engines, aeronautics and reacting flows, combustion, gas turbines.

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| <p>Dr. Colin Pritchard</p>  <p>Colin.Pritchard@ed.ac.uk http://www.eng.ed.ac.uk/about/people/dr-colin-pritchard</p> | <p>Energy Storage: Biofuels, chemical energy storage.</p> |
| <p>Prof Win Rampen</p>  <p>W.Rampen@ed.ac.uk http://www.eng.ed.ac.uk/about/people/prof-win-rampen</p> | <p>Energy Storage: Fluid Power, Vehicle transmissions, Wind turbines, mechanical design, off-road machinery, commercialisation, patents.</p> |
| <p>Dr Adam Robinson</p>  <p>Adam.Robinson@ed.ac.uk http://www.eng.ed.ac.uk/about/people/dr-adam-robinson</p> | <p>Energy Storage, Marine Renewables: Fluid modelling, Gas turbines, CFD, Tank testing, Thermal and Thermodynamic.</p> |

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| <p>Professor Stephen Salter</p>  <p>S.H.Salter@ed.ac.uk http://www.eng.ed.ac.uk/about/people/prof-stephen-salter</p> | <p>Marine Renewables: Wave energy, tidal energy, climate change, smog clearance, voter-friendly congestion charging.</p> |
| <p>Dr Brian Sellar</p>  <p>Brian.Sellar@ed.ac.uk http://www.eng.ed.ac.uk/about/people/dr-adam-robinson</p> | <p>Marine Renewables: Wave and tidal resource assessment, tank testing and sea trials.</p> |
| <p>Dr. Jonathan Shek</p>  <p>J.Shek@ed.ac.uk http://www.eng.ed.ac.uk/about/people/dr-jonathan-shek</p> | <p>Electrical Power Conversion: Power electronics, hybrid renewable energy systems, HVDC, electrical drive reliability, resource to wire system modelling.</p> |

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| <p>Dr Donghyuk Shin</p>  <p>D.Shin@ed.ac.uk http://www.eng.ed.ac.uk/about/people/dr-dong-hyuk-shin</p> | <p>Clean Combustion: Computational fluid mechanics, combustion, reacting flows, turbulent flames, gas turbine, combustion Instability</p> |
| <p>Dr Ton Van Den Bremer</p>  <p>Ton.VandenBremer@ed.ac.uk http://www.eng.ed.ac.uk/about/people/dr-ton-van-den-bremer</p> | <p>Marine Renewables: Geophysical/environmental fluid mechanics, surface and internal waves, buoyancy driven flow, stochastic processes, perturbation methods</p> |
| <p>Dr. Venki Venugopal</p>  <p>V.Venugopal@ed.ac.uk http://www.eng.ed.ac.uk/about/people/dr-vengatesan-venugopal</p> | <p>Marine Renewables: Wave Hydrodynamics, Numerical modelling of waves and tides, Offshore and coastal structures, Floating wind turbine, Metocean data analysis and wave statistics.</p> |

Dr. Ignazio Maria Viola



I.M.Viola@ed.ac.uk

<http://www.eng.ed.ac.uk/about/people/dr-ignazio-maria-viola>

Marine Renewables: hydrodynamics of tidal turbines, aerodynamics of wind turbines, yacht sail aerodynamics, naval architecture

Dr Harry van der Weijde



H.Vanderweijde@ed.ac.uk

<http://www.eng.ed.ac.uk/about/people/dr-harry-van-der-weijde>

Power Systems: Energy markets, economics, policy, investment, energy networks, risk and uncertainty, optimisation and equilibrium modelling, big data

Prof Robin Wallace



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<http://www.eng.ed.ac.uk/about/people/prof-robin-wallace>

Marine Renewables & Power Systems: resource to wire system modelling, grid integration of renewables, power systems analysis`