Research Assistant/Associate (Full advert here)

Imperial College London - Chemical Engineering

Salary: £34,397 to £40,858 per annum
Hours: Full Time
Contract Type: Fixed-Term/Contract
Closes: 16th July 2019
Job Ref: ENG00840

Campus: South Kensington, London

The Department of Chemical Engineering is seeking a Research Assistant/Associate to join the team on ESPRC Programme Grant “Integrated Development of Low-Carbon Energy Systems (IDLES): A Whole-System Paradigm for Creating a National Strategy”. This opportunity focuses on whole-energy-system modelling based on advanced techno-economic descriptions of energy technologies at various levels of detail, that can support reliable evaluations by such integrated approaches of the value of different technologies from a system’s perspective.

The project aims to develop detailed models for analysing and optimizing complex energy systems, considering spatial resolutions from local to national and temporal resolutions from real-time operation to long-term planning. You will develop multiscale modelling approaches of an integrated multi-vector energy system and contribute to the selection and modelling of energy technologies to inform these tools. In particular, you will focus, beyond conventional power generation/cogeneration and residential/commercial energy loads (heat pumps, electric heaters, etc.), on options among the following: (i) heating; (ii) gas/hydrogen networks; (iii) air-conditioning/cooling; (iv) storage of energy vectors across scales; (v) renewable technologies; (vi) cross-vector conversion technologies; (vii) practices in key industrial sectors for improved energy use, energy saving/integration, waste-heat recovery for power generation (e.g. with ORCs); and (viii) transport electrification.

You should have a degree in Chemical/Mechanical/Electrical Engineering or a related field, and are expected to have a strong foundation in energy conversion technology and systems modelling, with a focus on energy generation, conversion and storage.

*Candidates who have not yet been officially awarded their PhD will be appointed as Research Assistants within the salary range £34,397 – £37,486 per annum.*

The post is available from June/July 2019 for 12 months in the first instance, with the possibility of extension. The post is based in the Department of Chemical Engineering at Imperial College London (South Kensington Campus).

Informal enquiries about the post can be made to Professor Christos Markides (c.markides@imperial.ac.uk).

To apply, please visit our website: www.imperial.ac.uk/jobs You will find this vacancy by searching either the position title or job number: ENG00840. Please ensure you include a completed application form with your submission.

Further information about the post is available in the job description. Should you have any queries about the application process please contact chemeng.staffing@imperial.ac.uk.

Closing date: midnight on 28 days from publication

For technical issues when applying online, please contact: recruitment@imperial.ac.uk

About Imperial College London

Imperial College London is the UK’s only university focussed entirely on science, engineering, medicine and business and we are consistently rated in the top 10 universities in the world. We work in a multidisciplinary and diverse community for education, research, translation and commercialisation, harnessing science and innovation to tackle the big global challenges our complex world faces. It’s our mission to achieve enduring excellence in all that we do for the benefit of society – and we are looking for the most talented people to help us get there.
Research Assistant/Associate (Full advert here)

Imperial College London - Chemical Engineering

Salary: £34,397 to £40,858 per annum

Hours: Full Time

Contract Type: Fixed-Term/Contract

Closes: 9th July 2019

Job Ref: ENG00841

The Department of Chemical Engineering is seeking a Research Assistant/Associate to join the team on ESPRC Programme Grant “Integrated Development of Low-Carbon Energy Systems (IDLES): A Whole-System Paradigm for Creating a National Strategy”. This opportunity focuses on advanced techno-economic models of energy technologies at various levels of detail, to be used within integrated energy-system approaches for evaluations of their system-level value.

You will focus, beyond conventional power generation/cogeneration and residential/commercial energy loads (heat pumps, electric heaters, etc.), on options among the following: (i) heating (e.g., air-/ground-source and hybrid heat pumps); (ii) the decarbonisation of the gas network and hydrogen networks; (iii) air-conditioning/cooling; (iv) storage of all energy vectors across scales, including electrical and thermal energy (hot/cold) storage; (v) renewable technologies (wind, solar, biomass/gas, etc.); (vi) cross-vector conversion technologies; (vii) selected practices in key industrial sectors for improved energy-use, from energy saving and integration, to waste-heat recovery for power generation (e.g. with ORCs); and (viii) electrification of transport (e.g., electric and hybrid vehicles, rail, etc.). Many of these technologies are highly distributed and therefore their study in high spatial resolution models will be required to analyse adequately their integration as this occurs at the local scale.

You should have a degree in Chemical/Mechanical/Electrical Engineering or a related field, and are expected to have a strong foundation in energy conversion technology and systems modelling, with a focus on energy generation, conversion and storage.

*Candidates who have not yet been officially awarded their PhD will be appointed as Research Assistants within the salary range £34,397 – £37,486 per annum.

The post is available from June/July 2019 for 18 months in the first instance, with the possibility of extension. The post is based in the Department of Chemical Engineering at Imperial College London (South Kensington Campus).

Informal enquiries about the post can be made to Professor Christos Markides (c.markides@imperial.ac.uk).

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Imperial College London - Chemical Engineering

Salary: £34,397 to £40,858 per annum
Hours: Full Time
Contract Type: Fixed-Term/Contract
Closes: 21st July 2019
Job Ref: ENG00838

Campus: South Kensington, London

The Department of Chemical Engineering is seeking an outstanding Research Assistant/Associate to join the research team on the project “Optimal design of hybrid renewable energy systems for tourism facilities in the Fayoum Governorate”, which aims to enhance the use of renewable energy in this growing region and its expanding tourism sector, and to consider the transferability of promising solutions to other, similar global regions. The project is funded by the British Council as part of its Institutional Links scheme between the UK and Egypt.

The project objectives to: (i) assess the potential of renewable (wind, solar) resources, and develop prediction models for solar irradiance and wind speed in Fayoum (and other similar regions); (ii) assess biomass potentials in Fayoum, to be integrated within hybrid renewable energy systems (HRES); (iii) propose potential HRES configurations for tourism facilities/determine their optimal design/operation when serving the onsite energy demands of such facilities in Fayoum and elsewhere; and (iv) develop a small-scale hybrid wind + PV + storage prototypes for model validation and research purposes.

You should have a degree in Chemical/Mechanical/Electrical Engineering or a related field of study, and you are also expected to have a strong foundation in conventional and renewable energy technology and system modelling, and economic analysis.

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The post is available from June/July 2019 for 12 months in the first instance, with the possibility of extension. The post is based in the Department of Chemical Engineering at Imperial College London (South Kensington Campus).

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Closing date: midnight on 21 July 2019

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Job Ref: ENG00839

Campus: South Kensington, London

The Department of Chemical Engineering is seeking an outstanding Research Assistant/Associate to join the research team on the project “Optimal design of hybrid renewable energy systems for tourism facilities in the Fayoum Governorate”, which aims to enhance the use of renewable energy in this growing region and its expanding tourism sector, and to consider the transferability of promising solutions to other, similar global regions. The project is funded by the British Council as part of its Institutional Links scheme between the UK and Egypt.

The project objectives to: (i) assess the potential of renewable (wind, solar) resources, and develop prediction models for solar irradiance and wind speed in Fayoum (and other similar regions); collecting data from local measurement stations (assisted by our Egyptian partners; (ii) assess biomass potentials in Fayoum, to be integrated within hybrid renewable energy systems (HRES); (iii) propose potential HRES configurations for tourism facilities/determine their optimal design/operation when serving the onsite energy demands of such facilities in Fayoum and elsewhere; and (iv) develop a small-scale hybrid wind + PV + storage prototypes for model validation and research purposes.

You should have a degree in Chemical/Mechanical/Electrical Engineering or a related field of study, and you are also expected to have a strong foundation in conventional and renewable energy technology and system modelling, and economic analysis.

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