



Fellow	Host Institution No.1: City, University of London	Country: United Kingdom
DC9	Supervisor: Prof. Abdulnaser Sayma Co-supervisor: Dr Tala El Samad	WP No: 3
Title: Fundamental studies to enhance off-design performance of megawatt scale sCO ₂ compressors		
Research Objectives: (1) To explore the optimisation of the overall compressor flow path including inlet, impeller, diffuser, volute, and secondary flow paths to maximise performance of the compressor. (2) To validate the different compressor flow path modules numerically and experimentally. (3) To investigate design modifications and operational strategies to enhance part-load control such as inlet guide vanes.		
Applicant - specifications: in addition to the general specifications (eligibility criteria) listed above, the applicant must feature the following requirements: <ul style="list-style-type: none"> • Earned degree: <ul style="list-style-type: none"> ○ MSc in Mechanical Engineering (or related area). Preference will be given to candidates with a major in energy or related areas • Background (mandatory): <ul style="list-style-type: none"> ○ Thermodynamics ○ Turbomachinery design and analysis ○ Optimisation techniques in engineering systems ○ Matlab/Python programming • Additional background that will be valued in the selection process: <ul style="list-style-type: none"> ○ Simulation of thermal systems ○ Turbomachinery and heat exchanger design and analysis ○ Matlab Simulink ○ Materials science and engineering • English language: <ul style="list-style-type: none"> ○ An IELTS qualification of minimum 6.5 		
Scheme: <ul style="list-style-type: none"> • M1-M36: the applicant is hired by City, University of London 		
Locations (place of work): <ul style="list-style-type: none"> • M1-M36: the applicant will be employed by City, University of London: Northampton Square, London EC1V 0HB Google Maps: link 		
Planned secondments: No planned secondments but will be revised according to career development plan.		

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How to apply: apply online via the City, University website:

<https://www.city.ac.uk/about/jobs/apply/details.html?jobId=2828&jobTitle=Marie%20Curie%20Doctoral%20Position%3A%20Control%20of%20sCO2%20Power%20cycles>

The Application Package is comprised of:

- CV
- Letter of motivation
- Copy of transcripts and of their degree, and a copy of a thesis or any other publication (if available)

Contract:

- Start date (estimate): September 2023
- Type: full-time exclusive
- Gross salary: £36,386
- An additional (family) allowance is available for candidates who have family obligations (applied from and until this condition applies)

Equal Opportunity Employers:

City, University of London is committed to promoting equality, diversity and inclusion in all its activities, processes, and culture, for our whole community, including staff, students, and visitors.

We welcome applications regardless of gender, sexual orientation, disability, marital status, race, nationality, ethnic origin, religion or social class. For more information on our approaches to encouraging an inclusive environment, please see our [Equality, Diversity and Inclusion Pages](#).

