

JOB DESCRIPTION

Vacancy Ref: A2793

Job Title: Senior Research Associate: Data Management and Visualisation	Grade: 7
Department/College:	Engineering / Energy Lancaster Research Centre / Data Science Institute
Directly responsible to:	Denes Csala
Supervisory responsibility for:	
Other contacts	
Internal:	
Dr Denes Csala (project supervisor), Energy Storage Group, Data Science Institute, Department of Chemistry, Department of Mathematics and Statistics, Energy Lancaster, Doctoral Training Centre STOR-I, Lancaster Institute of Contemporary Arts	
External:	
Faraday Institution, Multi Scale Modelling (MSM) Consortium, BMW, Jaguar Land Rover, AGM Batteries Ltd., Altelium Ltd., Technical University Munich, Warwick Manufacturing Group, Imperial College, University College London, University of Oxford, University of Bath, University of Southampton, University of Birmingham	
Major Duties:	
<ol style="list-style-type: none"> 1. To continue the development of the data exchange platform VISDAM (Visualisation and Data Management) that supports and promotes collaboration within the Multi Scale Modelling (MSM) consortium in the UK Faraday Institution: linking different modelling techniques, and bringing together modelling and experiment. This will start with selected “end-to-end” test cases and will be broadened over time. 2. To establish interactive interfaces for the interaction of external stakeholders with findings of the MSM consortium, and encourage its use. This will serve the wider research community and industry. 3. To gather, document and curate the various formats of data streams generated in computational and experimental lithium-ion battery research as conducted in the MSM consortium. 4. To develop visualisation tools for a better understanding of computational and experimental methods and the underlying assumptions. This will remove communication hurdles internally and externally. 5. To develop and implement data cleansing and normalization algorithms and set up a database, configure data streams. This will allow the system to grow over time whilst remaining manageable. 6. To help the Energy Storage Group at Energy Lancaster to develop hybrid, physics and data-driven models for battery lifetime estimation and effectively facilitate liaison between the experimental and data modelling teams. 7. To contribute to the day-to-day running of the Energy Storage group at Energy Lancaster, including the upkeep of data-related documentation and the organization of training for new staff and students. 8. To participate in regular project meetings with industrial and academic partners; preparation and presentation of talks, posters and reports to disseminate the results of these studies. 9. To participate in national and international conferences and workshops to present the results of the project to a wider audience and to learn about current advances in the field. 10. To prepare journal papers for publication of project findings. 11. Any other duties appropriate to the grade as delegated by Dr Denes Csala and Prof Harry Hoster. 	