



THE POST

College:	The College of Engineering, Mathematics and Physical Sciences
Post:	Integrated Systems Engineer (KTP Associate)
Reference No:	P63833
Grade:	E
HERA:	ARF/RFEL
Reporting To:	Dr Prathyush Menon

The above full time post is available on a fixed term basis from 15th October 2018 to 14th October 2020 in the College of Engineering, Mathematics and Physical Sciences. The KTP programme is a partnership between the University of Exeter and Supacat (part of SC Group Ltd). You will be employed by the University of Exeter, but will spend the majority of your time working on this project at the company premises in Dunkeswell, near Honiton.

SC Group Ltd is an innovative engineering and design company providing global, defence-focussed products and services with offices in the UK and Australia.

KTP (Knowledge Transfer Partnership)

KTP offers high-calibre graduates the opportunity to accelerate their career by gaining experience at senior level in the organisation and receive a tailored development programme, with a personal development budget. Further information on Knowledge Transfer Partnerships can be found on <http://ktp.innovateuk.org/>.

Job Description

Main purpose of the job:

The successful postholder will be responsible, in conjunction with their Industry and Academic Supervisors, for managing and driving forward this research programme to develop expertise required for the development of an optionally-manned, high-mobility all-terrain vehicle with the intention of fulfilling autonomous roles. The intention is that this platform will operate in harsh off-road environments commensurate with SC Group's existing products and with the intention of fulfilling roles within future defence and civilian applications.

Main duties and accountabilities:

1. To undertake a range of tasks and activities through a supported environment including:
 - Selection and integration of sensors and systems for collection, processing and management of data to facilitate autonomous functions
 - Development of control systems for the vehicle
 - Development of a virtual terrain model

- Physical Demonstrator planning and construction, development, design and construction
 - Demonstrator commissioning and trials
 - Acting as project manager on the KTP programme;
 - Developing research objectives, projects and proposals;
 - Conducting individual or collaborative research projects;
 - Writing up research work for publications;
 - Making presentations at conferences or exhibiting work in other appropriate events;
 - Assessing, interpreting and evaluating outcomes of the KTP programme
 - Developing new concepts and ideas to extend intellectual understanding;
 - Resolving problems of meeting research objectives and deadlines;
 - Developing ideas for generating income and promoting research area;
 - Developing ideas for application of research outcomes.
2. To contribute to teaching and learning programmes in the School and to supervise postgraduate research students.
 3. To act as research team leader including:
 - Mentoring colleagues with less experience and advising on their professional development;
 - Coaching and supporting colleagues in developing their research techniques;
 - Supervising the work of others, for example in research teams or projects;
 - Developing productive working relationships with other members of staff;
 - Co-ordinating the work of colleagues to ensure equitable access to resources and facilities;
 - Dealing with standard problems and help colleagues to resolve their concerns about progress in research.
 4. To routinely communicate complex and conceptual ideas to those with limited knowledge as well as to peers using high level skills and a range of media and to present the results of scientific research to sponsors and at conferences.
 5. To plan, co-ordinate and implement the KTP programme, including:
 - Managing the use of research resources and ensure that effective use is made of them;
 - Managing research budgets;
 - Helping to plan and implement commercial and consultancy activities.

Person Specification

Competency	Essential	Desirable
Attainments/Qualifications	BEng in Electrical, Electronics, Control Engineering, Mechatronics or equivalent qualification/experience in a related field of study.	MEng or Masters in Electrical, Electronics, or Control Engineering, Mechatronics or equivalent qualification/experience in a related field of study.
Skills and Understanding	Possess sufficient specialist knowledge in the discipline to develop/follow research programmes and methodologies.	Interest in vehicles and an understanding of automotive systems Knowledge of autonomous systems

	<p>Ability to apply engineering in a practical context.</p> <p>Good command of software development, testing and practical application in varying environments.</p> <p>Ability to integrate software and hardware using different software architectures.</p> <p>Knowledge of microcontrollers.</p>	<p>An understanding and familiarity with off-road environments and equipment requirements.</p> <p>An understanding and familiarity with different robotic systems.</p>
Prior Experience	<p>Relevant work experience, specifically experience in a workshop environment</p> <p>Expertise and a strong interest in 'plug and play' – i.e. the integration of different systems and knowledge of the underlying communication aspects.</p>	<p>Experience of using Raspberry Pi, Arduino etc.</p>
Behavioural Characteristics	<p>Interest in programming and control algorithms.</p> <p>Excellent written and verbal communication skills.</p> <p>Able to communicate complex and conceptual ideas to a range of groups.</p> <p>Evidence of the ability to collaborate actively with multiple stakeholders to complete research projects and advance thinking.</p> <p>Able to participate in and develop external networks.</p> <p>Able to balance the pressures of research, administrative demands and competing deadlines.</p>	

Circumstances or Additional Competencies/Experience		Driving Licence

Informal Enquiries

Before submitting an application you may wish to discuss the post further by contacting Dr Prathyush Menon, telephone 01392 726498 or email P.M.Prathyush@exeter.ac.uk

Terms & Conditions

Our Terms and Conditions of Employment can be viewed [here](#).

Further Information

Please see our [website](#) for further information on working at the University of Exeter.