

School of Architecture, Building and Civil Engineering

Technical Surfaces

Job Ref: REQ231496

Job Title: Sports pitch performance engineer (KTP Associate)

Period: 30 months

Salary: up to £35,000 per annum (Confirmation on offer of appointment), plus £5,000 training budget for the term of the project.

Application deadline: Sunday 03 March 2024

Key words: surface monitoring, maintenance and Performance, next generation, 4G pitches, Artificial Turf Pitches, warranty framework, grass roots, high performance AGP, experimental design, data collection and analysis, statistics and advanced software/ programming

Project Title: Maintenance and Performance of the Next Generation of Artificial Turf Pitches.

About the project

The classification of recycled end of life tyre rubber infill materials as 'intentionally added microplastics' has led to a ban and accelerated the step change to more sustainable pitch infills and associated changes in the synthetic carpet and shockpad designs into the global market. This KTP will develop new bespoke monitoring, maintenance and certification criteria for this next generation of sports pitches constructed with the emerging wide range of sustainable infill materials (e.g. cork, wood chip, etc.). The key activities include laboratory and field testing, data collection and analysis and working with multiple parties within the research team and externally. The new national Football Foundation research site, at their hub in Sheffield, will form a key part of the field monitoring. The technology developed will be operationalised through maintenance protocols and built into company warranty frameworks with Technical Surfaces' installation partners.

About Technical Surfaces

Technical Surfaces is the largest specialist artificial turf sports surface maintenance company in the UK. Established in 1998, the company was at the forefront of promoting the need for artificial turf sports surface maintenance. Technical Surfaces provides specialist sports pitch surface monitoring, maintenance and renovation services for sports facility owners throughout the UK. Technical Surfaces has a long-established track record of innovating within the industry, working closely with industry manufacturers and construction companies, sport's governing bodies and collaborating on research projects with Loughborough University and have recently been awarded the contract for specialist maintenance trials at the new Football Foundation trial site in Sheffield. A previous KTP with Loughborough University established new practices within the company, and a unique pitch degradation model, to support decision making for maintenance interventions and demonstrate their effectiveness – enhancing their market leading position.

About Loughborough University

Loughborough University is ranked in the top ten in the most recent Complete University Guide Guardian League Table and the Times Good University Guide. Its position as a research-leading university is confirmed through its recognition as one of the UK's Top-10 research-led universities in the most recent research excellence framework (REF 2014). It has been awarded a record of seven Queen's Anniversary prizes for its research impact to society and UK industry.

With an international reputation for research excellence and track record in high quality training, the School of Architecture, Building and Civil Engineering at Loughborough University, is one of the largest centres for built environment education in the UK. The School of Architecture, Building and Civil Engineering was ranked second in the UK (May 2022) in the most recent Research Excellence Framework exercise. The school brings together outstanding laboratory facilities and commercial industry connections across a wide range of sectors. The multi-disciplinary Sport Surfaces Research Group team includes staff and further extensive laboratory resources of the internationally acclaimed Sports Technology Institute. The Sports Technology Institute has established relationships with the University's sports scientists, psychologists, biomechanists and human biologists, bringing together around 50 academics, research associates, technicians and PhD students, carrying out wide-ranging research, including athletic footwear, technical apparel, protective equipment, balls, bats, clubs, rackets and sports surfaces. Our track record of design-led innovation and accelerating novel concepts from initial stages through to commercialisation is unparalleled. The STI also leads undergraduate and postgraduate programmes in Sports Technology and Sports Engineering.

About the KTP Associate

The successful candidate will be a highly motivated, proactive and perceptive individual and will ideally be qualified to Master's level in Technology, Engineering or Materials Science with a minimum 2.1 first degree in Engineering, Materials Science or related discipline. Work experience in a relevant industry/environment will be considered as very advantageous and may supersede the requirement for a second degree.

The successful candidate will ideally have experience of experimental design, data collection and analysis, statistics and advanced software/programming. They will also ideally possess existing knowledge of artificial surfaces, sports service industries, and/or experience in a split office/ field environment. The ability to collaborate with a diverse team, and to proactively take the initiative is essential.

A self-motivated, analytical thinker, the Associate will communicate effectively with a range of academic and business personnel. They will have excellent attention to detail, strong written communication and presentation skills, and excellent time management.

The Associate will work primarily within the company's technical team, and collaborate closely with the commercial support teams, with the overall aim to embed the expertise arising from the project outputs, such as new methods of infill characterisation and models to predict behaviour and effective maintenance management strategies to maximise in-service life and performance.

The KTP Associate will be based primarily at the Technical Surfaces office in East Leicester with good travel links and will also spend time at Loughborough University with the academic team. They will be managed and supervised by Professor Paul Fleming, Professor of Sports Surface, and Ground Engineering Professor Steph Forrester, Professor of Sports Engineering and Biomechanics. The Associate will form an integral part of the Technical Surfaces team, working closely with the company supervisory team and the academic supervisors from Loughborough University.

As a KTP Associate, the successful applicant will have access to a wide range of commercial, R&D and management training programmes, as well as support and access to resources and facilities at Loughborough.

We strive to create a culture that supports equality and celebrates diversity throughout our organisations.

Applications

Applications must be made through the Loughborough University recruitment site. The application process will include:

- A motivational letter stating the applicant's interest in working with Technical Surfaces and in particular to include relevant training and experience of projects of interest within the given scope of the project, and the key relevant competencies.
- A full up- to- date CV.
- Applicants should be ready to provide academic and work related and/or character references upon request.

Job Description and Person Specification

Job Grade: Other

Job Purpose

The KTP Associate will be responsible for:

- Developing bespoke monitoring, maintenance and certification criteria, for next generation of artificial turf pitches constructed with sustainable infill materials.
- Working with stakeholders, including senior leaders, commercial, sales and marketing functions, academic experts and multi-disciplinary scientists, developing networks across the business to understand project requirements and deliverables.
- Planning and implementing data collection and analysis of laboratory samples and field installations.
- Writing technical notes and contributing to study reports and papers.

- Presenting data and the results in a clear and comprehensible fashion.
- Supporting dissemination of the project outcomes across academia and industry.

Job Duties

- Carry out the KTP project tasks and deliver the outcomes as outlined in the project workplan.
- Data collection from field installations in various geographical locations, including the need for irregular hours and overnight stays.
- Manage the project day to day and disseminate the findings to the project team.
- Produce and deliver reports to the senior management team and employees at different organisational levels, using business performance metrics as appropriate.
- Write R&D reports, and present these at the Local Management Committee (LMC) meetings, as well as at national conferences with other members of the project team.
- Undertake KTP management training, as well as other training courses as deemed necessary.
- Prepare research papers for publication in highly acclaimed learned journals, in line with the expected scholarly activities of the University Research Staff, but in accordance with the commercial sensitivity of collaborating companies.
- Travel to company clientele and to various other locations within the UK.
- To undertake such other duties as may be reasonably requested and that are commensurate with the nature of the post.
- Communicate effectively and regularly with the project management team, in regard to progress and plans.
- The Associate will organise monthly meetings, setting agendas, chairing, minuting and circulating actions. Benefits accrued and risks will be updated monthly.
- Describe technical concepts to domain experts and lay audiences.

The associate will have the opportunity to gain membership to relevant professional bodies such as the International Sports Engineering Association (ISEA) and attend relevant academic conferences in the UK and overseas.

Technical Surfaces staff regularly attend the UK trade association (SAPCA) events and training courses and the opportunity to gain an NVQ qualification(s).

The University also offer a wide variety of staff development training including leadership and management courses, IT skills courses and presentation and communication courses. The associate will have full access to these as appropriate.

Points to Note

The purpose of this job description is to indicate the general level of duties and responsibility of the post. The detailed duties may vary from time to time without changing the general character or level of responsibility entailed.

Applicants will have completed their last qualification (degree or masters) no more than five years before the closing date.

Previous KTP Associates or employees of Technical Surfaces are not eligible to apply for this KTP.

Special Conditions

All staff have a statutory responsibility to take reasonable care of themselves, others and the environment and to prevent harm by their acts or omissions. All staff are therefore required to adhere to the University's Health, Safety and Environmental Policy & Procedures.

All staff should hold a duty and commitment to observing the University's Equality & Diversity policy and procedures at all times. Duties must be carried out in accordance with relevant Equality & Diversity legislation and University policies/procedures.

Successful completion of probation will be dependent on attendance at the University's mandatory courses which include Respecting Diversity and, where appropriate, Recruitment and Selection.

We actively encourage applicants from women, disabled and Black, Asian and Minority Ethnic candidates, who can bring their experiences and voices to the partnership.

Organisational Responsibility

Reports to the Technical Surfaces company Supervisor, Emma Coulson, and the Lead Academic, Professor Paul Fleming.

Person Specification

Your application will be reviewed against the essential and desirable criteria listed below. Applicants are strongly advised to explicitly state and evidence how they meet each of the essential (and desirable) criteria in their application. Stages of assessment are as follows:

- 1 – Application
- 2 – Presentation
- 3 – Interview

Essential Criteria

Area	Criteria	Stage
Experience	Knowledge of artificial turf sport surfaces, the sports service industry or similar areas.	1,2,3
	Experience of experimental design including data collection and analysis.	1,2,3
	Project management with demonstrable excellence in planning and organisation.	1,2,3
	The Associate will have experience of using data collection, data processing and statistical analysis software.	1,2,3
Skills and abilities	Excellent numeracy and problem-solving skills.	1,3
	Proficient use of MS Word, Excel and PowerPoint.	1,2
	Collaborate (or lead) within a diverse team, and to proactively take the initiative.	1,3
	Able to think independently, challenge ideas and develop innovative solutions.	1,3
	Demonstrate accuracy, attention to detail and high levels of presentation quality.	1,2
	Strong interpersonal, written and oral communication skills with a high standard of spoken and written English.	1,2,3
	Motivated to undertake KTP training modules and bespoke training as appropriate for personal and professional development.	3
Qualifications	A minimum 2.1 degree in Engineering, Materials Science or related discipline (complemented with work experience).	1
	A UK driving licence or ability to drive in the UK.	1
Other	To always observe the University Equal Opportunities policies.	3

Desirable Criteria

Area	Criteria	Stage
Knowledge and Expertise	A passion for learning and solving real-world challenges in engineering/science	1,3
Experience	The Associate will have experience of using programming software, e.g. Matlab, Python or similar.	1,3
	The Associate will have experience of independent experimental laboratory work and/or field work.	1,3
	Relevant work experience.	1, 3
Skills and abilities	Proficient in the use of standard database software packages.	1,3
	A track-record of engaging diverse stakeholders in a changing programme.	1,3
	Ability to visually communicate ideas and study outcomes will be an asset.	1,2,3
Qualifications	MSC in technology, engineering, material science.	1

Conditions of Service

The position is FULL TIME and FIXED TERM for 30 months. Salary will be up to **£35,500** per annum at a starting salary, dependent on qualifications and experience, to be confirmed on offer of appointment. The successful applicant will also receive a £2,000 per annum training budget.

The appointment will be subject to the University's normal Terms and Conditions of Employment for Academic and Related staff/Operational and Administrative staff, details of which can be found [here](#).

We strive to create a culture that supports equality and celebrates diversity throughout the campus. The University holds a Bronze Athena SWAN award which recognises the importance of support for women at all stages of their academic career. For further information on Athena SWAN see <http://www.lboro.ac.uk/services/hr/athena-swan/>.