Control System Architect (10089)

At SKAO, we’re coordinating a global effort to deliver the largest science facility on the planet. The SKA will be a next-generation radio telescope that will help to answer key questions in astrophysics, drive technological innovation and support human capital development.

More than a dozen partner countries and over a thousand scientists and engineers around the world are already on board, making the SKA an international collaboration like no other, and one of the most ambitious science and engineering endeavours of the 21st century.

Headquartered in the UK, with telescope sites in Australia and South Africa, it will be one observatory, operating two telescopes, an endeavour spanning three continents. Multinational by design, SKAO will soon join only a handful of other science infrastructures in becoming an intergovernmental organisation.

Our Global HQ is located near the buzzing city of Manchester at the historic Jodrell Bank Observatory, a UNESCO World Heritage site located in the Cheshire countryside. It is home to a rapidly expanding international team of more than a hundred, working in a highly collaborative and inclusive way, in coordination with SKA teams in Australia & South Africa and as part of a global astronomy and engineering community.

Being part of Team SKA means contributing to something extraordinary: a uniquely exciting project to advance human knowledge that will last decades. In return, we offer a diverse multicultural working environment, 30 days annual leave plus public holidays, a generous pension scheme, regular social events, a family-friendly environment and much more. Come and join us

Control System Architect

An ideal role for a talented software architect with significant experience in the design and architecture of control systems in astronomy or other domains, based on TANGO or similar frameworks.

Job Location

UK (Head Office)

Area / Department

Software Data Management and IT

Contract Type

Permanent

Salary

Competitive salary with generous benefits

Closing Date

14/06/2020

Ref No

10089

The Role

The SKA Computing and Software team are looking for a talented Software Architect to work under the lead Software Architect and alongside other architects and system engineers to ensure the Control Systems for the two SKA telescopes are fit for purpose, providing the architectural quality needed for a system that will have to last, and be continually developed, for decades. The system will use the Tango Control System Framework (<https://www.tango-controls.org/>) and be based on designs submitted by worldwide-based design consortia which have recently completed a critical design review.

Key Responsibilities, Accountabilities and Duties

The main functions of this role will be to:

* Work within the SKA Architecture team using processes based on the Scaled Agile Framework (SAFe®) to advise and lead software development teams based around the world.
* Develop the Controls system architecture and standards so that they are consistent across the SKA.
* Oversee the implementation of the architecture throughout the software development lifecycle, as part of the continuous delivery pipeline.
* Be recognised as the design authority for all aspects of the SKA control system.

Mandatory Knowledge, Skills and Experience

The successful applicant for this role shall:

* Have significant experience in the design and architecture of large management and hardware control systems.
* Be technical expert in at least one of:
  + Astronomical Control Systems,
  + The Tango Control system, or
  + A comparable system that can be demonstrated to have similar characteristics.
* Be experienced in developing C++ and Python software in a GNU/Linux environment.
* Have hands-on experience with the formalisms and requirements of software architecture standards (e.g. UML, ISO/IEC 42010, SEI Views and Beyond).
* Be able to demonstrate understanding and enthusiasm for working based on lean/agile principles.
* Have excellent communication and influencing skills with distributed, highly specialised project teams and stakeholders, across international boundaries and time zones, involving a wide range of cultures and backgrounds.
* Be a flexible team player who is adaptable to change.
* Have the ability to travel to SKA partner sites world-wide as necessary and when possible in the context of any international travel restrictions (travel for this sort of role has typically been for up to one week 4-6 times per year).

Desirable Knowledge, Skills and Experience

The ideal candidate would also:

* Have experience in managing a small team of technical staff.
* Demonstrable interest in astronomy, with an understanding of the challenges of controlling telescopes like the SKA.
* Have experience in virtualization or containerisation technology in the realm of control systems.

Equal Opportunities Statement

Equality, Diversity and Inclusion are at the core the SKA's agenda and we are committed to being an equal opportunities employer. Our aim to is recruit and retain the most talented individuals, regardless of gender, race, disability, age, sexual orientation, marital status, religion or nationality.    
   
Women have traditionally been under-represented in the fields of science and engineering; SKA Organisation welcomes and encourages female applicants.    
   
Where applicants with a disability need facilities or adjustments to enable them to participate in the recruitment process, these will be provided.