

Project Manager - Infrastructure

Contracts

Job Location

Cape Town, South Africa

Area / Department

Project Management

Contract Type

Fixed Term Contract

Salary

ZAR 1,000,000 to 1,200,000 depending on experience, plus excellent benefits

Closing Date

08/04/2024

Ref No

10293

At the SKAO we are coordinating a global effort to deliver one of the largest science facilities on the planet. The SKAO telescopes will be next-generation instruments 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 project 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, the SKAO will be one observatory operating two telescopes, an endeavour spanning three continents. Multinational by design, in early 2021 the SKAO became an intergovernmental organisation, one of only a select handful of science infrastructures to do so worldwide.

Construction activities for the SKAO's telescopes in Australia and South Africa started in 2021, along with a ramping up of SKAO staff in both countries. It is expected that the transition from the Construction Phase to the Operations Phase will happen around 2028.

SKAO Operations in South Africa will be conducted in partnership with the South African Radio Astronomy Observatory (SARAO). SKAO Operations in Australia will be conducted in partnership with the Commonwealth Scientific and Industrial Research Organisation

(CSIRO). The Observatory will also partner closely with a global network of SKA Regional Centres through which astronomers will access science data products and a suite of tools and resources to further analyse the SKA telescopes' data.

For more information on the SKA project visit <https://www.skao.int/>

The SKA Observatory offers a competitive salary and a generous pension and benefits package. As an employee of an intergovernmental organisation, an appointee who is not a national of the country in which the role is based may be subject to personal Privileges and Immunities.

An exciting opportunity for a Contracts Project Manager with experience in infrastructure delivery to join an international, multicultural organisation and support the development of the largest radio telescope on the planet.

The Role

The SKAO Project Management Group holds the project management and control expertise within the Observatory. During construction, the Project Managers procure and deliver their assigned parts of the SKA-Mid Telescope facilities by managing a portfolio of contracts and work packages. The Project Managers form the primary managerial link between SKAO as the client and the selected contractors, and are responsible for delivery of their scope within the agreed budget and schedule, managing change, risks and issues, and performing regular reporting and variance analysis.

The Project Manager – Infrastructure Contracts will manage and support the procurement and delivery of the following contracts for the SKA-Mid Telescope:

- Carnarvon to Beaufort West fibre link;
- Power Facility upgrade and associated works;
- BMS upgrade;
- Supporting the remote power stations and centralised solar power station roll-out and associated infrastructure interfaces;
- General Contract Management support on all Infrastructure contracts.

The Project Manager – Infrastructure Contracts will lead and co-ordinate efforts across the matrix organisation to advise and support the contractors engaged in the delivery of their assigned contracts whilst ensuring that the deliverables from these contracts and the work of the internal team are integrated into the project level tools and systems. They will work closely with other project managers, the project control team, engineers, procurement specialists, assurance and operations staff.

This role is known internally as Contracts Project Manager – SKA-Mid Infrastructure and will be reporting to the SKA-Mid Senior Project Manager.

This role will be a 3-year fixed term appointment and will be based in Cape Town, South Africa, with occasional travel required to suppliers and SKAO sites.

SKAO is committed to providing an inclusive and flexible working environment, meeting the requests of our Colleagues whilst also fulfilling the needs and objectives of the Observatory.

We encourage applications from under-represented groups such as women and individuals with disabilities, as well as open conversations during the recruitment process in relation to any specific requirements.

There may be occasions where this role requires the post holder to work across different time zones and, in line with SKAO policy, flexible working hours will be supported in agreement with the line manager.

Key Responsibilities, Accountabilities and Duties

- Manage the delivery of assigned infrastructure contracts for the SKA-Mid Telescope, complying with relevant legislation, policies and frameworks.
- Lead and manage a medium sized team within the matrix and the agile framework, with a number of activities overseen and integrated. Coach more junior colleagues, set objectives and review performance to ensure staff have the necessary skills and understanding to deliver their requirements.
- Provide specialist advice to senior management or senior programme/project leaders to support change through understanding and insight in order to have an impact on overall programme/project performance.
- Translate business objectives into clearly defined project plans in order to support realisation of benefits and delivery of capabilities.
- Assess safety, environmental, reputational and financial risks associated with programmes / projects / portfolios, recommend corrective actions and report to senior management in order to ensure risks are understood and appropriate action is taken.
- Manage whole contracts through to successful completion, forming a link between SKAO and the contractors. This may include active steps to looking ahead to proactively manage progress against schedule, budget and earned value, where applicable, influencing others approach to deliver better outcomes.
- Conduct rigorous tender, evaluation and selection processes, complying with organisational policies to select suppliers which best meet the resource requirements of the project and organisation.

- Take prompt action to resolve any problems in accordance with the terms of the contract, including negotiating and managing contract variances or in relation to schedule and budget.
- Manage an effective governance and control environment to ensure the direction of travel in the contract portfolio is aligned to the business case and corrective actions are implemented as appropriate.
- Manage project quality reviews in order to identify, assess and take action to mitigate risks to project success.
- Review and interpret programme and project management related functional policies or processes, develop and recommend changes and provide advice to colleagues to ensure their effective implementation.
- Build relationships with internal and external stakeholders to gain buy in and to deliver assigned part of programmes/projects and support effective collaboration.

Mandatory Knowledge, Skills and Experience

- University degree in project management or the built environment, or equivalent experience, supported by a relevant professional project or programme management qualification, with deep understanding of the theoretical principles which apply to project and programme management.
- Experience of commissioning and managing products/services within a complex project to deliver measurable and visible outcomes for the client.
- Experience in contract management and associated procedures and processes, with the ability to agree and shape standards to a particular project environment.
- Knowledge of the technical specialisms being managed (civils, fibre networks, electrical installations).
- Ability to develop and review the implementation of large/complex project plans taking account of business and customer requirements and reconciling competing demands.
- Ability to monitor, plan and manage an agreed budget within a defined area, producing reports and analysis.
- Ability to provide team leadership for a multicultural, geographically dispersed team.
- Ability to organise own work and plan ahead for others, taking account of priorities and impact on other people.
- Good communication skills with the ability to influence behaviours of internal and external stakeholders at all seniority levels.
- Flexible team player who is adaptable to change.

Desirable Knowledge, Skills and Experience

- Knowledge or experience of NEC type of contracts.
- Experience in large-scale infrastructure projects.
- Experience in managing delivery in multi-disciplinary, multi-national projects.

- Experience in using CEMAR and/or other contract management tools as well as configuration management.
- Industry experience and/or a track record in successful collaboration with industry.

Equality Diversity and Inclusion Statement

SKA Observatory recognises that our diversity is a strength. We aim to create a welcoming and inclusive environment where everyone feels they belong, and diverse perspectives and ideas thrive. As such, Equality, Diversity, and Inclusion are at the core of SKA Observatory's agenda.

Our aim is to recruit and retain the most talented individuals, regardless of gender, race, disability, age, sexual orientation, marital status, religion, nationality or background.

Women have traditionally been under-represented in the fields of science and engineering; SKA Observatory 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.

SKA Observatory welcome all candidates, especially those from member countries.

The "How to Apply" information contained within the SKA Observatory recruitment portal provides more detail regarding our application and selection approach.

Data Processing Software Engineer

Job Location

Cheshire, UK (Head Office)

Area / Department

Software Data Management and IT

Contract Type

Permanent

Salary

Circa GBP 60,000 depending on experience, with excellent benefits

Closing Date

19/04/2024

Ref No

10247

At the SKAO we are coordinating a global effort to deliver one of the largest science facilities on the planet. The SKAO telescopes will be next-generation instruments 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 project 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, the SKAO will be one observatory operating two telescopes, an endeavour spanning three continents. Multinational by design, in early 2021 the SKAO became an intergovernmental organisation, one of only a select handful of science infrastructures to do so worldwide.

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 SKAO teams in Australia and South Africa 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 for decades. In return, we offer a diverse multicultural working environment, 30 days annual leave plus public holidays, a generous pension scheme, visa and support with relocation (if applicable), regular social events, a family-friendly environment and much more. Come and join us!

An amazing opportunity for a Software Engineer with experience in scientific data processing and a passion for high performance computing to join an international, multicultural organisation.

The Role

The Data Processing Software Engineer will help lay the groundwork for the next generation of radio astronomy processing. Their focus will be to build high-throughput distributed data processing pipelines, while maintaining modifiability through clean separation of processing functions and distribution strategy.

The Data Processing Software Engineer will also work, among others, to design, prototype, implement and integrate systems that bring state-of-the-art algorithms to real-world scientific processing pipelines. Our ambition is to look past the current SKA project phase and raise the bar of radio astronomy processing software to the benefit of future SKA extensions, SKA regional centres, precursor telescopes, as well as the entire radio

astronomy community. The Data Processing Software Engineer should be keen on approaching these challenges using rigorous software engineering practices, ensuring that we are prepared for the many known and unknown challenges facing this next-generation Observatory.

The Data Processing Software Engineer will coordinate their work with the Data Processing Architect and also work with the agile software engineering teams, to build highly scalable processing software, and with other developers at SKA development sites around the world (especially SKAO and SKA precursors).

At SKAO we support staff in their continuous professional development and this role presents the opportunity for training in the scientific and technical aspects of the role and to work closely with more experienced software engineers, as well as the opportunity to occasionally attend relevant international conferences and industry events.

This role will be based at the SKAO Global Headquarters at the iconic Jodrell Bank Observatory, Cheshire, UK, and will report to the SKA Lead Software Architect. Occasional international travel may be required to collaborate with teams in member countries.

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Key Responsibilities, Accountabilities and Duties

- Work with SKA software teams to build and maintain libraries of base algorithms for radio astronomy.
- Build complex distributed pipelines with well-understood scientific and computational performance characteristics.
- Work as part of an agile software development team as agreed with the Data Processing Architect.
- Collaborate with other software development teams based in SKAO member countries.
- Occasionally travel internationally as required (typically for up to one week, 2-3 times per year).

- Undertake any other reasonable duties as directed by the line manager or senior management.

Mandatory Knowledge, Skills and Experience

- Experience with distributed data-intensive processing and algorithm development in a High-Performance Computing (HPC) like environment, ideally both from a design and application development perspective.
- Experience with benchmarking, profiling and optimisation techniques, especially how to build high performance pipelines overlapping I/O and processing.
- Ability to work constructively with agile teams around the world towards a shared vision for SKA processing.
- Collaborative approach and ability to work effectively to meet competing deadlines.
- Be a flexible team player who is adaptable to change.

Desirable Knowledge, Skills and Experience

- Understanding of signal processing algorithms, such as Fourier transformations, gridding and (de)convolution methods.
- Knowledge of radio astronomy data processing pipelines and their scaling properties would be advantageous.
- Experience developing computational functions and kernels on different architectures, and interfacing them with Python code).
- Experience working in a multicultural environment across international boundaries and time zones.

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