

# 平方公里阵列射电望远镜招聘职位详情

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## 1、Radio Telescope Specialist Engineer

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**Salary** Competitive Salary and generous pension

**Location** SKA HQ, Jodrell Bank, Cheshire

**Reports To:** SKA Project Engineer

### Organisation Background

The Square Kilometre Array (SKA) is a global project to build a multi-purpose radio telescope that will play a major role in answering key questions in modern astrophysics and cosmology.

Twelve governments are now participating in the project, with others engaged in discussions regarding possible membership. Facilities for the new telescope will be located in South Africa and Australia, with our headquarters in a purpose-built building at Jodrell Bank, Cheshire, UK. SKA HQ currently houses around 80 staff but has just undergone a major expansion to accommodate up to 150 staff as the project moves towards construction and operation of the SKA telescopes.

Negotiations between the governments of SKA member countries to establish the SKA Observatory as an Inter-Governmental Organisation (IGO) have recently concluded with the IGO due to be established in 2020.

The Office of the SKA Organisation ("SKA Office") leads the SKA system design and oversees the detailed design being undertaken within the globally distributed SKA work packages (WPs). To accomplish this goal the SKA Office employs highly qualified scientists and engineers, project managers and system engineers. Work packages for the major SKA subsystems (elements) are contracted to a small number of work package consortia who are responsible for the management, execution and delivery of the work packages. The technical strategy and philosophy of the project are strongly based on system engineering principles.

### The Role

The Telescope Specialist Engineer (known internally as a Domain Specialist – Mid Telescope) will be a member of the MID Telescope Delivery Team (TDT), a

multidisciplinary team responsible for the “delivery” of the MID telescope. Within the MID TDT the Telescope Specialist Engineer provides engineering support and leadership, both in their specific discipline and across the entire MID telescope. Working in collaboration with the SKA System Scientist, they are responsible for the performance of the MID telescope. The Radio Telescope Specialist Engineer (with the internal title Domain Specialist – Mid Telescope) reports to the SKA Project Engineer.

## **Key Responsibilities, Accountabilities and Duties**

- Provide technical leadership in the area of domain expertise for the SKA MID telescope, as a member of the MID Telescope Delivery Team (TDT)- providing guidance, advice and technical leadership both at a system level and in their area of expertise
- Support the SKA Project Engineer and SKA System Scientist in leading engineering analysis, technical notes, and engineering reports as required
- Advise the TDT Project Manager on technical risks and performance compliance
- Identify and manage any technical issues through engineering analysis
- Lead team projects, and provide specialist assistance (SME) to working groups, colleagues and engineering project managers
- Support and advise on system design and verification work for the MID telescope
- Participate in and lead project design reviews as requested
- Undertake any other reasonable duties as directed by the SKA Project Engineer or a member of SKA Organization Senior Management

## **Mandatory Knowledge, Skills and Experience**

- University degree in Physics or Engineering, another closely related and relevant field, or equivalent expertise
- Strong demonstrable and lengthy experience (normally 5+ years) having provided technical leadership in the engineering of large high value research and development projects; radio astronomy, astronomy, telecommunications or defence – or a broad technical knowledge of the engineering of high technology systems, such as large observatories, space systems, telecommunications networks, nuclear power plants, etc.
- Proven experience in one or more of the following fields as specialist engineer:
  - Radio Frequency (in the MID operational Frequency Band)
  - Antenna and Feed design, including experience in cryogenic systems
  - Beam Forming and Phased array, including experience of calibration techniques
  - Mechatronic and mechanical design of telescope/antenna infrastructures
  - Verification of complex systems

- SW development and integration for scientific projects
- Familiarity with telescopes based on radio interferometry, including experience with debugging interferometers at an early stage of development
- Experience in working with international projects and scientists from a variety of cultures, including projects with 'in-kind' contribution
- Good English oral and written communication skills
- The ability to influence people in widely differing parts of a complex organisation
- Willing to travel, nationally and internationally as required

## Desirable Knowledge, Skills and Experience

- Membership of, or eligibility for a recognised national or international system engineering institute
- Knowledge of, or a demonstrable interest in, the development, operation and ethos of large-scale international research infrastructures such as observatories
- Experience in design for volume production and/or in large-scale manufacturing and assembly

SKA Organisation offers a competitive salary and a generous company pension scheme. The successful applicant's workplace will be located at SKA Organisation's Global headquarters in Jodrell Bank Observatory.

Closing date for receipt of applications is **1st April 2019**.

## Equal Opportunities Statement:

*SKA Organisation is committed to being an equal opportunities employer. Our aim is to recruit and retain the most talented individuals, regardless of gender, race, disability, age, sexual orientation, religion or nationality.*

*At all stages of the recruitment process and beyond, we strive to treat applicants and employees with a high standard of care, honesty and politeness.*

*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. If you need equipment or*

*adjustments to enable you to complete your application and/or attend an interview, then please let us know.*

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## 2. Project Manager: SKA-Low Infrastructure & Field Node

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**Salary** Competitive Salary plus generous pension

**Location** SKA Australia & SKA HQ, Jodrell Bank, Cheshire, UK

**Expires** 8th April 2019

**Reports To:** Head of Project Management Group

### Organisation and Project Background

The Square Kilometre Array (SKA) is a global project to build a multi-purpose radio telescope that will play a major role in answering key questions in modern astrophysics and cosmology. Twelve governments are now participating in the project, with others engaged in discussions regarding possible membership. Facilities for the new telescope will be located in South Africa and Australia, with our headquarters in a purpose-built building at Jodrell Bank, Cheshire, UK. SKA HQ currently houses around 80 staff but has just undergone a major expansion to accommodate up to 150 staff as the project moves towards construction and operation of the SKA telescopes.

Negotiations between the governments of SKA member countries to establish the SKA Observatory as an Inter-Governmental Organisation (IGO) have recently concluded with the IGO due to be established in 2020.

SKA Organisation is currently co-ordinating the design activities in the 'Pre-Construction' phase of the project. The company leads the SKA system design and oversees the detailed design being undertaken by globally distributed design consortia. Critical Design Reviews of these design workpackages started in 2018 and are due to conclude in 2019. The project will then proceed via a System Critical Design Review to a Procurement Preparation phase and then the SKA1 Construction phase

### The Role

The SKA Organisation Project Managers report to the SKA Head of Project Management Group and are responsible for the overall management, control and successful delivery of the specific design workpackages under their stewardship in Pre-Construction. In the

Procurement Preparation phase they will then be responsible for managing the creation of procurement packs for the delivery of their assigned parts of the construction project, and will assist in the assessment of bids and contracts negotiations. In Construction they will then manage these contracts through to successful completion. The Project Managers will form the primary managerial link between the SKA Organisation and the contractors.

The Project Manager will be managing the preparation and delivery of the Infrastructure and Field Node contracts for the SKA1-LOW telescope. There are 512 Field Nodes in the Low telescope and each one contains many 2 metre antennas, a mesh ground plane and a fibre cable assembly.

Within the SKA Organisation, the successful applicant will work closely with other project managers, engineers, scientists and operations planners. He/she will work as part of a matrixed team and co-ordinate efforts to advise and support the contractors engaged in the delivery of the Low Infrastructure and Field Node contracts. He/she will ensure that the project management products for these contracts and the work of the internal team are integrated into the project level tools and systems.

## **Key Duties, Accountabilities and Responsibilities**

The post holder will:

- Contribute to the final stages of the Pre-Construction phase, ensuring the Low Infrastructure and Field Node workpackages are accurately represented in the Construction Plan and Proposal;
- Contribute to the Procurement Preparation activities for Low Infrastructure and Field Node;
- Manage costs, schedule, issues and risks;
- Monitor and report on progress;
- Manage the configuration and review of the workpackage and contract documentation;
- Manage communications with the contractors and other stakeholders;
- Manage Low Infrastructure and Field Node activities within the matrix organisation at SKA HQ;
- Deliver the Low Infrastructure and Field Node contracts and successfully handover to operations;
- Ensure project controls implemented for Low Infrastructure and Field Node such that these workpackages are delivered to the expected cost, time and quality and stakeholders are appropriately engaged;
- Travel, as required, to any of the SKA countries and elsewhere as required.

## Mandatory Qualifications, Experience and Knowledge:

- Recognised university degree-level education/training in engineering or physical sciences;
- Membership of recognised national or international project management and/or engineering institutes or equivalent experience;
- A proven track record of managing delivery in multi-disciplinary, multi-national projects;
- Knowledge of NEC contracting;
- Experience of working collaboratively with geographically dispersed teams;
- Experience of the delivery of engineering projects;
- Good English oral and written communication skills; and
- A flexible and self-motivated team player who is adaptable to change.

## Desirable Qualifications, Experience and Knowledge:

- Post-graduate qualification in management, engineering or physical sciences;
- Experience in large scale science infrastructure projects;
- Experience of projects using system engineering;
- Experience in using NEC contracting;
- Industry experience, and/or a track record in successful collaborative links with industry; and
- Familiarity with the formalism for, and requirements of, quality control environments such as ISO9001.

In addition, the role will be required to:

- Undertake training in the financial, occupational health and safety, and human resourcemanagement procedures applicable to the SKA or its partners.
- Undertake any other reasonable duties as directed by the post holder's line manager or amember of SKA Organisation Senior Leadership Team.

The SKA Organisation offers a competitive salary, a generous company pension scheme and a flexible benefits package. The successful applicant's workplace will be initially located at the SKA Organisation's headquarters at Jodrell Bank, UK and later on in Australia.

Closing date for receipt of applications is **8<sup>th</sup> April 2019**.

## Equal Opportunities Statement

SKA Organisation is committed to being an equal opportunities employer. Our aim is to recruit and retain the most talented individuals, regardless of gender, race, disability, age, sexual orientation, religion or nationality.

At all stages of the recruitment process and beyond, we strive to treat applicants and employees with a high standard of care, honesty and politeness.

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. If you need equipment or adjustments to enable you to complete your application and/or attend an interview, then please let us know.

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### 3. SKA Operations Scientist

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**Salary** Competitive Salary plus generous pension

**Location** SKA HQ, Jodrell Bank, Cheshire

**Reports To:** Head of Science Operations

### Organisation and Project Background

The Square Kilometre Array (SKA) is a global project to build a multi-purpose radio telescope that will play a major role in answering key questions in modern astrophysics and cosmology. Twelve governments are now participating in the project, with others engaged in discussions regarding possible membership. Facilities for the new telescope will be located in South Africa and Australia, with our headquarters in a purpose-built building at Jodrell Bank, Cheshire, UK. SKA HQ currently houses around 80 staff but has just undergone a major expansion to accommodate up to 150 staff as the project moves towards construction and operation of the SKA telescopes.

Negotiations between the governments of SKA member countries to establish the SKA Observatory as an Inter-Governmental Organisation (IGO) have recently concluded with the IGO due to be established in 2020.

## The Role

The first phase of the SKA is due to begin construction soon after the IGO is formed in 2020, and become fully operational in 2027. The operation of the SKA Observatory is currently being planned. Science Working Groups from across the SKA community are developing the future science programme for the Observatory in order to inform and constrain the detailed design.

We are seeking a motivated individual to join the Operations team to support Science Operations planning for the SKA Observatory. We require somebody with operational and scientific experience of the whole signal chain for a radio observatory, and in particular with that from receptor to correlator.

The individual will also be required to support and advise on the planning and execution of the scientific commissioning plan for the SKA Observatory, as well as support the use and operation of the SKA in the global VLBI network. Good organisational, communication and collaborative skills are expected to take on this role.

## Key Duties, Accountabilities and Responsibilities

Under the direction of the SKA Head of Science Operations, the post holder will undertake to support the future science operations of the SKA Observatory in the following areas:

- To support the development of commissioning and science verification plans to be carried out during SKA construction, as well as any associated test procedures;
- To develop and inform the operational model for operating the SKA through a series of use cases;
- To support the review of SKA System Level requirements to ensure their applicability to the future operation of the SKA1 telescopes;
- To act as the point-of-contact for the SKA with the global VLBI centres, and to work with the SKA VLBI Working Group, and others in the community, to develop the science case(s) for SKA VLBI and a calibration strategy in commissioning;
- To support the Scaled Agile Framework (SAFe) programme of work leading up to and into construction;
- To undertake a programme of personal research;
- To undertake other duties as directed by the Head of Science Operations.



## **Mandatory Qualifications, Experience and Knowledge:**

- Experience with the operation of radio observatories and the acquisition and reduction of astronomical data.
- Experience of the scientific commissioning of radio astronomy instrumentation (or similar), including calibration of data.
- Experience and knowledge of data analysis software and techniques in radio astronomy, including VLBI.
- Experience with the use of correlators for radio interferometers.
- University PhD degree in Physics or Engineering, another closely related and relevant field, or equivalent expertise.
- A flexible team player who is adaptable to change.

## **Desirable Qualifications, Experience and Knowledge:**

- Experience working in large collaborative projects.
- Experience of managing data subject to Radio Frequency Interference (RFI) and familiarity with observatory RFI policies.
- Experience, or knowledge of, hardware and software technologies in domains such as high-performance computing, big data analytics, or cloud computing.
- Effective oral and written communication skills in English, and the ability to influence people in widely differing parts of a complex organisation.
- Ability to work effectively with engineers and scientists from a variety of cultures.
- Willingness to travel, nationally and internationally, and work outside normal business hours, including evenings and weekends.

The SKA Organisation offers a competitive salary and a generous company pension scheme. The successful applicant's workplace will be located at the SKA Office's headquarters at Jodrell Bank.

Closing date for receipt of applications is **26 April, 2019**.

## **Equal Opportunities Statement**

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## 4、 Business Application Analyst (Unit 4 Business World)

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**Salary** £35k - £45K depending on experience plus generous pension

**Location** SKA HQ, Jodrell Bank, Cheshire

**Expires** 15th March 2019

**Reports To:** Head of Procurement (Interim line manager)

## Organisation Background

The Square Kilometre Array (SKA) is a global project to build a multi-purpose radio telescope that will play a major role in answering key questions in modern astrophysics and cosmology. Twelve governments are now participating in the project, with others engaged in discussions regarding possible membership. Facilities for the new telescope will be located in South Africa and Australia, with our headquarters in a purpose-built building at Jodrell Bank, Cheshire, UK. SKA HQ currently houses around 80 staff but has just undergone a major expansion to accommodate up to 150 staff as the project moves towards construction and operation of the SKA telescopes.

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## The Role

SKA Organisation is currently implementing Unit4 Business World (U4BW). We are deliberately starting small and plan to apply the principles of Lean Agile approach to

organically grow and develop our ERP system to meet future requirements that cannot yet be fully defined as we scale-up our business functionality in order to prepare ourselves for construction and operation of the world's largest radio telescope.

Reporting to the Head of Procurement (interim line manager), the Business Application Analyst (U4BW) will be involved in the ongoing delivery, enhancement and deployment of our ERP system. The post holder will need to take the lead on administration, monitoring and maintenance of all U4BW system infrastructure and applications. He/she will ensure integrity, safety and availability of all data and applications as part of SKA Organisation's information systems and that the processes needed for our business to function and succeed are running smoothly. The Business Application Analyst (U4BW) will be the 'first point of contact for staff seeking support with any aspect of the ERP system and so will need to develop a strong technical relationship with Unit4.

## **Key Duties, Accountabilities and Responsibilities**

The post holder will:

- Lead the development of a strategy that will ensure the U4BW system scales-up and develops to meet the changing needs of the business;
- Contribute to the finalisation of the implementation project;
- Analyse new user requirements;
- Collaborate with other staff members to formulate, design and develop solutions for both process and systems;
- Train and support the staff using the applications;
- Prepare test scripts and test applications and new functionality;
- Monitor and respond to requests for support;
- Investigate and diagnose system faults and errors;
- Resolve technical issues, collaborating with other experts as required, e.g. software suppliers;
- Communicate messages regarding systems issues to users;
- Make configuration changes to the system, new and amended workflows etc.;
- Prepare and maintain accurate technical documentation, training materials, user guides, change control and release records;
- Provide assistance and training for SKA staff as necessary;
- Analyse error trends to reduce/minimise down time;
- Identify and develop proposals for improvement;
- Plan and deliver system upgrade releases;
- Act as our point of contact with Unit4 on all technical issues;
- Travel as required; and

- Undertake any other reasonable duties, such as assisting with other business systems, as directed by the post holder's line manager.

## **Mandatory Qualifications, Experience and Knowledge:**

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required:

- University degree or equivalent in Business Information Systems, Information Technology or a related area;
- Experience, in a similar role within a complex small-medium sized business for the (Agresso) Unit4, Business World product suite;
- General knowledge of business processes and controls;
- Experience of developing applications in Unit4 Business World to meet business needs;
- Experience of identifying, documenting and implementing user requirements;
- Attention to detail, ability to prepare clear and accurate technical documentation;
- Ability to administer system configuration changes, workflow changes, etc.;
- Problem solver with ability to manage conflicting priorities and work to deadlines;
- Good English oral and written communication skills; and.
- A self-motivated team player who is adaptable to change

## **Desirable Qualifications, Experience and Knowledge:**

- Post-graduate qualification in management, engineering or physical sciences;
- Experience in large scale science infrastructure projects;
- Understanding and experience of the principles and practices behind lean agile organisation management; and
- Industry experience, and/or a track record in successful collaborative links with industry.

SKA Organisation offers a competitive salary and a generous company pension scheme. The successful applicant's workplace will be located at the SKA Headquarters at Jodrell Bank.

Closing date for receipt of applications is **15<sup>th</sup> March 2019**.

## Equal Opportunities Statement

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## 5. Radio Frequency (RF) Antenna Engineer

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**Salary** Competitive salary plus generous pension

**Location** SKA HQ, Jodrell Bank, Cheshire

**Expires** 27th March 2019

**Reports To:** Project Engineer

## Organisation Background

The Square Kilometre Array (SKA) is a global project to build a multi-purpose radio telescope that will play a major role in answering key questions in modern astrophysics and cosmology. Twelve governments are now participating in the project, with others engaged in discussions regarding possible membership. Facilities for the new telescope will be located in South Africa and Australia, with our headquarters in a purpose-built building at Jodrell Bank, Cheshire, UK. SKA HQ currently houses around 80 staff but has just undergone a major expansion to accommodate up to 150 staff as the project moves towards construction and operation of the SKA telescopes.

Negotiations between the governments of SKA member countries to establish the SKA Observatory as an Inter-Governmental Organisation (IGO) have recently concluded with the IGO due to be established in 2020.

The Office of the SKA Organisation (“SKA Office”) leads the SKA system design and oversees the detailed design being undertaken within the globally distributed SKA work packages (WPs). To accomplish this goal the SKA Office employs highly qualified scientists and engineers, project managers and system engineers. Work packages for the major SKA subsystems (elements) are contracted to a small number of work package consortia who are responsible for the management, execution and delivery of the work packages. The technical strategy and philosophy of the project are strongly based on system engineering principles.

## The Role

As a successful RF Antenna Engineer the post holder will be member of the SKA Project Engineering Office (PEO), a team of experienced individuals developing the MID telescope and you will report directly to the SKA Project Engineer.

Within the SKA Project Engineer Office the RF Antenna Engineer will work closely with the relevant SKA Office engineers, project managers and/or domain specialists. As a team he/she will work and interact very closely with her/his counterparts within the management and technical team(s) of the relevant Work Package Consortium(s). The RF Antenna Engineer will ensure that the MID telescope RF related components are coherent with overall SKA Office project requirements and will be responsible to integrate these products into the project level tools and systems.

Although the primary focus of the RF Antenna Engineer will be the engineering effort at SKA MID system and SKA MID Element levels, she/he will also actively participate and support the SKA Project Engineer in all aspects of the overall engineering.

**The RF Antenna Engineer will have the following duties and responsibilities under the direction of the SKA Project Engineer:**

- Provide the technical expertise in RF and antenna systems
- Assist in the maintenance of the top level requirements,
- Critically track telescope-system performance impacts on dish design through construction and verification,
- Evaluation in the context of relevant design reviews,

- Development of verification and testing procedures for dish system and subsystems, and acceptance criteria for related production items,
- Assist with the development of system integration plans,

**In addition the postholder will:**

- Provide updates and reports as necessary.
- Participate in team projects, and to provide specialist assistance to working groups, colleagues and Work Packages.
- Undertake training in the financial, occupational health and safety, and human resource management procedures applicable to the SKA or its partners.
- Travel, as required, to any of the SKA countries.
- Undertake any other reasonable duties as directed by the post holder's line manager or a member of SKA Organisation Senior Management Team.

## **Mandatory Qualifications, Experience and Knowledge:**

- Recognised university degree-level education/training in engineering or physical sciences.
- Analytical skills. Experience with analysis/simulation, design tools and programming (e.g. FEKO, CST, HFSS, GRASP, MATLAB)
- Knowledge and experience at the working frequencies of the SKA MID telescope as specified below:
- Demonstrated experience with feed system including Low Noise Amplifiers and cryogeny technique for cooled receivers.
- Working knowledge of analogue-to-digital converter systems,
- Working knowledge with electromagnetic design of large reflector antennas and feeds, and applicable simulation techniques
- Working knowledge with performance testing of large reflector antennas,
- Familiarity with digital signal processing.
- Good English oral and written communication skills.
- Experience in presenting work orally at meetings and other forums.
- Ability to work effectively with SKA engineers and scientists from a variety of cultures.
- Willingness to travel, nationally and internationally as required.
- A self-motivated and flexible team player who is adaptable to change.

## **Desirable Knowledge, Skills and Experience**

- Membership of, or eligibility for, membership of, recognised national or international system engineering institutes;
- Knowledge of, or a demonstrable interest in, the development, operation and ethos of large scale international research infrastructures such as observatories;
- Experience in design for volume production and/or in large-scale manufacturing and assembly;
- Familiarity with the formalism for, and requirements of, quality control environments such as ISO9000.

SKA Organisation offers a competitive salary and a generous company pension scheme. The successful applicant's workplace will be SKA Organisation's headquarters at Jodrell Bank Observatory, UK.

Closing date for receipt of applications is **27<sup>th</sup> March 2019**.

## Equal Opportunities Statement:

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## 6、 SKA Regional Centre Scientist (2 roles available)

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**Salary** Competitive Salary plus generous pension

**Location** SKA HQ, Jodrell Bank, Cheshire

**Expires** 15th April 2019

**Reports To:** SKA Regional Centre Project Scientist



## Organisation and Project Background

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Negotiations between the governments of SKA member countries to establish the SKA Observatory as an Inter-Governmental Organisation (IGO) have recently concluded with the IGO due to be established in 2020.

## The Role

The first phase of the SKA is due to begin construction soon after the IGO is formed in 2020, and become fully operational in 2027. The operation of the SKA Observatory is currently being planned, and Science Working Groups from across the SKA community are developing the future science programme for the Observatory.

The SKA telescopes will generate unprecedented amounts of data, both in terms of total annual rates and in terms of the size of individual data products. The Observatory will produce calibrated data products but these will need further analysis or processing to be fully science-ready. Users will interact with these data sets via SKA Regional Centres (SRCs), which we anticipate will be part of a global network of facilities providing data storage, archive services and processing capabilities. These SRCs will require a collaboration of regional initiatives in order to function as a coherent network providing access to scientists across the world.

The European Open Science Cloud (EOSC) has just been established and will very likely provide the framework within which a European SRC will function. The ESCAPE project (European Science Cluster of Astronomy and Particle physics ESFRI research Infrastructures) has just been funded to €16M as part of the Horizon 2020 (H2020) EC funding cycle, and will run until June 2022 with the goal of defining and implementing the

EOSC, and enabling the principles of open science, in the fields of astronomy and particle physics.

The role of the SKA Organization within the ESCAPE project is to work with international collaborators to develop prototypes of SRCs for distributed storage and computing, and for the provision of a science platform that will enable users to develop and deploy pipelines for use with SKA-scale data sets across a network of computing and storage infrastructures.

We are looking for motivated individuals to join our group to conduct and document prototyping work on the concepts of federated data storage and distributed workflow management – specifically seeking to understand three areas:

1. how Exabyte-scale archives including very large volume data objects might function effectively and scalably across the globe,
2. how computations requiring significant HPC time at distributed facilities could be managed, and,
3. how individual science users develop workflows collaboratively for deployment in this distributed environment.

These prototyping and development activities will be part of work in the ESCAPE project, which will entail strong collaboration with partners across several institutes but especially with CERN, in Geneva, and ASTRON, in the Netherlands.

You will join SKA Organisation's Operations group, and work with a team from across the Operations and Software and Computing groups. In addition to the ESCAPE work, you will have the opportunity to support the SKA's other SRC related work by assisting in developing technical data challenges around distributed storage and related areas to ensure that the work done within the ESCAPE project is put into the global context.

## **Key Duties, Accountabilities and Responsibilities**

Under guidance from their SKAO line manager the post holders will:

- Help develop, test, optimise and maintain a prototype SKA data lake (as a pre-cursor to a network of SRCs) using scientific data management tools.
- Liaise with members of the SKA Science Working Groups to determine the data storage Quality of Service requirements for the various SKA science projects

- Be part of a team developing a Science Gateway for SKA as a framework for collaborations of science users to write and deploy workflows for use on remotely linked HPC centres.
- Attend frequent meetings to develop the ESCAPE work and report progress internally to SKAO and by writing high quality documents as deliverables for the ESCAPE project.

## **Mandatory Qualifications, Experience and Knowledge:**

- A PhD or equivalent, in Astronomy, Physics, Computer Science or a closely related field or equivalent experience in a professional scientific computing capacity.
- Significant experience with, and understanding of either or both
  - distributed scientific data management tools (e.g. rucio).
  - distributed computation frameworks (e.g. workload management and containerisation) in the Physical sciences.
- Good python programming background, including the use of Jupyter notebooks
- Ability to manage workload and targets in a dynamic and collaborative environment.
- A flexible, adaptable team player, able to work to deadlines.
- Good spoken and written English.

## **Desirable Qualifications, Experience and Knowledge:**

- Familiarity with astronomical analysis techniques
- Proven ability to document results to a high standard
- Ability to work with remote collaborators
- Expertise in Software Programming in collaborative environments

The SKA Organisation offers a competitive salary, a generous company pension scheme. The successful applicants' workplace will be located at the SKA Office's headquarters at Jodrell Bank.

Closing date for receipt of applications is **15th April 2019**.

## **Equal Opportunities Statement**

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