SKA-France

Monthly bulletin   **November 2018**

News from Maison SKA-France
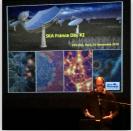
Second SKA-France Day

The **Second SKA France Day** took place on **November 23, 2018** in the **Theatre of the ENS Ulm, Paris**. With more than 120 registrations, the meeting confirmed the raising interest of the French community in the SKA project.

After the enthusiastic and enlightening opening words of E. Verges (Director of "*Service de la stratégie de la recherche et de l'innovation*" at Ministry for Higher Education, Research and Innovation), the recall of the interest in the SKA project for INSU by N. Arnaud (Director of CNRS/INSU), as well as an overview of the SKA place in the future of French astronomy by G. Perrin (Deputy director of CNRS/INSU, Head of Astronomy & Astrophysics Division), representatives of Maison SKA-France summarised the recent evolutions of SKA and of its preparation in France. An alternation of talks by speakers of the academic and industry domains allowed to show the variety of the technological and scientific applications envisaged by the French community in the project.

Presentations are available at the SKA-France web-page.

From left to right: E. Verges, N. Arnaud and G. Perrin

First Science Data Challenge launched by SKAO

On November 26, 2018, the SKA Organisation released the first of a series of Science Data Challenges (SDC). SDC will keep to be provided to the community in the next months and years, in order to prepare researchers to the highly detailed images and/or the big-data products that the SKA will produce.

The first SDC shows how SKA1-MID is expected to see the radio sky at three different frequencies (560 MHz, 1.4 GHz and 9.2 GHz), and at three depths (eight hours, 100 hours and 1000 hours of observing time). Developed by the SKAO's Project Science team, It consists of nine large images, each being about 32,000 pixels on each side and 4GB in size.

For this first SDC, researchers are invited to download the images and use their own software to find, identify and classify the sources.

28th SKA Board Meeting

Members of the SKA Board of Directors at the 28th Board meeting in Jodrell Bank (left). View of the new Council Chamber at the SKA Headquarters (right). Image courtesy: SKAO

The **28th meeting of the SKA Board of Directors** was held on **November 12 and 13, 2018** at the **SKA Global Headquarters (UK)**. After CNRS's membership approval on July 12, 2018, the Board meeting, hosted for the first time in the magnificent new Council Chamber of the SKA HQ, saw the participation of the two French representatives (M. Pérault and C. Ferrari).

Important updates were presented concerning, among others, the evolution towards the future Inter Governmental Organisation (IGO), the on-going work on procurement rules, the organisation of Science Data Challenges, as well as on-going progresses in the Critical Design Reviews (CDR) of the different consortia and on the definition of the future SKA Data Regional Centres. An interesting report of the recommendations that emerged during the last meeting of the Science and Engineering Advisory Committee (SEAC) was presented by the SEAC Chair (A. Ferrara).

For a more complete overview of the meeting, see the **notes from the Chair of the Board (C. Cesarsky)**, which are published on-line at the SKA Organisation web-page.

Activities

INRIA / SKA-France meeting

After the first meeting organised in February 2018 by Maison SKA-France (MSF) together with the French national research institute for the digital sciences (INRIA), which allowed to present a general overview of the SKA and its computing needs, **a follow-up MSF-INRIA meeting was held on November 15, 2018 and hosted by the INRIA Paris Research Center**.

The main aim of this second joint discussion was to identify how the extended expertise on machine learning of INRIA research groups can meet the needs of astronomers in preparing the best exploitation of present and future data from the SKA and its pathfinder and precursor telescopes.

Participants included researchers from INRIA centres in Montpellier, Rennes, Nançy and Lille, covering the fields of scientific big data analytics, large scale collaborative data mining, artificial intelligence, machine learning. From the astronomical point of view, researchers from Paris and Nice Observatories, Orléans University, as well as AIM, and APC Laboratories, could illustrate needs on different scientific applications, including the epoch of reionisation, pulsars searches and timing, inter-stellar medium studies.

The development of collaborative projects is envisaged between research groups that attended the meeting, which could of course include also other partners from industry or other research centres.

SKA meeting organised by GdR ISIS

On **November 27, 2018**, the **Research Group ISIS** (Information, Signal, Image & ViSion), an animation structure of the CNRS/INS2I institute, organised a **workshop to present current developments in radioastronomy and to discuss perspectives in this field**. The targeted themes concerned the entire processing chain from the point of view of algorithmic developments and architectures of the computing system. The meeting, started with a review talk of C. Ferrari about the SKA project and the activities of Maison SKA-France, and was followed by 10 scientific talks. 25 researchers attended the workshop. Algorithms for antennas calibration, image reconstruction, wide-band reconstruction and source separation were presented. Needs of the community for specific processing where discussed. Then the SKA requirements in terms of energy consumption and real-time processing were approached in terms of algorithms, design tools and hardware optimisations including GPU and many-core embedded processors. More details about this workshop are available at the meeting web-page.

Announcements

5th Workshop on Performance and Scalability of Storage Systems

Per3S (Performance and Scalability of Storage Systems) is a workshop targeting I/O and storage for the Exascale era. Per3S has the ambition to help the French storage community to crystallise and to foster discussion in the storage as well as file system areas. Per3S is co-organised by INRIA Bordeaux Sud-Ouest, DDN Storage, UBO, CEA, Orange Labs and SysNum Cluster.

The **fifth edition of Per3S** will last a full day on **January 25, 2019**, and will be held at **INRIA Bordeaux SO in Talence, France**. The program will include both invited presentations of experienced researchers and contributed talks of young researchers. **Abstracts** of maximum 300 words can be submitted at the conference web-page by **December 14, 2018**. No registration fees will be required.

Head of finance recruitment at SKA Organisation

The **post holder** of this new high-profile leadership position, based at the SKA Headquarters in Jodrell Bank (UK), will **lead SKA Organisation's Finance department at a strategic level**, as well as **oversee the application of the company's Finance Policies and Procedures**. The post holder will be supported initially by a small team of 2-3 staff at SKA Headquarters. The establishment of this role presents a unique opportunity to be involved at a critical time, as the company transitions to an IGO, and the global project moves from the conclusion of its design activities to construction. In line with the evolution of organisation, the successful candidate should be a high-potential individual with the capability in the future to take on a broader commercial leadership role as required.

Interested candidates can find at the SKA recruitment web-page all information concerning:

* Key Duties, Accountabilities and Responsibilities
* Mandatory Qualifications, Experience & Knowledge
* Desirable Qualifications, Experience & Knowledge

How to apply:

Please send a CV and covering letter, including details of your current remuneration, to jobs@skatelescope.org, quoting reference HF/01. To be considered applications must include a summary, detailing how you meet the essential and desirable knowledge, skills and experience criteria. **Closing date for receipt of applications is 15 January 2018.**

Chiara Ferrari
for the **Maison SKA-France**