About SKACH

Vision
Further Swiss leadership in the global radio astronomy community.

Mission
Ensure meaningful contributions to the SKAO and SRCs through the development and delivery of cutting-edge Swiss solutions to key science goals, big data research, technology, and services.

- The SKA Switzerland is SKACH is a strong consortium of 10 research institutions tasked with managing the Swiss contribution to the SKAO.

- Current Consortium members include: Centro Svizzero di Calcolo Scientifico (CSCS), Ecole Polytechnique Fédérale de Lausanne (EPFL), Eidgenössische Technische Hochschule Zürich (ETHZ), Fachhochschule Nordwestschweiz (FHNW), Haute École spécialisée de Suisse Occidentale (HES-SO), International Space Science Institute Bern (ISSI-Bern) Universität Basel (UniBAS), Université de Genève (UniGE), Universität Zürich (UZH), and Zürcher Hochschule für Angewandte Wissenschaften (ZHAW). Membership discussions are currently taking place with University of Bern.

- SKACH is primarily funded by the State Secretariat for Education, Research and Innovation (SERI) and several competitive research grants: AstroSignals SINERGIA, SNF Bilateral, PASC, InnoSuisse, and Horizon Europe. SKACH reports to each of these grants as outlined in their funding agreement.

- SKACH, directly or indirectly, supports around 120 individuals conducting research in astrophysics, computer science and engineering.
Progress of the SKACH Consortium

2021
Year 1:
We started to form as a consortium
- Submitted proposal for SERI to fund the consortium for the SKAO
- EPFL signed agreement and received funds from SERI
- First meetings of the consortium board
- Hiring of personnel began

2022
Year 2:
We continued to form as a consortium
- Switzerland officially joined the SKAO
- Monthly meetings of the consortium board
- Weekly meetings for the consortium
- Consortium branding
- Kick-off of SKACH programs and reporting
- Attendance to SKAO council
- International collaboration

2023
Year 3:
Reflection and adjustments of consortium structures. We are also using this information to plan for the next round of SERI Funding
- Continuing board and weekly meetings
- Increased regular meetings for work packages (simulations, SRCs)
- 2025 + consortium planning
- Increased participation in international groups
- Preliminary results

2024
Year 4:
We expect to see strongly formed collaborations and results from this first round of consortium funding.
- Continuation and adjustment of consortium structures
- Final results of the first round of consortium funding
- Reflection of SKACH Activities
- Preparation for next round of activities
2021 - 2024 Work Packages

SKACH WBS

Management WP1000
- SKA Director WP1100 (EPFL)
- SKA Manager WP1200 (FHNW)
- Admin Assistant WP1300 (EPFL)
- Swiss SKA Board WP1400 (All)

SKA Construction WP2000
- SPC and Co-Design WP2100 (FHNW, EPFL)
- Observatory Management and Control WP2200 (Cosylab)
- MID Band 6 Receiver WP2300 (HES-SO, EPFL)
- LNA Development WP2400 (HES-SO)
- Correlator WP2500 (ETHZ)

Data Science and Simulations WP3000
- Imaging Algorithms WP3100 (EPFL, UniGe)
- SKA Regional Centers WP3200 (EPFL, UniGe, FHNW)
- Sky to Observations WP3300
- Sky Simulations WP3310 (UZH, UniBas, ZHAW)
- Data Analysis Tools WP3320 (UniGe)
- Digital Twin Pipeline WP3330 (FHNW, ETHZ)

Computing Platforms and Infrastructure WP4000 (CSCS)
- Outreach & Comms WP6000

Science WP5000
- SKA Science WGs
- Astrosignals

Plain text representation:

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Science WP5000
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SERI funded in-kind contribution or other funds
2023 Program Progress

Science Program

- 20% of the members are highly involved in the SKAO Science WGs,
- 10 publications related to Swiss SKA activities from 01/2023 to 04/2023

Chair: Miroslava Dessauges (UniGe)
Co-Chairs: D. Crichton, M. Spinelli (ETHZ)

Data Science Program

- Release of python libraries for high performance computational imaging and scalable synthesis/analysis of spherical sky maps
- Developing and deploying a data transfer interface at CSCS for a mini-SRC demonstrator
- Development of an analysis pipeline for cosmological simulations continues.
- Monthly software releases of Digital Twin

Chair: Emma Tolley (EPFL)
Co-Chair: Simon Felix (FHNW)

Outreach & Comms

- Participation in SKACON
- Making Waves Podcast
- Hosting PARI 2024
- Develop Strategic Comms Plan

Chair: Tanya Peterson (EPFL)
Co-Chair: Hamsa Padmanabhan (UniGe)

Instrumentation

- Preliminary System Requirements Review
- International Collaboration
- Continued work on EBB

Chair: Dominique Bovey (HES–SO)
Co-Chair: Gilles Feusier (EPFL)

Computing Platforms and Infrastructure

- Development of SPH-EXA & Bluebild
- Connection to HPC at SKACH
- Participation in the SDC3
- SKAO SRC WG participation

Chair: Victor Holanda (CSCS)
Co-Chair: Darren Reed (UZH)
2021 - 2024 Work Packages
Contact Me:

Carolyn.Crichton@EPFL.ch