Postdoc position: Machine learning for imaging, generative modeling and data analysis in radio-astronomy

The Stochastic Information Processing Group (SIP) (http://sip.unige.ch), University of Geneva, Switzerland, has an open post-doc position in machine learning for imaging, generative modeling and data analysis in radio-astronomy.

Profile:
- PhD degree in one of the following domains: computer science, data science, radio-astronomy, physics or electrical and computer science engineering
- Solid experience with machine learning in image processing applications with preferable knowledge of recent concepts in generative models such as diffusion and score models, transformers and inverse problem solvers
- Good knowledge of radio-interferometric imaging or strong understanding of signal processing concepts related to Fourier transform and sampling
- Strong programming skills in Python with demonstrated experience in PyTorch or TF that will be verified
- Strong verbal and written communication skills in English
- Strong analytical abilities and problem solving/troubleshooting skills

We offer:
- Great collaboration environment
- Flexibility in research and career development
- Support in publishing papers and attending top international events
- Collaboration with leading Swiss institutions working in the domain of radio-astronomy imaging and data analysis
- Salary: about 80'000 CHF per year
- Duration of contract: initial duration of position is 1,5 years

The successful applicant will be involved into the Swiss research project Astrosignals (https://astrosignals.ch) and contribute to the development of machine learning based image processing methods in application to radio-astronomy imaging systems such as SKA and MeerKAT. The postdoc will be a member of a joint team between the Computer Science (the SIP group: (http://sip.unige.ch)) and Astronomy (the starbursts in the Universe group: https://www.unige.ch/sciences/astro/starbursts/team/daniel-schaerer) Departments of the University of Geneva, Switzerland.

The research problems will cover the development of innovative machine learning based imaging, reconstruction, source localization and classification. The part of project is also dedicated to the development of digital twins of radio-astronomy imaging systems. The developed methods will be validated on both synthetic and real data.

The SIP group has a broad network of international collaboration and has excellent possibilities to organize scientific exchange with the leading Swiss Universities.

STARTING DATE
September 1, 2023 or can be discussed.

APPLICATION PROCEDURE:
All applications should be submitted via:
https://forms.gle/2i9w7Vhg2coAg2rv5

The application deadline:
There is no strict application deadline but the position will be filled once an appropriate candidate is found.