RadioNet support for organisers of training events
Application form

EVENT INFORMATION	
TITLE	LOFAR Polarization Busy Days
PLACE	*Dwingeloo, the Netherlands*
ORGANISER'S INSTITUTE NAME	*ASTRON* *Contact person: Dr. Sarrvesh Seethapuram Sridhar (sarrvesh@astron.nl)*
DATE	June 24 - 26, 2020.
NO. OF PARTICIPANTS	30
TOTAL EVENT COST	**4000 euros**
OTHER SOURCES OF FUNDING	Registration fees. We plan to submit a funding proposal to the Leids Kerkhoven-Bosscha Fonds (LKBF) agency in the Netherlands to cover some of the organisational costs (Application deadline: Feb 15, 2020).

REQUEST *(max. 2 pages)*	
Requested contribution	*2000 euros*
Use of the RadioNet contribution	*The financial support we request from RadioNet will be used to cover:* • *travel and accommodation costs for invited lecturers (RadioNet affiliates; about 5 lecturers),* • *financial support for selected PhD students and post docs (about 5 participants),* • *expenses related to food and drinks during the event.* **How will this event contribute to RadioNet goals?** *LOFAR has been scientifically productive in the last few years owing to the success of the LOTSS survey. However, most of the science has been using the total intensity emission. Exploiting polarization data has been highly limited due to the technical challenges related to calibrating and imaging linear polarization especially using LOFAR's international baselines.* *New algorithms are actively being developed to tackle this issue. For example, within the MKSP, we have developed a GPU-accelerated software suite for carrying out advanced polarization analysis (See https://github.com/sarrvesh/cuFFS). Within the wider LOFAR community, there has been much effort put into tackling the longest baselines. However, only a few expert users are able to exploit these new pipelines.* *With this in mind, the two main goals of this event are* 1. *Demonstrate/teach the new algorithms and pipelines to young researchers, and* 2. *Test new calibration and imaging procedures.* *We strongly emphasize that the techniques developed and tested during this event will be useful for other RadioNet infrastructures like EVN and e-MERLIN, and the wider radio astronomical community. For example, the GPU-accelerated code mentioned above was used recently to carry out a polarization survey by one of the SKA precursors: the MWA. In addition to such direct contribution, with the SKA just over the horizon, it is important to train young researchers on pipelined processing techniques to deal with large and complex datasets.*
Impact of training	*We envision that the training provided during our event will have the following impact:*

	• *More young researchers get familiarized with the new polarization data processing techniques for LOFAR. This would increase the scientific productivity of LOFAR tremendously and open up new avenues of research.* • *Algorithms and software packages developed as part of this effort are useful to the wider radio astronomical community.* *This event is aimed specifically for data from the LOFAR telescope. However, techniques developed and tested using this data will be useful for other RadioNet infrastructures like the EVN and e-MERLIN, and to the wider radio astronomical community.*
Accessibility	*The event is open to all astronomers and engineers who are interested in radio polarization measurements. To encourage active participation from the young researchers, they will be given higher priority while selecting the attendees.*
Ethics	*The event is open to all astronomers and engineers regardless of their nationality, gender, race, or any other criteria. This event will be governed by the Dwingeloo Code of Conduct.*

Privacy Policy: With signing this template and applying for RadioNet funding, I accept the <u>Privacy Policy of RadioNet</u>, which is based on the EU General Data Protection Regulation (GDPR).

Place & Date:

Dwingeloo, Jan 30, 2020.

Signature of the applicant:

Sarrvesh