RadioNet support for organisers of training events
Application form

EVENT INFORMATION	
TITLE	6th LOFAR data processing school
PLACE	Dwingeloo, The Netherlands
ORGANISER'S INSTITUTE NAME	ASTRON, the Netherlands Institute for Radio Astronomy Marco Iacobelli, iacobelli@astron.nl
DATE	September 2020
NO. OF PARTICIPANTS	50
TOTAL EVENT COST	14000
OTHER SOURCES OF FUNDING	International LOFAR telescope funds and registration fees.

REQUEST *(max. 2 pages)*	
Requested contribution	5000
Use of the RadioNet contribution	The 6th LOFAR data processing school is a radio astronomy-related training event organised and hosted by ASTRON. The International Low Frequency Array (LOFAR) Telescope is part of the RadioNet infrastructure and LOFAR is recognised as a science and technology pathfinder facility for the next generation radio telescope, the Square Kilometre Array (SKA). As for the previous five editions of the event, students from all over the world will visit ASTRON for one week receiving lectures, tutorials and tours about LOFAR. In the coming edition, there will be, in addition, an interactive overview of the APERTIF Long Term Archive (ALTA), which is also part of the RadioNet infrastructure. For these reasons, the proposed training event will fulfil the RadioNet mission in training the next generation of scientists to low-frequency data processing. The financial support requested by ASTRON to RadioNet will be used to cover the following costs: catering costs and travel expenses for eligible participants/tutors.
Impact of training	The aim of this School is to introduce the LOFAR system to new members of the LOFAR community who will analyse both interferometric and high-time resolution beamformed LOFAR data. The School will cover the many aspects of the LOFAR system from the capabilities of the basic station hardware to the software pipelines and their science products. Lectures and tutorials will be presented by members of the Radio Observatory as well as staff from the many institutions involved in the LOFAR collaboration. Hands-on sessions will play a crucial role during the School giving attendees an opportunity to gain experience with real LOFAR data. The lectures and tutorial sessions will cover both basic and advanced (e.g. the concept of direction-dependent calibration) processing techniques, as well as the interaction between the Radio Observatory and the users. During the tutorial sessions, students completely new to LOFAR will learn how to edit (flag), calibrate and image LOFAR data. Advanced tutorial sessions will cover very long baseline interferometry, beamformed and high dynamic range imaging; these will challenge the students that already had some experience with LOFAR and low-frequency data in general. A detailed description of the hardware will be given by our field engineers at the core of the telescope. This will stimulate those students with a hardware/technical engineering background to get involved

	in radio astronomy and signal processing technology. A question and answer session will take place every day in order to give the students, tutors and lecturers the chance to discuss in an informal forum the topics presented during the day.
Accessibility	The selection of the students will be based upon their curricula. In order to assimilate some of the complex concepts presented during the school (long baseline interferometry, variable beam patterns, ionospheric phase delays etc.), students will need to have a background in radio astronomy including exposure to interferometry. Students with a hardware engineering and signal processing background will also be given priority. The aim of the school is also to increase the number of trained people associated with countries and institutes belonging to the International LOFAR Telescope (ILT) or involved with SKA.
Ethics	Careful attention will be given to represent gender balance, ethnic diversity and disability, from the selection of the students to the choice of the lecturers and tutors. Moreover, like every event organised by ASTRON, the lecturers, tutors and participants will be asked to follow the Dwingeloo Code of Conduct (https://www.astron.nl/about/diversity-and-dwingeloo-code-conduct).

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

Place & Date:

Signature of the applicant: *Marco Iacobelli*

Dwingeloo – January 28, 2020

Marco Iacobelli