RadioNet support for **organisers** of technical events
Application form

EVENT INFORMATION	
EVENT TITLE	WORKSHOP CASPER (COLLABORATION FOR ASTRONOMY SIGNAL PROCESSING AND ELECTRONIC RESEARCH)
EVENT PLACE	*Cagliari, Italy*
ORGANISER'S INSTITUTE	*INAF – OSSERVATORIO ASTRONOMICO DI CAGLIARI* *CONTACT PERSON: ANDREA MELIS* *EMAIL: ANDREA.MELIS@INAF.IT*
EVENT DATE	6-11 SEPTEMBER 2020
NO. OF PARTICIPANTS	90-110
TOTAL EVENT COST	35000 EURO
OTHER SOURCES OF FUNDING	*We requested 10000 euro to INAF, but it is not guaranteed at all and, even in case of positive response, the total amount might be strongly (statistically 50%) reduced.* *We will also apply a fee to participants, closely related to how much it will be financed with these possible funding opportunities. If possible, students will not pay any fee.*
REQUEST *(max. 2,5 pages)*	
Requested contribution [EURO]	*27500 euro*
Use of the RadioNet contribution	*The RadioNet contribution would be used for the following expenses:* *1) Rent of three halls at Hotel Regina Margherita in Cagliari: 6150 euro* *2) Coffee Breaks for 100 people (presumed number of participants): 7320 euro* *3) Lunch for 100 people: 14030 euro* *Clearly, in case the total amount could not be financed, even a part of the aforementioned voices would be appreciated.*
Topic	*The Collaboration for Astronomy Signal Processing and Electronic Research (CASPER), as shown in the homepage of the official website, has the primary goal to streamline and sinplify the design flow of radio astronomy instrumentation by promoting design reuse through the development of platform-independent, open-source hardware and software.* *Most of the radio astronomical facilities are part of CASPER, including the European ones like Effelsberg, Sardinia Radio Telescope, Jodrell Bank and other again. Digital electronics is in costant evolution, and hosting the annual CASPER workshop in Italy can definitely give an important added value to the RadioNet community, both for enforcing current collaborations and for opening new ones.*
Relevance for RadioNet	*CASPER is a collaboration whose key points embody, in our opinion, the spirit requested by RadioNet. The motto of the CASPER community is that everything is*

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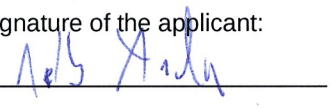
	open-source, and this helps to go right in the direction of disseminating technical achievements and progress of the project technical activities in the community. This workshop definitely aims at bringing the European radio astronomy engineering results and expertise to the attention of the broader engineering community, at exchange ideas and new directions as well as attracting the interest of industrial parts. For example, the SKA project uses CASPER instrumentation both in Australia (ITPM boards, recently "casperized") and in South Africa (SKARAB boards, used for the MeerKat), but there is an ongoing dialogue with industry for considering new technologies, the RFSoC for instance. *With regard to the involvement of the CASPER for the RadioNet facilities, it is very important to underline that one of the digital backend used for the Event Horizon Telescope (EHT) is based on CASPER boards, the ROACH2s in particular (see section 3.4 in https://iopscience.iop.org/article/10.3847/2041-8213/ab0c96/pdf); EHT also comprises the following RadioNet infrastructures: NOEMA, APEX.* *With regard to Effelsberg, ROACH and ROACH2 boards are currently used for pulsar science, both for coherent and incoherent observing modes (https://www.cfa.harvard.edu/events/2019/casper/CASPER2019_files/talks/karuppusamy.pdf). ROACHs are also used for the LEAP (Large European Array for Pulsars) project, which involves Effelsberg and one of the telescope of the e-Merlin, the Lovell Telescope indeed. SKARAB (as said earlier fully-integrated in CASPER) and ZCU111 (https://www.cfa.harvard.edu/events/2019/casper/CASPER2019_files/talks/bradford.pdf) boards are currently under investigation for a future use at Effelsberg.* *To conclude, we think that hosting the CASPER workshop in Italy is a great opportunity for the European radio astronomy engineers to exchange expertise with specialists that come from all over the world, consistently to the guiding principles requested by this RadioNet call for support.*
Impact	*The impact of the event in terms of interaction between European radio astronomy engineers and industry is definitely strong. We are planning to invite the representetatives of the major company in this field: Xilinx, Intel, Fujitsu, Abaco, Pentek, Mellanox, Supermicro.*
Ethics	*We will endeavor to achieve gender balance and other ethnic issues in all aspects of the conference, and in particular the choice of the speakers, the choice of the session chairs, the choice of the discussion chairs.*

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:

Selargius, 21/01/2020

Signature of the applicant:



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