

# RadioNet support for scientific events

## Application form

EVENT INFORMATION	
TITLE	Galaxy interactions and mergers across cosmic time URL: <a href="http://www.sexten-cfa.eu/en/conferences/2018/details/93-galaxy-interactions-and-mergers-across-cosmic-time.html">http://www.sexten-cfa.eu/en/conferences/2018/details/93-galaxy-interactions-and-mergers-across-cosmic-time.html</a>
PLACE	Sexten Center for Astrophysics
ORGANISER'S INSTITUTE	European Southern Observatory
DATE	11.03.2018 - 16.03.2018
NO. OF PARTICIPANTS	~50
TOTAL EVENT COST	~40,000 EURO (registration fee €300 + €500 logistics per person)
OTHER SOURCES OF FUNDING	None
REQUEST	
<i>(max 2 pages)</i>	
Requested contribution [EURO]	4500
Use of the RadioNet contribution	<p>Our workshop has a cross-disciplinary character, involving observers using multi-wavelength facilities, theorists using various computational tools such as hydrodynamical simulations, semi-analytical modelling, or pure analytical calculations.</p> <p>To foster international collaborations among not only multi-disciplinary experts but also multi-generation researchers, we aim to use all of the requested funding to cover the registration fee for ~15 students and postdocs, whose attendance may be hampered by their limited funding. We will prioritize the funding to underrepresented groups, namely female/junior researchers or coming from less-developed countries. In exceptional cases, we will consider reimbursing the travel and accommodation costs of one or two participants, whose research experience is relevant to our workshop but do not have financial means to attend otherwise.</p>
How the event fits in the RadioNet framework	<p>Since the establishment of its critical role in the theory of galaxy formation in the local Universe over twenty years ago, galaxies that are undergoing dynamical interactions, or galaxy mergers, have been one of the main target of interests among radio and submillimeter community. The measurements made by the radio astronomy community have proven essential in improving our physical understandings toward galaxy mergers; On the one hand, they prompt discussions of the possible triggering of radio-loud Active Galactic Nuclei (AGN) by galaxy interactions. On the other hand, armed with its unbiased nature toward obscuration, radio emission is one of the best tracer of star formation, probing the enhancement of star formation triggered by galaxy interactions. Moreover, the physical state of the molecular gas traced by CO emission and detected by the radio</p>

	<p>telescopes, is a major field of interest, as it sheds more insights into the dynamical impact of galaxy interactions on star formation and morphology. These measurements, along with theoretical models and state-of-the-art hydrodynamical simulations, have fundamentally changed our views on the formation and evolution of galaxies.</p> <p>Over the past two decades, technical advances have allowed us to observe galaxies ever further than before, reaching the era of reionization. New evidence has been found, almost unequivocally, that massive galaxies in the early Universe were much more gas-rich. Consequently, internal disk instability, rather than galaxy mergers, is contended as the main driver to form over 10 billion stars within a few hundred Myr, one of the key criteria to explain the formation of massive elliptical galaxies in the local Universe. Crucially, under a gas-rich, chaotic environment as expected in the early Universe, a clear definition, agreed by the community, of what can be called a merger is necessary but currently lacking.</p> <p>The workshop is timely and a pivotal next step to answering fundamental questions regarding galaxy mergers. On the one hand, galaxy simulations are starting to resolve gravitational instabilities in the ISM down to parsec-scales. On the other hand, new and upcoming facilities such as LOFAR, NOEMA, ALMA, JWST, SKA (including the pathfinders). and ELT will reveal how gas and stars reorganize when galaxies collide out to high redshifts. The goal of this workshop is to catalyze discussions among experts working on different redshifts, techniques and wavelengths, and to foster synergies between observers and theorists. This will help build a complete picture of this fundamental phenomenon, and to guide future observations conducted by the RadioNet community.</p>
Relevance of the event for RadioNet	<p>To fully understand an event that involves both old and young stars, dust and gas, AGN and supernova, across a long period of time and so a large redshift range, observations using multi-wavelength dataset, including RadioNet facilities such as LOFAR and NOEMA, would be most useful and discussions catalyzed by cross-disciplinary researchers would be most fruitful. This workshop enables researchers using RadioNet facilities to disseminate their results to the wider astronomical community. We envision the workshop to be a platform for radio astronomers to begin new collaborations with theorists as well as optical astronomers. Therefore we believe our workshop meets perfectly with the spirit of the RadioNet goals.</p>
Ethics	<p>Our goal for the workshop is to have a diverse representation of researchers among participants, invited speakers, and session chairs. In fact, we have already started addressing this issue by drafting up a list of invited attendees that is roughly equal in gender, and includes researchers from a diverse ethnic background across at least three continents.</p> <p>We will continue our ongoing effort on the final list, ensuring balances not only on gender and ethics, but also on professional position and research expertise.</p>