

RadioNet support for scientific events

Application form for organisers

EVENT INFORMATION	
TITLE	Conference "Views on the Interstellar Medium in galaxies in the ALMA era"
PLACE	https://eventi.unibo.it/ism-difa-bologna-2019
ORGANISER'S INSTITUTE NAME	INAF-OAS Bologna DIFA, Università Alma Mater Bologna
DATE	2-6 September 2019
NO. OF PARTICIPANTS	130
TOTAL EVENT COST	28,700 euros (VAT free, ~32,000 euros in total)
RADIO NET SUPPORT	2,500 euros
OTHER SOURCES OF FUNDING	The two organizing institutes will contribute to the budget with 3,500 euros each. These funds will be used to rent the conference venue and its audio/video system, and to lower the fee for students.
REQUEST <i>(max. 2 pages)</i>	
Short abstract of the event	<p>Galaxies accrete gas from the intergalactic medium, thus building their gaseous reservoirs, which fuel the formation of stars and the growth of supermassive black holes. Feedback mechanisms then return part of this material into the circum-galactic environment, thus completing the so-called 'baryon cycle'. Understanding this process and its dependence on different galaxy properties and cosmic times is one of the key-question of modern astrophysics and is very challenging, given the complexity and interplay of the physical mechanisms involved and the difficulty to observe the interstellar gas in distant galaxies.</p> <p>The advent of the power of the Atacama Large Millimeter Array and the upgraded capabilities of other sub-mm/mm facilities, including several RadioNet instruments, are now opening a complete new window of the baryon cycle. On the one hand, local galaxies are exploited as 'laboratories' where the interstellar medium is studied down to molecular cloud scales and the physical processes can be investigated in detail. On the other hand, thanks to the unprecedented sensitivities of the new facilities, systematic surveys of the gaseous content in high-redshift galaxies are starting to characterize the gas cycle throughout cosmic time. Dedicated observations have revealed gas in the most distant galaxies, all the way to the reionization epoch, and have started to dissect the interplay between luminous active galactic nuclei and their host galaxy. These new observational constraints are guiding the next generation of galaxy evolution models.</p> <p><i>The aim of this conference is to review the latest results on extragalactic studies of the baryon cycle, obtained thanks to IR/(sub-)mm facilities, and to discuss their impact and consequences on our understanding of galaxy evolution from nearby galaxies up to the early Universe.</i></p>
Relevance for RadioNet	The study of the Interstellar Medium in galaxies is a central research field for RadioNet. Many of the observational results that will be presented at this conference are based on RadioNet facilities, including (but not limited to) the IRAM 30m telescope, and the IRAM Northern Extended Millimeter Array. The conference program also provides for a session

	dedicated to theoretical modeling of the ISM, with the goal of bringing together theoreticians and observers working on the field of star formation and galaxy evolution.
Impact on RadioNet	<p>The main goals of this conference are 1) to foster the research progress in the field of galaxy formation and evolution, and 2) to significantly contribute in the high-level education and formation of the next generation of young scientists working in this field (who, given the relevance of the topics, will become the future users of RadioNet facilities and an integral part of the RadioNet community). The entire concept of the conference is built around these two goals.</p> <p>The conference will offer the RadioNet community a great opportunity to gather world-wide experts on the study of gas in galaxies, star formation, and galaxy evolution, ranging from the local universe to the highest redshifts accessible to date. We will explore different approaches (statistical surveys, detailed studies of individual sources, global vs spatially resolved measurements, etc) and compare and contrast the predictions of theoretical models and numerical simulations with the results from observations. The conference program is articulated in 6 sessions, each starting with a review talk by a prominent researcher in the field, and followed by 1-2 invited talks, a number of contributed talks, and a discussion session. The review talks will provide an overview of the state of the art of a specific field, addressing the main pending questions and reviewing the latest on-going efforts to tackle these issues. The invited talks are meant to highlight some of the main projects and research lines that have been pushed in the last couple of years. Finally, the contributed talks will offer the community the opportunity of sharing news from other research projects. The discussion sessions will allow the participants to wrap up the main messages that emerged during each session, and to discuss open issues and how to address them. The SOC of the conference selected a diverse list of names of prominent scientists as reviewers / invited speakers, with many relatively young yet firmly established profiles. From the organizational point of view, we are making a significant effort in order to provide as low a registration fee as possible, and to offer even reduced fees for young scientists, with the ultimate goal of broadening the accessibility of the event for professionals, in particular at the early stages of their carrier.</p> <p>We strongly believe that this format will provide a clear snapshot of the on-going research in the study of the ISM in galaxy, and a marvellous learning experience for young scientists attending the meeting.</p>
Use of the RadioNet contribution	We plan to use the RadioNet contribution to support the travel expenses of one of the invited speakers (Dr. Takuya Hashimoto, Univ. Osaka-Sangyo/NAOJ, Japan) and of up to 5 young conference participants (PhD students and young post-docs). Dr. Hashimoto is a world-wide expert on the observation of very high-redshift galaxies at (sub-)mm wavelengths; among the invited speakers, he's one of the youngest. As for the other participants, the abstract submission has just opened, so we cannot provide a list of names and related project at the time of the deadline for RadioNet contributions. Given the relevance of the proposed themes of the conference for the RadioNet science, we expect several applications related to projects that are based on RadioNet facilities. These will obtain priority in accessing the requested funds.
Ethics	Gender balance is respected in all the organizing committes (SOC: 6 women out of 13; LOC: 5 women out of 10) as well as in the list of invited / review speakers (6 women out of 14). We also addressed geographical diversity in the composition of the SOC and of the invited / review speaker list, with representatives affiliated to institutes all around the globe (Japan, various European countries, USA, Chile).

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:

Bologna, 29/1/2019

Signature of the applicant:

Roberto De Luca