




## RadioNet support for Short Term Missions (staff exchange) Application form

<b>STM INFORMATION</b>	
<b>APPLICANT'S NAME</b>	Islam Mohamed Helmy Gad
<b>APPLICANT'S AFFILIATION</b>	National Research Institute of Astronomy and Geophysics (NRIAG)
<b>HOST INSTITUTE</b>	Observatorio de Yebes, Apartado 148 E-19080 Guadalajara, SPAIN
<b>DATE OF THE STM</b>	15/4/2020 to 22/4/2020
<b>TOTAL COST OF STM</b>	900€
<b>OTHER SOURCES OF FUNDING</b>	No
<b>Request</b> <i>(max. 2,5 pages without signature part)</i>	
<b>Topic</b>	RFI map over Egypt
<b>Proposed work</b>	The aim is to initiate the first RFI map over Egypt through some selected sites.
<b>Cross-disciplinary</b>	<p>However, Egypt is one of the promising sites to install radio astronomy telescope, there is no antenna yet now. We are aiming to use the STM fund to go through the first step of being a radio telescope hosting country, which is studying radio frequency interference over Egypt. This will come from collaboration with experts at Observatorio de Yebes. We arranged a week's visit to Observatorio de Yebes. During this week I expect to learn how to measure and analyze the RFI from the Yebes facilities. This proposal will help my institute to go through buying the needed instruments for selecting the best site to initiate the first radio telescope in Egypt. This proposal aims to transfer knowledge about the importance and effect of studying RFI on the astronomical radio observation through different bandwidth from Yebes at Spain to NRIAG Egypt.</p> <p>As a communication Engineer, I used to analyze signals as well as design and implement control circuits. Besides, I have good experience in programming using different programming languages. I expect that this training will be a proper research topic to start with my Ph.D.</p> <p>Eventually, we expected that this proposal will serve different disciplines since it will bring together the astronomy science and engineering algorithm in addition to the industrial part (receiver and antenna manufacturing).</p>
<b>Impact</b>	<p>This training will allow a great chance of building radio astronomy in Egypt. So it may be used to start a collaboration between European radio astronomy engineers and NRIAG-Egypt. Due to the gap in the VLBI Network between the north and south hemisphere, we expect this proposal will be a hands-on covering this gap by putting an antenna in the Egyptian selected site that resulted from our RFI Map.</p> <p>Consequently, this would add further north-south baseline coverage for the EVN, complement the AVN, thus helping to increase capabilities for this key RadioNet Facility and also bridge the gap toward new and emerging telescope and arrays such as MeerKAT and SKA-mid.</p> <p>In addition to the knowledge transfer to and from Yebes which represent the RadioNet Partners, this also will lead to the transfer of technology from Europe to developing countries.</p>

Please also read the Privacy Policy of RadioNet: <https://www.radionet-org.eu/radionet/data-policy/>

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Curriculum Vitae	<p><u>Application of fuzzy logic on astronomical images' focus measures</u></p> <p><u>Focus Measures Assessment for Astronomical Images</u></p>
<p><b>Privacy Policy:</b> 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).</p>	
<p>Place &amp; Date:</p> <p><u>Cairo, 28/1/2020</u></p>	<p>Signature of the applicant:</p> <p><u>ISLAM HELMY</u></p>
<p><u>ISLAM HELMY</u></p> <p><u>28/1/2020</u></p> <p>Date and Signature of the applicant</p>	<p>I confirm that the proposed STM is in compliance with the agenda of my organisation</p> <p><u>28 ELQAD 2020</u></p> <p></p>