

# RadioNet support for TA users at scientific events

## Application form

TA PARTICIPANT INFORMATION	
NAME	<i>Kelly Gourdji k.gourdji@uva.nl</i>
HOME INSTITUTE	<i>University of Amsterdam, Science Park 904, 1098 XH Amsterdam</i>
EVENT	<p>Name: Ioffe Workshop on GRBs and other transient sources: 25 Years of Konus-Wind Experiment</p> <p>Place: Ioffe Institute, St. Petersburg, Russia</p> <p>Date: 9-13 September 2019</p> <p>100 participants.</p> <p><a href="http://www.ioffe.ru/LEA/grb2019/">http://www.ioffe.ru/LEA/grb2019/</a></p>
RADIONET SUPPORT	<p><i>Accommodation: 300</i></p> <p><i>Conference Fee: 200</i></p> <p><i>Living expenses (meals, local transport): 100</i></p> <p><i>Airfare: 325</i></p> <p><i>Total : 925 euros</i></p>
OTHER SOURCES OF FUNDING	<i>N/A</i>
REQUEST <i>(max. 2 pages)</i>	
Info about the TA user	<ul style="list-style-type: none"> <li>- <b>Review of recent fast radio burst results and links to GRBs</b></li> <li>- <i>I will provide an overview of fast radio burst (FRB) astronomy and of recent results that suggest potential links to gamma-ray bursts (GRBs). In particular, the very recent localization of a FRB occurring at the edge of a low star formation rate spiral galaxy is consistent with the environments of short GRBs and by extension neutron star merger events (detectable through gravitational waves). A coincident detection of FRBs and gravitational waves or/and a GRB would be groundbreaking. Linking FRBs to neutron star mergers would unveil the mysterious progenitors of FRBs and advance our understanding of the extreme physical processes involved when two neutron stars (or a neutron star and black hole) collide. LOFAR is one of few instruments capable of catching FRBs coincident with GRBs or gravitational waves. I demonstrate why LOFAR may be uniquely suited to the task, and show recent LOFAR results.</i></li> <li>- <i>additional information: <b>Invited talk</b></i></li> </ul>
Use of RadioNet infrastructure	<ul style="list-style-type: none"> <li>- <i>LOFAR</i></li> <li>- <i>LT10_013 (PI: K. Gourdji): On going. 2018/08/16, 2019/05/03, 2019/05/23. Results of LOFAR observations of GW 170817 are presented in a paper led by Jess Broderick which has undergone internal refereeing and will be submitted imminently.</i></li> <li>- <i>LC9_028 (PI: A. Rowlinson): 6 July 2018. Paper will have been submitted before</i></li> </ul>

	<p>conference.</p> <p>- LC12_002 (PI: A. Rowlinson, co-PI: K. Gourdji): continuation fo LC9_028. 3 GRB triggers available in cycle 12 which has only recently begun.</p>
<p>Impact on RadioNet</p>	<p><i>This is an international conference focused on gamma-ray bursts and their connection to multi-messenger (e.g. gravitational waves) astronomy and other high-energy transient phenomena. My invited talk is an opportunity to showcase LOFAR's ability to contribute to the key science themes of the conference, to an audience that may largely be unfamiliar with the telescope, and possibly radio astronomy more generally. In particular, I intend to emphasize LOFAR's very large instantaneous sky coverage at unrivalled sensitivities, and rapid response triggering capabilities. These aspects collectively make LOFAR the most appealing tool to conduct radio follow-up of GRBs. Being a LOFAR delegate at this conference is a fantastic opportunity to foster future collaborations between GRB and radio astronomers, many of whom may be RadioNet users.</i></p> <p><i>Additionally, I am currently working on a paper that tests different models where FRBs are produced during gravitational waves/short GRBs, using very recent FRB results. This conference will be helpful for the GRB aspect of the analysis (e.g. GRB flux expected for given FRB flux). I also explore detectability for various radio telescopes including LOFAR.</i></p>
<p><b>Privacy Policy:</b> <i>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).</i></p> <p>Place &amp; Date: <u>Amsterdam, 28 June 2019</u></p> <p>Signature of the applicant: <u></u></p>	