



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

STM INFORMATION	
APPLICANT'S NAME	Dr. Bernard Duah Asabere
APPLICANT'S AFFILIATION	Ghana Space Science and Technology Institute (GSSTI)
HOST INSTITUTE	<b>Joint Institute for VLBI ERIC (JIVE)</b> <b>Postbus 2, 7990 AA Dwingeloo, The Netherlands</b> <b>Oude Hoogeveensedijk 4, 7991 PD, Dwingeloo, The Netherlands</b>  Dr. Francisco Colomer Director Joint Institute for VLBI ERIC (JIVE), NL Phone: +31 (0)521 596 512 (office) Mobile: +31 (0)615 335 380 Email: <a href="mailto:colomer@jive.eu">colomer@jive.eu</a> <b>(SUPPORT LETTER IS ENCLOSED)</b>
DATE OF THE STM	October 29 – December 14, 2018 (7 Weeks)
TOTAL COST OF STM	Five Thousand and Six Hundred Euros (5600 Euros)
OTHER SOURCES OF FUNDING	Jumping JIVE SKA-VLBI Work Package
<b>Request (max. 2,5 pages without signature part)</b>	
Topic	VLBI Data Reduction and Analysis, EVN Science and Technical Operations, Traineeship and Collaboration Drives
Proposed work	<p>The main purpose of the visit is to have specialised training and hands-on experience with the science, data reduction and analysis, technical and administrative operations of EVN. My hosts, Dr. Zolt Paragi and Dr. Jay Blanchard have new VLBI scientific data sets, which we plan to reduce and analyse for publication during the visit. Another focus will be to build strong research ties, partnerships and collaborations with JIVE, ASTRON and the institutions of some of the interested renowned scientists, engineers and technical persons who visit the host institutions.</p> <p>There will be opportunities to understudy the technical and scientific operations, resource mobilisations, organisational structures, support systems, and managerial and sustainability modalities. The work here will be to identify, co-design and adopt the best practices for implementation at the Ghana Radio Astronomy Observatory (GRAO) and astronomy development in Ghana as a whole.</p>
Cross-disciplinary	Currently, I am leading astronomy development, training and outreach drives in Ghana; helping to assemble a team and resources to drive the discipline. My outfit is pushing through the Environment, Science, Technology and Innovations, and the Education Ministries to officially introduce astronomy in the national educational curriculum. There are rising interests in the field shown by the huge number of schools (from basic to university levels) who request to visit the Observatory on daily basis, and those who apply to participate in our basic astronomy training programmes. We do receive invitations to visit schools and do public engagements via the media.

	<p>With a background in infrared/submillimetre astronomy, and now receiving training in LOFAR science, operations and support, I will be well-equipped and better positioned to lead astronomy development crusade in Ghana: teaching, training and co-supervising students with focus on building collaborative research groups in Ghana to use our telescope and other global radio astronomy infrastructure (e.g., EVN, LOFAR, E-MERLIN and future SKA). I will be better placed and informed after the visit to influence decision and policy makers on the way forward for astronomy development in Ghana.</p> <p>The experience from the visit will help motivate the formation of a formidable radio astronomy community in Ghana (especially with the universities) and the sub-region in education, training and research., which will be beneficial to the present and next generations of scientists, engineers, and relevant industrial and educational institutions. The GRAO will soon serve as a broader research, training and outreach facility for the people of Ghana and beyond, as the first non-South Africa radio telescope on the block. Working more closely now also with the Ghanaian Universities.</p>																
Impact	<p>I have been involved in few collaborative ventures and negotiations with a couple of European radio astronomy institutions not to mention ASTRON on LOFAR science operations and support, JIVE on EVN technical activities and VLBI observations, Onsala Space Observatory for BRAND receiver development and the United Kingdom Newton Fund DARA project for astronomy training and research programme but few. Moreover, I am also affiliated with SKA Africa and the AVN. All these are attempts and efforts to equip self and establish stronger relationship and collaborations between Europe and Ghana in particular. This will in effect help build formidable user community of radio astronomy in Ghana and beyond, to use RadioNet radio astronomy facilities and infrastructure. And to tap the related technology and engineering expertise for accelerated growth.</p> <p>GRAO is preparing to join EVN officially. There will be a wider benefit to European radio astronomers, engineers and the entire worldwide radio astronomy community. Ghana's position around the equator and the centre of Africa offers an advantage in terms of VLBI observations spatial resolution</p>																
Curriculum Vitae	<p><b>1. Personal Details</b></p> <table border="1"> <tr> <td>Surname : ASABERE</td><td>First Names: Bernard Duah</td></tr> <tr> <td>Institution: Ghana Space Science and Technology Institute (GSSTI)</td><td>Centre: Ghana Radio Astronomy Observatory (GRAO)</td></tr> <tr> <td>Mobile: 00233 561 392911</td><td>Work Email: b.asabre@gaecgh.org Personal Email: bd.asabere@gmail.com</td></tr> <tr> <td>Title at currently position:</td><td>Research Scientist and Manager of GRAO</td></tr> </table> <p><b>2. Qualifications</b></p> <table border="1"> <thead> <tr> <th>Date</th><th>Award Title</th><th>Subject/Field</th><th>Awarded Body</th></tr> </thead> <tbody> <tr> <td>Sept.2016</td><td>PhD</td><td>Physics (Astronomy)</td><td>University of Johannesburg, South Africa [with Co-supervisors from University of Cape Town and Chalmers University of Technology]</td></tr> </tbody> </table>	Surname : ASABERE	First Names: Bernard Duah	Institution: Ghana Space Science and Technology Institute (GSSTI)	Centre: Ghana Radio Astronomy Observatory (GRAO)	Mobile: 00233 561 392911	Work Email: b.asabre@gaecgh.org Personal Email: bd.asabere@gmail.com	Title at currently position:	Research Scientist and Manager of GRAO	Date	Award Title	Subject/Field	Awarded Body	Sept.2016	PhD	Physics (Astronomy)	University of Johannesburg, South Africa [with Co-supervisors from University of Cape Town and Chalmers University of Technology]
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Sept.2016	PhD	Physics (Astronomy)	University of Johannesburg, South Africa [with Co-supervisors from University of Cape Town and Chalmers University of Technology]														

Feb. 2009	Msc	Engineering	Chalmers University of Technology, Gothenburg - Sweden
June 2000	Bsc (Hons.)	Physics	Kwame Nkrumah University of Science and Technology, Kumasi - Ghana




### 3. Previous Relevant Employment

Date	Appointment/Title	Work/Responsibilities Summary
Since May 2016 - to date	Research Scientist, Manager of GRAO, Astronomy Development Coordinator	Research, Administration, Astronomy Outreach. Teaching, Coordination/Development of Astronomy Activities and Programmes
Jan 2011 to date	Research Scientist (study leave partly)	Administration, Research, Teaching Assistant, Students Mentor Teaching,
Sept. 2000 – August 2006	Physics Tutor	Teaching, Administration, Mentoring
Sept 1994 – August 1996	Laboratory Technician (Obligatory National Service)	Portable water sampling, treatment and quality monitoring

### 4. Relevant Publications (3)

1. Pulsar Observations at the Ghana Radio Astronomy Observatory: T. W. Scragg, B. W. Stappers, R. P. Breton, J. N. Smith, D. Adomako, **B. Duah Asabere**, J. O. Chibueze, and K. Cloete, Proceedings IAU Symposium No. 337, 2017 (to be published soon).
2. Mid-infrared dust in two nearby merger-remnant radio galaxies, NGC 1316 (FornaxA) and NGC 612 (PKS 0131–36); **B Duah Asabere**, C. Horellou, T. Jarrett, and H Winkler Published in Astronomy and Astrophysics Journal: 2016A&A...592A..20D, and also in Astro-PH: 2016A&A...592A..20D
3. Radio astronomy in Africa: the case of Ghana; **B Duah Asabere**, M J Gaylard, C Horellou, H Winkler and T Jarrett. Published in the Proceedings of the 59 th Annual Conference of the South African Institute of Physics: SAIP2014 Proceedings, and also in Astro-PH: 2015arXiv150308850D

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Place & Date:		Signature of the applicant:	
<u>Dwingeloo, June 28, 2018</u>			
<p>June 28, 2018 </p> <p>.....</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>GHANA SCIENCE &amp; TECHNOLOGY INSTITUTE</p> <p>DEPUTY DIRECTOR</p> <p>29-06-2018 </p> <p>Date and Signature of the director of the home institute</p>	

**Dr. Bernard Duah Asabere**  
**Manager Ghana Radio Astronomy Observatory**  
Ghana Space Science and Technology Institute  
P.O. Box LG 80  
Legon - Accra  
Ghana

Dwingeloo, 27 June 2018

**Invitation letter for**

Given name : Bernard Duah  
Family name : ASABERE  
Date of birth : 10-OCT-1972  
Nationality : Ghanaian  
Passport no : G1847952  
Passport exp date : 25-OCT-2022

Dear Dr. Bernard Duah Asabere,

It gives me great pleasure to invite you to visit our Institute to work on European VLBI Network (EVN) data reduction, and to discuss further joint collaboration between the Ghana Radio Astronomy Observatory and JIVE in the field of very long baseline interferometry (VLBI) with the EVN, the African VLBI Network (AVN), and the Square Kilometre Array (SKA). Your host will be dr. Zsolt Paragi and dr. Jay Blanchard.

You will be most welcome to visit us between 29 October and 14 December 2018. For this period we will reserve a room for you in our guesthouse or in a nearby hotel. Your expenses will be partially covered by RadioNet (pending approval), and partly by the Jumping JIVE SKA-VLBI work package.

I am looking forward to seeing you at our Institute.

Yours sincerely,



Dr. F. Colomer  
Director