



# Report from the event supported by RadioNet

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**TITLE** *YOUNG EUROPEAN RADIO ASTRONOMERS CONFERENCE 2019*

**DATE:** 26th August 2019 to 29th August 2019

**LOCATION:** *DUBLIN, REPUBLIC OF IRELAND*

**MEETING WEBPAGE:** <https://dias.ie/yerac2019/>

**HOST INSTITUTE:** Dublin Institute for Advanced Studies

**RADIONET  
BENEFICIARY / NO:** *DIAS/16*

# Report:

## 1 SCIENTIFIC SUMMARY

*The Dublin Institute for Advanced Studies (DIAS) hosted the Young European Radio Astronomers Conference (YERAC) 2019 between 26th - 29th August 2019, using facilities at Trinity College Dublin (TCD), specifically the Schrödinger lecture theatre and Fitzgerald library in TCD School of Physics. A total of 29 participants took part (originally 30 however one participant cancelled shortly before the first day), each being given a chance to present their work.*

*In summary the schedule was comprised of participant presentations on Monday 26th - Wednesday 28th August and finished with an organised field trip to the I-LOFAR node at Birr Castle all day on Thursday 29th. Talks were interspersed with refreshments in the Fitzgerald library to aid with networking and interaction between participants. On the Tuesday and Wednesday, invited scientific talks were given by Prof Anna Scaife from the University of Manchester, and Dr Michiel Brentjens from the Netherlands Institute for Radio Astronomy (ASTRON). Wednesday's agenda was also supplemented by a workshop on scientific writing by Prof Janet Drew and Prof Michael Barlow, both editors of Monthly Notices of the Royal Astronomical Society (MNRAS), as well as a workshop on presentation and public outreach skills by Ms. Aine Flood from the Irish Low Frequency Array. Prof. Peter Gallagher from DIAS also gave an invited talk on LOFAR science during the tour of Birr Castle.*

*All registered participants presented their work on radio astronomy-related topics in 20 minute slots (15 minutes talks and 5 minutes of questions) covered in sessions ranging from extragalactic astrophysics, solar physics, pulsars, star formation and radio instrumentation. All talks were of a high quality with particular highlights coming from a series of 4 talks from the Event Horizon Telescope (EHT) team on their direct imaging of M87's black hole and accretion disc by Sara Issaoun, Freek Roelofs, Michael Janssen and Shan-Shan Zhao from Radboud University. Most of the talks utilised data taken from RadioNet affiliated facilities, mainly LOFAR, APEX and IRAM. As well as having the opportunity to present their work in a formal setting, students were also given the opportunity to chair sessions, allowing them to introduce speakers, moderate questions and facilitate discussion after each talk, in much the same environment as a professional conference setting*

*YERAC 2019's main purpose was for early career researchers to be given the chance to present their work, in a formal setting, perhaps for the first time. In light of this it was perhaps surprising that the calibre of the talks was so high in general. This event also gave the participants a chance to develop their network within astrophysics which was a great success, with much interaction both inside and outside of conference hours between all involved. Post-conference reports indicate that many are in contact with each other in both a scientific and personal capacity. In summary, YERAC 2019 has helped to ensure the sustainability of the research community within Europe, one of RadioNet's primary goals, by being a 'comprehensive networking and training opportunity'.*

*The event webpage can be found at <https://dias.ie/yerac2019> which includes a full schedule of the event, pdf versions of all talks, as well as other details of interest to RadioNet. We also actively covered the event on Twitter (@yerac2019) with each talk being given a post consisting of photos and a one line summary, which RadioNet was tagged in. Hashtag for the event was #YERAC2019 which can be used by RadioNet for images related to the conference. A dedicated Facebook group for the event was also created (YERAC 2019). In combination, all of these social media outlets have given the event, and RadioNet, good visibility.*

## 2 AGENDA OF THE EVENT

*A full schedule and participant list can be accessed on the webpage, with access to the presentation pdfs from each speaker. Below is a summary of that information:*

<b>Family name</b>	<b>First Name</b>	<b>Affiliation</b>	<b>Title</b>
<i>Benmahi</i>	<i>Bilal</i>	<i>Laboratoire d'Astrophysique de Bordeaux, France</i>	<i>Monitoring Jupiter's stratospheric H<sub>2</sub>O abundance with the Odin Space Telescope</i>
<i>Chalumeau</i>	<i>Aurélien</i>	<i>APC (Paris, France), USN (Nançay, France), LPC2E (Orléans, France)</i>	<i>Impact of planetary ephemerides on gravitational wave searches with Pulsar Timing Arrays</i>
<i>Chrysaphi</i>	<i>Nicolina</i>	<i>University of Glasgow, UK</i>	<i>The effect of scattering on split-band Type II solar radio bursts</i>
<i>Clarke</i>	<i>Brendan</i>	<i>TCD &amp; DIAS</i>	<i>Remote sensing the coronal magnetic field using Solar S-bursts</i>
<i>Cubuk</i>	<i>Kerem Osman</i>	<i>Armagh Observatory and Planetarium, UK</i>	<i>CO Mapping the Milky Way using Mopra Telescope</i>
<i>Feeney-Johansson</i>	<i>Anton</i>	<i>DIAS</i>	<i>A new method to measure magnetic fields in jets from young stars using LOFAR</i>
<i>Gómez-Garrido</i>	<i>Miguel</i>	<i>Observatorio Astronómico Nacional, Spain</i>	<i>Monitoring of SiO and water masers in evolved stars</i>
<i>Gupta</i>	<i>Prateek</i>	<i>Savitribai Phule Pune University</i>	<i>Detection possibility of low mass galaxy clusters and groups.</i>
<i>Issaoun</i>	<i>Sara</i>	<i>Radboud University, Netherlands</i>	<i>Calibration and imaging of the supermassive black hole in M87 with the EHT</i>
<i>Janssen</i>	<i>Michael</i>	<i>Radboud University, Netherlands</i>	<i>The 2017 observations of the Event Horizon Telescope</i>
<i>Kent</i>	<i>James</i>	<i>University of Cambridge, UK</i>	<i>Real-Time Radio Imaging through the EPIC Correlator</i>
<i>Kavanagh</i>	<i>Robert</i>	<i>Trinity College Dublin, Ireland</i>	<i>Tuning in to the radio environment of HD189733b</i>
<i>Kondapally</i>	<i>Rohit</i>	<i>University of Edinburgh, UK</i>	<i>Cosmic evolution of radio loud AGN in ultra-deep LOFAR observations</i>

<i>Leśniewska</i>	<i>Aleksandra</i>	<i>Astronomical Observatory Institute, Faculty of Physics, Adam Mickiewicz University in Poznań, Poland</i>	<i>Dust production in galaxies at <math>z &gt; 6</math></i>
<i>Maguire</i>	<i>Ciara</i>	<i>TCD &amp; DIAS</i>	<i>Insights into Coronal Mass Ejection Shocks with the Irish Low Frequency Array (I-LOFAR)</i>
<i>Mirocha</i>	<i>Agnieszka</i>	<i>Astronomical Observatory of the Jagiellonian University, Poland</i>	<i>Tracing low-mass protostars' properties with IRAM 30m submillimeter telescope</i>
<i>Motorina</i>	<i>Galina</i>	<i>Astronomical Institute ASCR, Czech Republic</i>	<i>Statistical approach to frequency rising submillimeter emission from solar flares</i>
<i>Murphy</i>	<i>Pearse</i>	<i>TCD &amp; DIAS</i>	<i>Interferometric imaging of Type III bursts in the solar corona</i>
<i>Mutale</i>	<i>Mubela</i>	<i>University of Hertfordshire, UK</i>	<i>HII regions in the Ku-band Galactic Reconnaissance Survey</i>
<i>Redaelli</i>	<i>Elena</i>	<i>Max Planck Institute for Extraterrestrial Physics</i>	<i>Molecular fractionation in the low-mass star forming regions</i>
<i>Roelofs</i>	<i>Freek</i>	<i>Radboud University, Netherlands</i>	<i>Comparing the EHT 2017 data to physical models of M87*</i>
<i>Ryan</i>	<i>Aoife Maria</i>	<i>TCD &amp; DIAS</i>	<i>Imaging the Solar Corona during the 2015 March 20 Eclipse using LOFAR</i>
<i>Sabatini</i>	<i>Giovanni</i>	<i>NAF-Istituto di Radioastronomia, ARC, Italy</i>	<i>On the size of the CO-depletion radius in the IRDC G351.77-0.51</i>
<i>Steinbergs</i>	<i>Janis</i>	<i>Engineering Research Institute "Ventspils International Radio Astronomy Centre" of Ventspils University of Applied Sciences, Latvia</i>	<i>Overview of VLBI observations in Irbene – Torun baseline</i>
<i>Timirkeeva</i>	<i>Maria</i>	<i>P.N. Lebedev Physical Institute of the Russian Academy of Sciences</i>	<i>On X-ray emission of radio pulsars</i>
<i>Topchieva</i>	<i>Anastasia</i>	<i>Institute of Astronomy, Russian Academy of Sciences, Moscow, Russia</i>	<i>The Spectral Type of the Ionizing Stars and the Infrared Fluxes of HII Regions</i>
<i>Verbena</i>	<i>Juan Luis</i>	<i>Observatorio Astronómico Nacional, Madrid, España</i>	<i>Interferometric observations of SiO thermal emission in the inner wind of M-type AGB stars IK Tauri and IRC+10011</i>

Webster	Brendan	The Open University, UK	Jet Feedback in a new sample of Galaxy Scale Jets from the LOFAR Two Metre Sky Survey
Zhao	Shan-Shan	Radboud University, Netherlands	Measurements of the shadow and mass of M87* with EHT 2017 data

### 3 PARTICIPANTS

A total of 29 participants (not including non-supported, non-contributing attendees) attended YERAC 2019, for which there was a gender ratio of 11 female to 18 male. Participants' institution countries included Ireland, UK, Spain, France, The Netherlands, Poland, Czech Republic, Germany, Italy, Latvia, Russia and India. Two local PhD-students, who did not register for the event, also attended but did not contribute and required no financial support. The vast majority were PhD students, with two junior, postdoctoral researchers present.

There were 2 invited speakers, with a gender ratio of 3 female to 2 male.



Figure 1: Our conference photo taken outside the main venue for YERAC 2019.

#### 3.1 RADIO NET NEWSLETTER

12 participants requested subscription to the RadioNet newsletter:

### 4 RADIO NET FINANCIAL CONTRIBUTION

RadioNet's €10000 was used to provide participants with accommodation, breakfast, coffee breaks and lunch at Trinity College Dublin within a few minutes walk of the venue (Schrodinger theatre of the School of Physics). Also,

*transportation (coach to/from the site) and the field trip to the I-LOFAR node at Birr Castle was paid for. Remaining money (~200EUR) from the 10000EUR was then put towards invited speaker costs. A full break down is below:*

- *7153EUR on accommodation*
- *590EUR on refreshments (during the programme)*
- *90EUR on welcome packs for the participants*
- *640EUR on lunches*
- *775EUR on the castle/I-LOFAR field trip*
- *550EUR on transportation for the field trip*
- *202EUR towards costs for invited speakers*

## **5 PUBLICATIONS**

*No publications have resulted from this conference.*