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Large RadioNet Conference

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CO	Confidential, only for members of the consortium (including the Commission Services)	

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ELUCIDATION:

Due to the Covid-19 the Art.51 applies to this deliverable. The original aim of this deliverable was a report on a Large RadioNet Conference. This conference was not possible to be organised due to the restrictions caused by pandemic. Thus a report on Young Radio Astronomers Conference (YERAC) organised by RadioNet beneficiary DIAS in August 2019 is the actual deliverable D2.8.

1 Introduction

The WP2.1 Science Dissemination focuses on supporting organisation of scientific meetings, in the form of large conferences, topic-oriented smaller meetings and informal very small workshops/discussion forums. Most of the events focus on scientific results achieved using the RadioNet facilities and/or technical developments of RadioNet activities. Additionally, cross-disciplinary events are supported, with the aim to feed the collaboration between radio astronomers and scientists working in other bands of the electromagnetic spectrum. This disseminates the knowledge acquired in our field to the broader astronomical community and at the same time broadens the scientific horizon of radio astronomers.

2 Summary of the meeting

The Young European Radio Astronomers Conference (YERAC) was hosted by the Dublin Institute for Advanced Studies (DIAS). The meeting took place 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 (11 female and 18 male) took part, 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

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(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.

2.1 The Program

Monday 26th August 2019 - Extragalactic

14:40 - 15:00	P. Gallagher	Welcome address
15:00 - 15:20	M. Janssen	The 2017 observations of the Event Horizon Telescope
15:20 - 15:40	S. Issaoun	Calibration and imaging of the supermassive black hole in M87 with the EHT
15:40 - 16:00	S-S. Zhao	Measurements of the shadow and mass of M87* with EHT 2017 data
16:00 - 16:20	F. Roelofs	Comparing the EHT 2017 data to physical models of M87*
16:20 - 16:40	-	Coffee + Posters
16:40 - 17:00	A. Leśniewska	Dust production in galaxies at z > 6
17:00 - 17:20	B. Webster	Jet Feedback in a new sample of Galaxy Scale Jets from the LOFAR TMSS
17:20 - 17:40	R. Kondapally	Host galaxies of radio sources in LOFAR deep fields
17:40 - 18:00	P. Gupta	Detection possibility of low mass galaxy clusters and groups
18:00 - 19:30	-	Welcome reception

Tuesday 27th August 2019 - Solar, Instrumentation and Pulsars

09:30 - 09:50	N. Chrysaphi	The effect of scattering on split-band Type II solar radio bursts
09:50 - 10:10	C. Maguire	Insights into Coronal Mass Ejection Shocks with the Irish LOFAR station
10:10 - 10:30	A. Ryan	Imaging the Solar Corona during the 2015 March 20 Eclipse using LOFAR
10:30 - 10:50	P. Murphy	Interferometric imaging of Type III bursts in the solar corona
10:50 - 11:30	-	Coffee + Posters
11:30 - 11:50	B. Clarke	Remote sensing the coronal magnetic field using Solar S-bursts
11:50 - 12:10	G. Motorina	Statistical approach to frequency rising submillimeter emission from solar flares
12:10 - 13:00	Prof. A. Scaife	SKA: a new era of radio astronomy
13:00 - 14:30	-	Lunch
14:30 - 14:50	A. Chalumeau	Impact of planetary ephemerides on gravitational wave searches with PTAs
14:50 - 15:10	M. Timirkeeva	On X-ray emission of radio pulsars
15:10 - 15:30	-	Coffee
15:30 - 16:10	Prof. J. Drew & Prof. M. Barlow	Workshop: Scientific Writing and Publication skills

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16:10 - 16:50	Á. Flood	Workshop: Presentations and Public Speaking
19:00 - 21:00	-	Conference Dinner

Wednesday 28th August 2019 - Star Formation, Evolved Stars and Instrumentation

09:30 - 09:50	J. Steinbergs	Overview of VLBI observations in Irbene – Torun baseline
09:50 - 10:10	J. Kent	Real-Time Radio Imaging through the EPIC Correlator
10:10 - 10:30	B. Benmahi	Monitoring Jupiter's stratospheric H2O abundance with the Odin
10:30 - 10:50	M. Mutale	HII regions in the Ku-band Galactic Reconnaissance Survey
10:50 - 11:10	A. Topchieva	The Spectral Type of the Ionizing Stars and the Infrared Fluxes of HII Regions
11:10 - 11:30	-	Coffee
11:30 - 11:50	K. Cubuk	CO Mapping the Milky Way using Mopra Telescope
11:50 - 12:10	A. Mirocha	Tracing low-mass protostars' properties with IRAM 30m submillimeter telescope
12:10 - 13:00	Dr Michiel Brentjens	Creative Telescope Abuse: pushing limits
13:00 - 14:30	-	Lunch
14:30 - 14:50	R. Kavanagh	Tuning in to the radio environment of HD189733b
14:50 - 15:10	E. Redaelli	Molecular fractionation in the low-mass star forming regions
15:10 - 15:30	G. Sabatini	On the size of the CO-depletion radius in the IRDC G351.77-0.51
15:30 - 15:50	A. Feeney-Johansson	A new method to measure magnetic fields in jets from young stars using LOFAR
15:50 - 16:10	-	Coffee
16:10 - 16:30	M. Gómez-Garrido	Monitoring of SiO and water masers in evolved stars
16:30 - 16:50	J. Verbena	Observations of SiO thermal emission in the inner wind of M-type AGB stars

Thursday 29th August 2019 - Field Trip

09:00 - 18:00	-	Excursion to Birr Castle/LOFAR station

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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 males, Fig. 1. 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.

Figure 1. Conference group picture © YERAC LOC

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Family name	First Name	Affiliation
Benmahi	Bilal	Laboratoire d'Astrophysique de Bordeaux, France
Chalumeau	Aurélien	APC (Paris, France), USN (Nançay, France), LPC2E (Orléans, France)
Chrysaphi	Nicolina	University of Glasgow, UK
Clarke	Brendan	TCD & DIAS
Cubuk	Kerem Osman	Armagh Observatory and Planetarium, UK
Feeney-Johansson	Anton	DIAS
Gómez-Garrido	Miguel	Observatorio Astronómico Nacional, Spain
Gupta	Prateek	Savitribai Phule Pune University
Issaoun	Sara	Radboud University, Netherlands
Janssen	Michael	Radboud University, Netherlands
Kent	James	University of Cambridge, UK
Kavanagh	Robert	Trinity College Dublin, Ireland
Kondapally	Rohit	University of Edinburgh, UK
Leśniewska	Aleksandra	Adam Mickiewicz University in Poznań, Poland
Maguire	Ciara	TCD & DIAS
Mirocha	Agnieszka	Jagiellonian University, Poland
Motorina	Galina	Astronomical Institute ASCR, Czech Republic
Murphy	Pearse	TCD & DIAS
Mutale	Mubela	University of Hertfordshire, UK
Redaelli	Elena	Max Planck Institute for Extraterrestrial Physics
Roelofs	Freek	Radboud University, Netherlands
Ryan	Aoife Maria	TCD & DIAS
Sabatini	Giovanni	NAF-Istituto di Radioastronomia, ARC, Italy
Steinbergs	Janis	Ventspils University of Applied Sciences, Latvia
Timirkeeva	Maria	Russian Academy of Sciences, Moscow, Russia
Topchieva	Anastasia	Russian Academy of Sciences, Moscow, Russia
Verbena	Juan Luis	Observatorio Astronómico Nacional, Madrid, España
Webster	Brendan	The Open University, UK
Zhao	Shan-Shan	Radboud University, Netherlands

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4 Impacts

RadioNet gives particular attention to the future generation. The YERAC is a long-standing tradition in the European radio astronomical community originally thought as a meeting, which would give young researchers and doctoral students the chance to present their research to the community and to connect with the generation of young radio astronomers in Europe. YERAC has preserved its scope and format since 1968 (http://yerac.jive.eu/), when it was first held. RadioNet has supported the YERAC organization since 2004. Thus, YERAC 2019 had a significant impact on the community of young radio astronomers.

To avoid duplication of work and to ensure continuity, together with the organizers basic guidelines concerning the purpose and organization of YERAC were developed. This guide is publicly available and is a base for future organizers, who, if necessary, should update the guidelines according to their new experiences.

During the entire event, there was active involvement on social media. The tag #YERAC2019 leads to the majority of posts on Twitter, Facebook and Instagram. The event resulted in a dedicated Facebook group for all the participants to keep in touch. Finally, the participants became aware of the relevance of RadioNet and its infrastructures.

5 RadioNet contribution

The total amount of support offered by RadioNet was 10000 EUR. It was used to provide participants with accommodation, breakfast, coffee breaks and lunch. In addition, transportation (coach to/from the site) and the field trip to the I-LOFAR node at Birr Castle was also paid for. The remaining money (~200 EUR) was used for the invited speakers.

6 Publications

No publications will result from this conference. The presentations can however be found online at:

https://dias.ie/yerac2019/

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