



Breaking down barriers in academia:

the EMCR Forum and TFOM as examples of interdisciplinary networks

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Introduction

Based at **CSIRO Space & Astronomy** (Sydney) since June 2019 - prior **ASTRON** (Netherlands, 2017-2019) and **University of Sydney** (2010-2017)

Current key roles include:



Head of ASKAP Science Operations focusing on survey science specification to ingest



ATCA DA Coordinator responsible for training duty astronomers to support the telescope



The Future of Meetings (TFOM) Chair
(ongoing as part of post-symposium phase)



EMCR Forum co-deputy Chair as part of the Australian Academy of Science



Why interdisciplinary?

Reasons we look beyond our fields

- **Build shared understanding**
 - Research collaborations
 - Consultation/communication
- **Enable mega-projects**
 - International experiments
 - Large-scale infrastructure
- **Identify shared challenges**
 - Method-based collaboration
 - Science outputs for public good
- **Connect related experiences**
 - Junior researcher networks
 - Diversity/advocacy initiatives
- **Construct a united front**
 - Cross-institution networks
 - International alliances/unions

The EMCR Forum

The EMCR Forum's mission is to serve as **the voice of Australia's early- and mid-career researchers**, championing **improvement** in the national research environment through **advocacy**.

- Founded in 2011 as part of the **Australian Academy of Science**, recognising challenges facing Australia's emerging researchers
- Represents those who self-identify as EMCRs, typically up to 15 years post-PhD **regardless of position or sector**
- Currently **over 6000 members** across Australia
- Activities overseen by **12 executive members** selected across discipline and expertise



EMCR Forum

@EMCRForum Follows you

The EMCR Forum is an advocacy group seeking to improve the research environment for Australia's Early- and Mid-Career Researchers

Australia science.org.au/emcr-forum Joined March 2015

2,444 Following 5,045 Followers

OUR VISION

A sustainable future for the early- and mid-career researchers driving Australia's knowledge economy

OUR MISSION

To provide leadership and advocacy that advances inclusion and empowerment of early- and mid-career researchers (EMCRs¹)

OUR DRIVING PRINCIPLES

We are **bold** in our ideas and are not afraid to challenge the status quo

We are **inclusive** of all EMCRCs in all sectors across all STEM disciplines

We are **trustworthy**. You are not alone. We are with you and for you

We are **proactive in engaging** with our members and stakeholders

We strive to be **effective and accountable** in everything we do

WHO WE REPRESENT

We are a grassroots network that represents EMCRCs in all sectors across all STEM² disciplines

OUR STAKEHOLDERS

• Australian Academy of Science • Government • Funding bodies • Employers of EMCRCs

THE EMCRC FORUM HELPS STAKEHOLDERS CREATE

Specialised input and perspectives on the needs of EMCRCs

A thriving research workforce

Connections with highly trained employees



OUR OBJECTIVES

To be a voice for EMCRCs across all sectors and all STEM disciplines

To advocate for best practice support of EMCRCs

INITIATIVES

-  **1** Build on and grow participation and engagement of EMCRCs in the Forum and its activities
-  **2** Extend and diversify the EMCRC Forum network in collaboration with our stakeholders
-  **3** Engage with members using digital platforms and social media
-  **4** Provide benefits for EMCRC Forum members through events, newsletters, competitions, surveys and resources

-  **1** Develop best practice policies for stakeholders to support optimal EMCRC career structures and opportunities
-  **2** Build on and contribute to equity activities
-  **3** Expand the advocacy program to influence key stakeholders
-  **4** Prepare submissions that represent EMCRCs on issues raised by key stakeholders

OUTCOMES

- Growth in our active and engaged membership
- Best practice research funding and career support policies and structures for EMCRCs in Australia

LONG-TERM AIM

Widespread recognition of the value of EMCRCs and their contributions in a diverse, equitable and empowered science and research sector

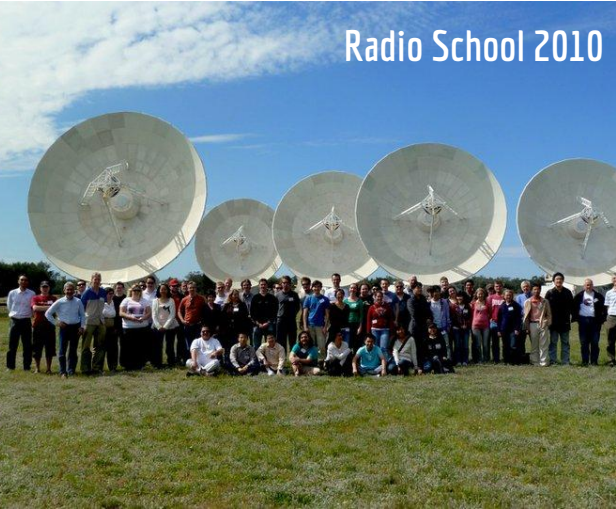


emcrforum



EMCR Forum Executive 2022: Dr Raffaella Demichelis (Chair), Dr Vanessa Moss (Co-Deputy Chair), Dr Mohammad Taha (Co-Deputy Chair), Dr Yee Lian Chew, Dr Timothy Lau, Dr Vipul Agarwal, Dr Angela Laird, Dr Maithili Sashindranath, Dr Charlie Morgan, Dr Emily Finch, Dr Emma Burrows, Dr Rowan Trebilco

Radio School 2010



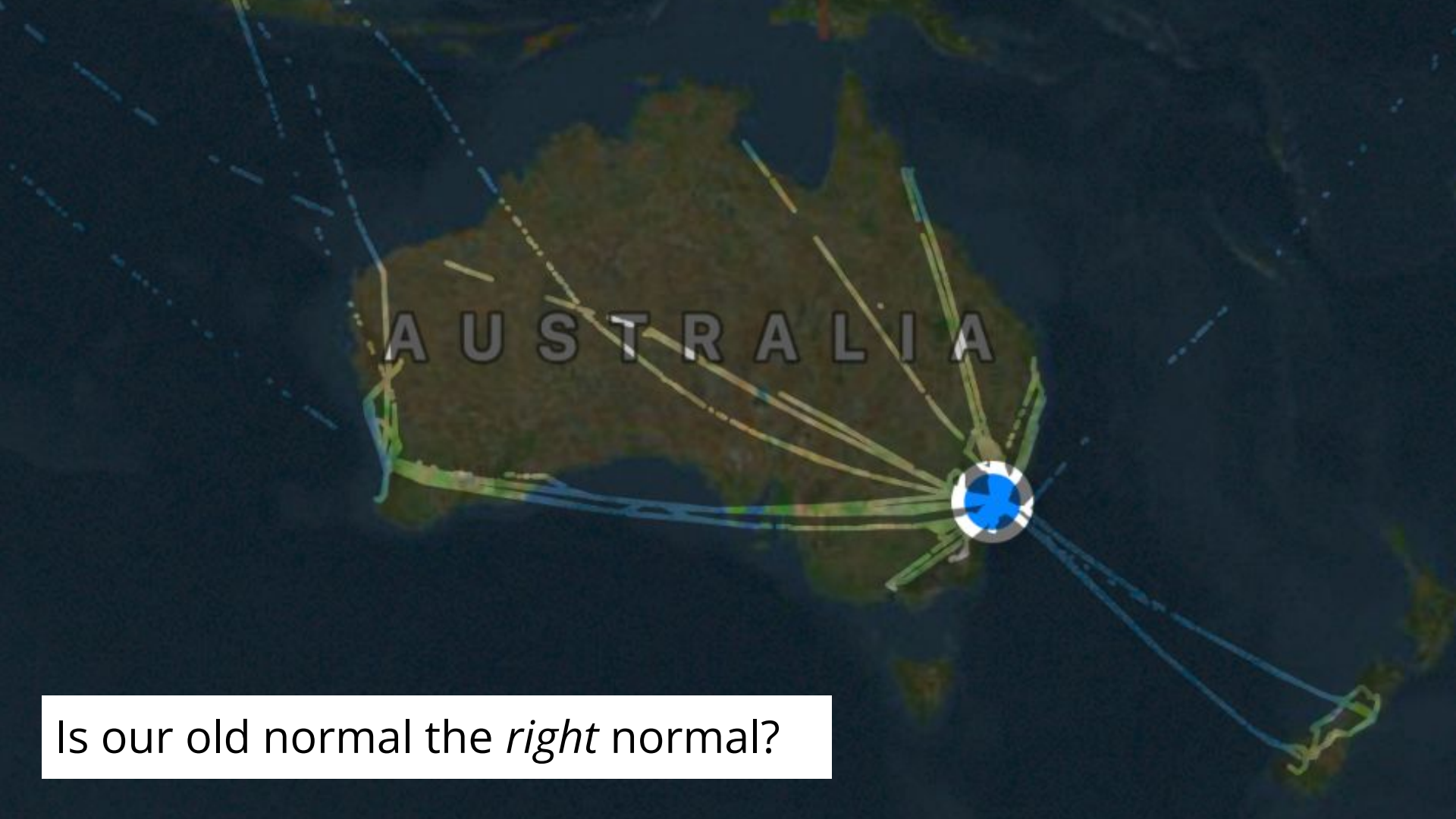
Astronomy 5/6/7



RFI 2016+



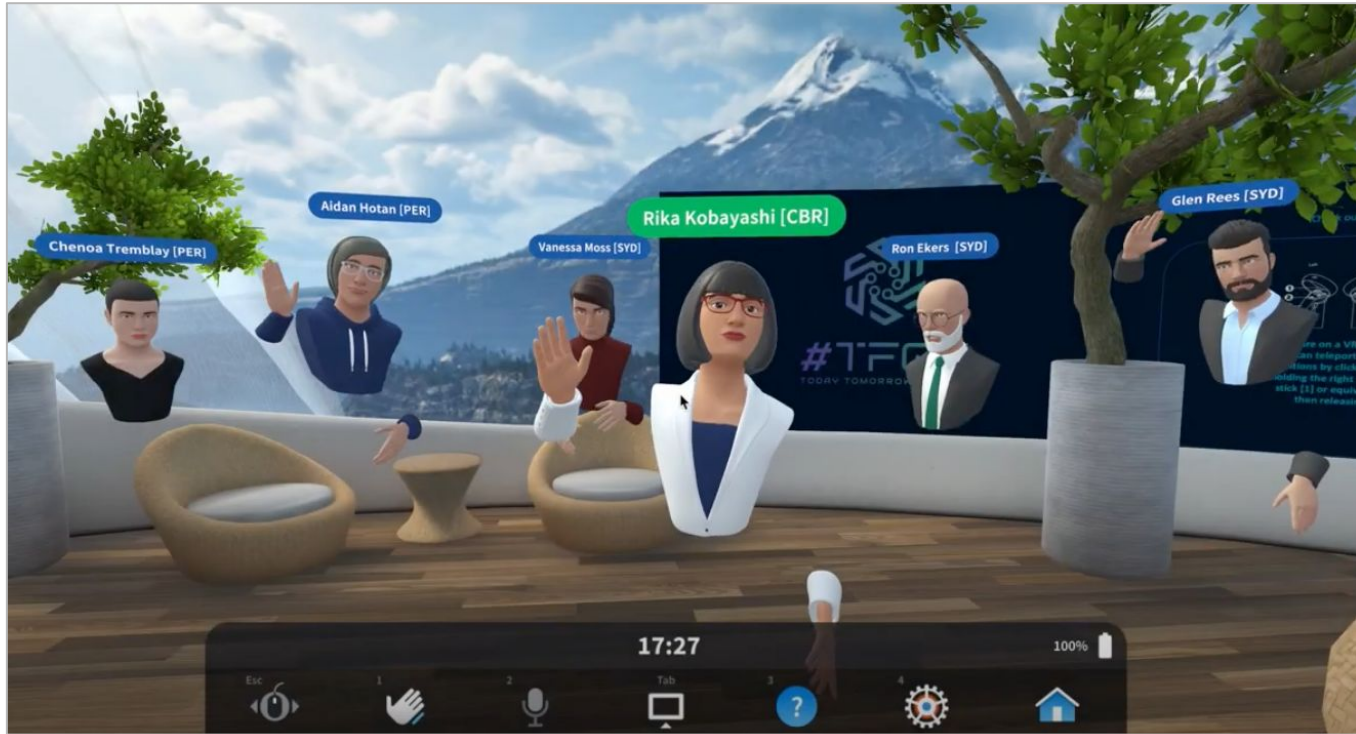
Conferences as a means of interdisciplinary exposure



A U S T R A L I A

Is our old normal the *right* normal?

Can we be together with people when we're apart?



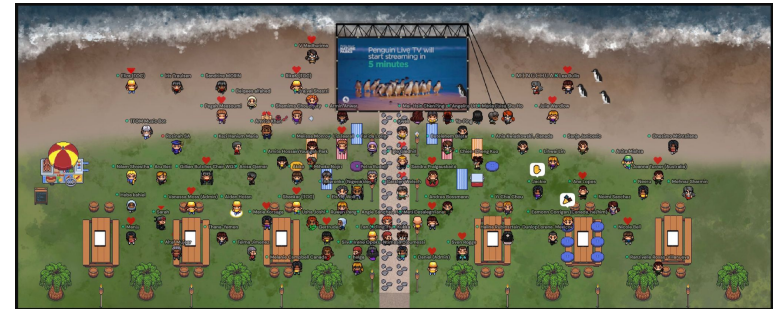
<https://youtu.be/uXegZUfjfH8>



The Future of Meetings (TFOM)

Our vision is a world that is increasingly **accessible**, **inclusive** and **sustainable** thanks to the benefits of **advancing technology**, both for the scientific community specifically and in wider society.

- Originated as the organising committee of **“The Future of Meetings”** CSIRO symposium (2020)
- Continued as **active community of practice** to collate and share outcomes from TFOM
- Provided **advice, design and execution** of virtual/hybrid events since then in partnership with academic conference organisers
- Ongoing experiments with technology to **pioneer new approaches** to virtual interaction



TFOM: BEST PRACTICE FOR INTERACTION

@FUTUREMEETINGS



**ACCESSIBILITY,
INCLUSIVITY,
SUSTAINABILITY**

Maximise accessibility, inclusivity and sustainability in all activities

Your choice of technology, approach and structure for any activity or interaction determines how accessible, inclusive and sustainable it will be as a result, which translates to positive or negative impact on both people and the environment

DIGITAL FIRST

Embrace a digital-first approach to interaction where possible

Going digital-first offers a level playing field for those involved and brings many opportunities for innovative ways to connect and collaborate



RIGHT TOOL/APPROACH

Find the right tool/approach for the given situation

Tools such as Whova, Altospace or Gather work best for very different contexts, so it is worth clearly defining your goals and choosing the tool/s to suit these desired outcomes

EXPERIMENTATION

Experiment regularly to build awareness of new solutions

Experimentation with new tools and approaches gives you diversity of experience, which then feeds into the suite of available solutions you have at your disposal



VALUE

Recognise the value that your team brings

By utilising the expertise of your team and taking ownership, it is possible to minimise outsourcing to where it is best applicable which maximises value for investment



EVALUATION

Evaluate at every step of the process for maximum impact

Evaluation of how well you are meeting your goals consistently provides useful reality checks and encourages you to adjust or adapt where needed



- ✓ **D**igital first
- ✓ **A**ccessibility
- ✓ **I**nclusivity
- ✓ **S**ustainability
- ✓ **E**xperimentation
- ✓ **R**ight tool/approach
- ✓ **V**alue
- ✓ **E**valuation



<https://readyplayer.me>



Activity highlights from EMCR Forum/TFOM

- Growth of membership to > 6000 people
- Establishment of Science Pathways
- EMCR website and resources ([website](#))
- Regular engagement with stakeholders
- Forming RepNet as extension of Forum
- Diversity in prizes and awards ([guide](#))
- Various submissions ([website](#))
- Updates via EMCR Pathways ([newsletter](#))
- COVID-19 impact survey ([media release](#))
- Initial symposium reaching > 1100 people
- TFOM symposium report ([Zenodo](#))
- TFOM article ([Nature Astronomy](#))
- TFOM website + archive ([website](#))
- Retro/planning workshop ([website](#))
- Various articles/posts ([website](#))
- Various talks/presentations ([website](#))
- Conference partnerships ([website](#))
- Ongoing community of practice ([website](#))



Why do they work?

EMCR Forum and TFOM as examples

- **United by a common cause**
 - Making things better for EMCRs
 - Adapting academic practices
- **Broad range of perspectives**
 - Diverse membership/expertise
 - Shared challenges across fields
- **Initial/ongoing support***
 - Australian Academy of Science
 - CSIRO Research Office + S&A
- **Timely relevant issues**
 - Addressing EMCR support issues
 - Future of work and interaction
- **Digital-first community**
 - Location-agnostic collaboration
 - Synchronous and asynchronous mode of working/collaborating

** Support from established entities ensures validation of & recognition for effort*



Effective interdisciplinary collaborations can be realised by uniting people across disciplines in the context of **solving shared challenges** and **applying similar skill-sets** to societal issues

 @EMCRForum
 @futuremeetings

Resources and links

- EMCR Forum: <https://www.science.org.au/supporting-science/early-and-mid-career-researchers-0>
- EMCR Forum Twitter: <https://twitter.com/EMCRForum>
- EMCR Forum 2021-2025 Strategic plan:
<https://www.science.org.au/supporting-science/early-and-mid-career-researchers-0/emcr-forum-strategic-plan>
- TFOM Report: <https://zenodo.org/record/4345562>
- TFOM Nature comment: <https://www.nature.com/articles/s41550-021-01325-z>
- TFOM website: <https://thefutureofmeetings.wordpress.com>
- TFOM Twitter: <https://twitter.com/futuremeetings>
- EMCR Forum x TFOM Perspective:
<https://www.science.org.au/news-and-events/newsletters/emcr-pathways-newsletter/issue-25-november-2021/emcr-perspectives-future-meetings>