Community as an Enabler of Scientific Progress and Innovation

IAS lunchtime seminar (November 9, 2026)

"...aim of this IAS major project is to investigate the role of communities as drivers of scientific progress with the key objective to enable better community engagement to unlock more effective and efficient scientific progress and innovation…"

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IAS fellows: Jarita Holbrook (Edinburgh: Michaelmas 2026), Marion Maisonobe (Paris: Michaelmas 2027)
IAS visiting scholar: Rhodri Leng (Edinburgh) and also 15 project partners

Durham University
Institute of Advanced Study

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What is a community?

External vs. internal approaches to “community”

- external/etic: sociological and anthropological approaches to ‘community,’ defined and viewed from the outside
- internal/emic: internal approaches to community, defined and viewed by the members of the community themselves

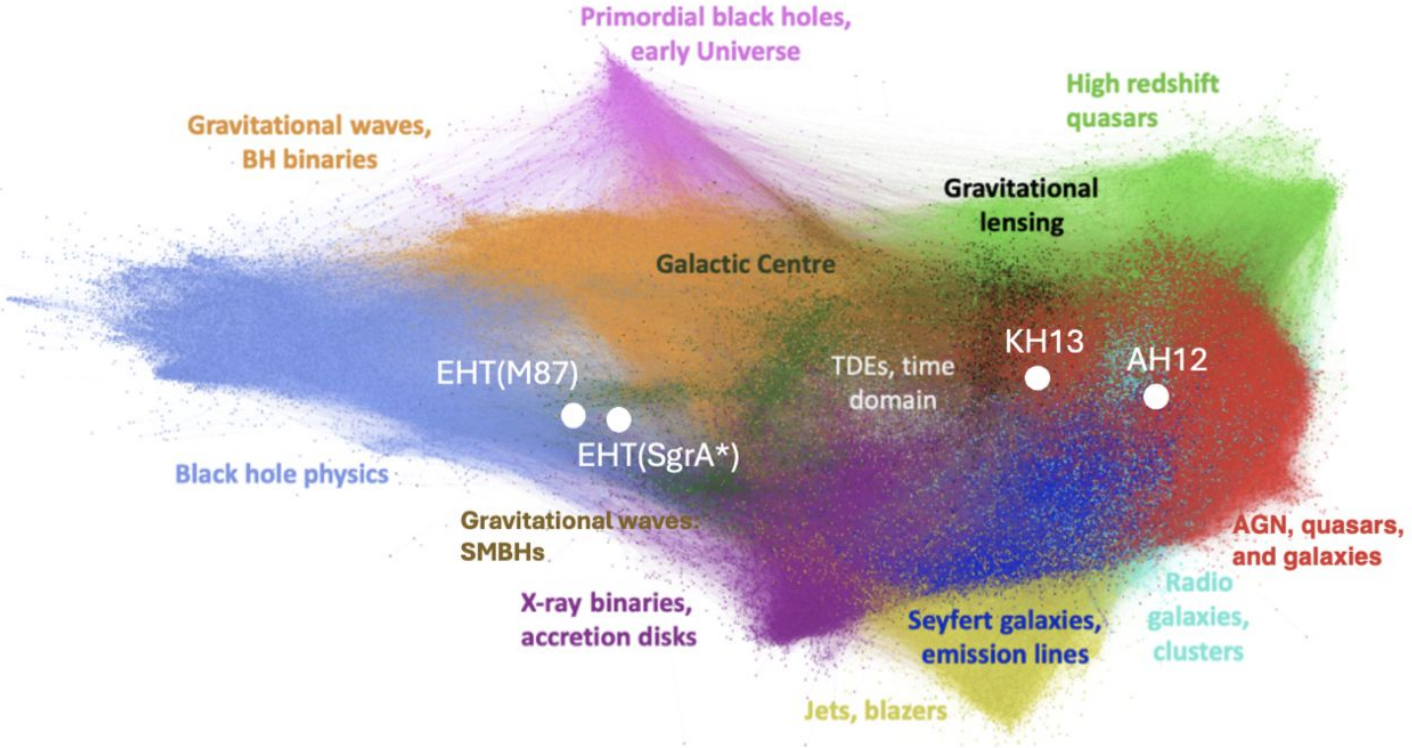
Scientific and research communities

- defined as groups of people who share something in common, e.g., research interests, lab space, disciplinary label
- exist on many different levels: broad international networks encompassing entire disciplines; sub-disciplines connected through specific areas of research; departmental/institutional/administrative groups; specific research projects connected to a single team.

Example: levels of research communities in quantum physics

Classification	**Example(s)**
Research discipline	physics
Research field	quantum light & matter
Research subfield	Rydberg systems
Research groups/labs	Strontium lab, Cuprite lab, Terahertz lab

An example: the black-hole research community



Citation network diagram for all research over last 20 years on “black holes” produced by Dr Rhodri Leng (IAS visiting scholar)

Project themes

- **Operations and culture**
  - day to day activities
  - tools and resources



- **Communication and discussions**
  - meetings
  - publishing



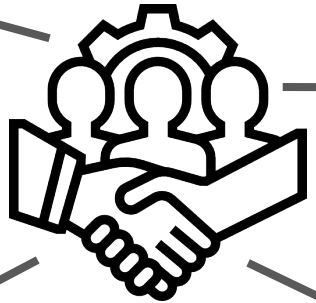
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care
community
co-authoring
culture
conflict
conferences
citations
communication

Ongoing project strands: operations and culture



Care in the scientific research community



Community engagement: UK astronomy community through fish-pool discussion sessions

The IAS as a case study

“Little Red Dot” research: operations of a community under pressure

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Care in the Research Community

Tronto's fourfold care-ethics framework:

Type of care	**General manifestation**
caring about	attentiveness
caring for / taking care of	responsibility
caregiving	competence
care receiving	responsiveness

Care in the Research Community

- How are these types of care manifest in research communities, esp. scientific ones?
- Is the language of care manifest in these research communities?
- What are the barriers to introducing the language of care into these communities?
- How do we get people to care about caring?






Ongoing project strands: communication and discussions

"It depends on what you mean": How do we talk to each other?

The effectiveness of research meetings: conferences, workshops, and symposia

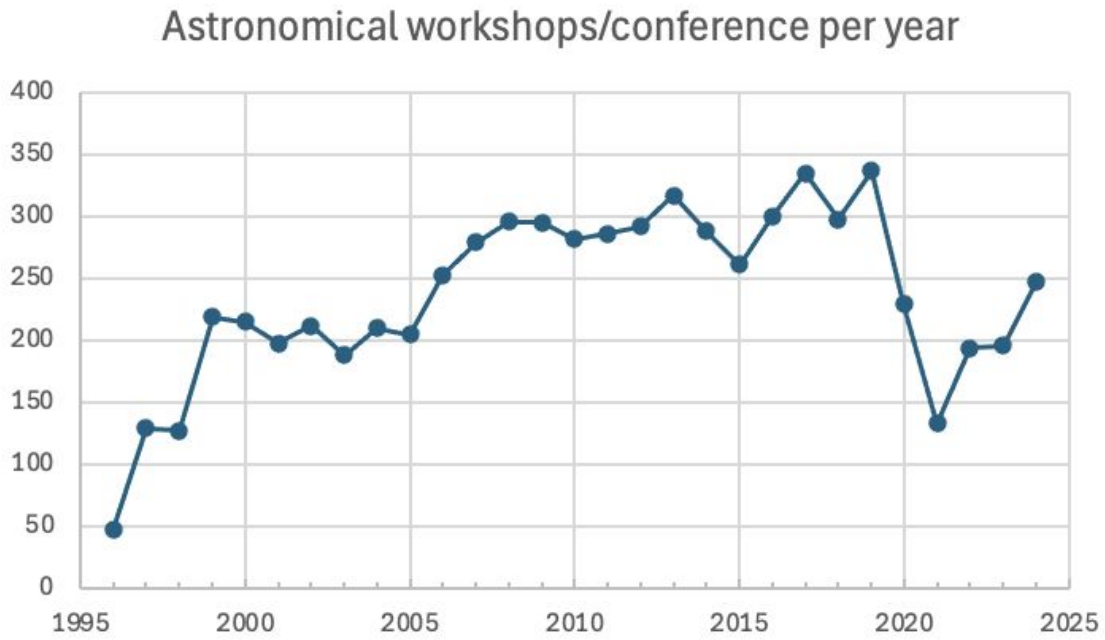


Conflict resolution: How do we navigate high-stakes communication?



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The effectiveness of research meetings: case for astronomy



Too many scientific meetings!

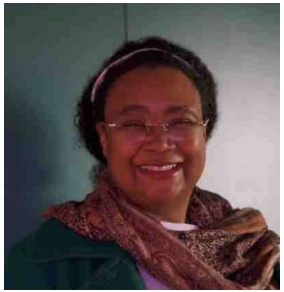
Worse: too many are “show and tell” meetings

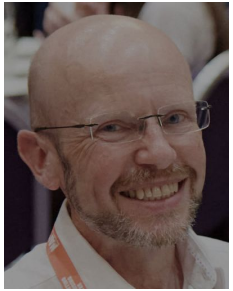
Not enough effective research discussion, moving forward the field

The effectiveness of research meetings: case for astronomy

Ongoing projects within this strand:

- **Science advancement in workshops and conferences:** case study on a recent Lorentz Center workshop
- **Meeting organisation guidelines:** selecting the right approach depending on the intended outcome
- **Challenging the community:** facilitating a workshop on understanding “Little Red Dots”, a highly **competitive and combative** black-hole research community







What we want from you?

- **Intersections between projects** - conflict resolution and scientific progress; science communication and communication between scientists; social/group psychology: how do communities operate?; combating resistance to change

- **What are we missing?** - what are the questions we aren't asking that we should be asking?

- **What can we offer?** - what can we add to what you are doing?

