

## GCRF Meeting

### Attendees

Chris Bick (University of Exeter) – CB  
Goylette Chami (Univeristy of Cambridge ) – GC  
Tim Connelley (Roslin Institute) -TC  
Paul Glendinning (ICMS) - PG  
Gabriel Lord (ICMS/Heriot-Watt University) - GL  
Frank Neumann (University of Leicester) - FN  
Gbemi Oluleye (Imperial College London) - GO  
Surajit Ray (University of Glasgow) - SR  
Mark Roberts (University of Surrey) - MR  
Seyed Shariatipour (Coventrey University) - SS  
Dawn Wasley (ICMS) - DW

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### Apologies

Anitoda Madzamuse (University of Sussex)  
Konstantinos Zografos (Lancaster University Management School)  
David Abrahams (Issac Newton Institute)

### **Welcome**

GL/DW gave a brief welcome and background. It was recognised that GCRF call is competitive and understood that people could share as much or as little information as appropriate. ICMS/INI bid slightly different as representing infrastructure to UK maths community, so keen to get community input and view point.

It is known that the call is heavily oversubscribed

### Gabriel Lord/Paul Glendinning (ICMS/Heriot Watt University)

GL gave a quick overview of ICMS/INI proposal. PG supplemented this with more info in the afternoon. Part of the building capacity call , running meetings, bring people together, forums for researchers to engage. Looking to support the development of new relationships, and support pre-existing contacts. RIGS (research in groups) type activity. Some challenges with 1 year timescale.

MR encourage to maximise overseas activity. PG – agree but concern re timescales. Consider exchange visits, i.e. 1 visit in host country and return visit in UK.

Chris Bick – University of Exeter (previously University of Oxford)

2 bids being submitted, both focussing on SE Asia. One based on capacity building (CB involved), the other based on flood modelling (Ian Hewitt is the main POC)

Interested in finding more about maths/maths education/curriculum steer to support plans for community building. (MR suggested that Balazs Szendroi, Oxford may be an useful contact)

TC – reported that accessing fund to focus on gender balance has been relatively straightforward and that institutional GCRF funding is a good source to get support for these type of activities.

Seyed Shariatipour Coventry University

Interest in the area of energy & environment. Not involved in proposal (largely due to time pressures) But lots of links to energy consumption. Has programme with 21 International Links related to energy environment, predominantly in South America/Africa/Middle East. Keen to find out more about this initiative and how to engage in the future.

Frank Neumann – Leicester University

Was involved in a capacity building bid from Liverpool that was unsuccessful. Strong links with Ghana and Tanzania. Keen to support this area and has ideas/thoughts links that may be useful for others.

FN is part of the Mentoring African Research in Mathematics (MARM), <https://www.lms.ac.uk/grants/mentoring-african-research-mathematics>, mentoring projects costing £10K for 2 years, this initiative pairs UK researches with Africa and has a fairly open remit. Workshops to make participants less isolated. Funded via LMS – just finished the last 4 projects. Could ICMS/INI be involved in this?

Mark Roberts (University of Surrey)

Has strong links with AIMS Tanzania

Research bid – re albinism in Tanzania – social inclusion.

Step 1 – data – quantify deprivation. Then incorporate social networks

Aim: network model how relationships effect social inclusion – initially Tanzania but extend beyond.

Strong Links to maths community in Tanzania, use NGO to translate to other countries

Local internal funding to consider some of the psychological factors. Interesting that local GCRF call (at Surrey) was 5 times oversubscribed.

Gbemi Oluleye (Imperial College London)

Chemical Engineer, working with Dan Crisan (Imperial)

Capability building in climate change – looking at sub-sahara (South Africa/Nigeria)

Would welcome more partners. Suggested to link to the Future Climate for Africa project. Strong existing links with Nigeria.

SS mentioned some relevant work links in his area that might be of interest.

UQ a particular interest

Goylette Chami (University of Cambridge)

7-8 years involvement in Uganda in de-worming projects/ en masse treatment campaigns.

Not involved in a particular proposal but has strong interest in this area and keen to support and advise. Has some ideas of mechanisms that may work and

Gave an overview of the **Alborada** (<https://www.cambridge-africa.cam.ac.uk/initiatives/the-alborada-research-fund/>) fund at Cambridge as a model for interaction. A key element of this is mentoring by a Cambridge based academic.

Suggested an INI type programme for 2-6 months could be a very interesting mechanism. – EPSRC Maths Precision Healthcare – linking to INI programme.

GC: video lecture as part of course – could SMSTC/MAGIC type activities be made available? MR noted that this was raised in the February meeting.

Surajit Ray (University of Glasgow)

Involved in research bid, related to river quality. Partners include Hutton/CEH and Indian Institute of Technology (Kanpur). Work will be mostly statistical. ODA capability appears clear. SR raised concern regarding general capability. Consensus was that having strong local benefit key, and should be focus of ODA statement – Mentioning general relevance – but more focus given to the local (in country) benefit.

Question from SR – with the ODA statement should the focus be on the identified area of world or broaden focus to other countries. View in meeting was focus should be identified country with a general statement regarding applicability elsewhere. Seek clarity from local GCRF advisor.

Dawn Wasley (ICMS)

DW gave a brief overview of other input/contributions received in advance of meeting

Anitoda Madzamuse (University of Sussex)

Working with South Africa Mathematical Sciences Association (SAMSA) – which represents 15 universities throughout the Sub-Saharan region.

Jonathan Dawes (University of Bath)

Understanding 'water stress' compiled by various agencies and insight into outbreak of violence/conflict. Focussing on MENA region, existing strong links with Jordan and Morocco. Keen to involve other mathematical science based collaborators, and encourages anyone interested to get in touch.

Apala Majumdar (University of Bath)

Training School type activity in ISSER Pune (India), targeting under-represented higher education institutions in the area.

Jeroen Lamb (Imperial College)

Bid will involve research with VIASM/VAST (Hanoi, Vietnam). Is particularly interested in understanding the ODA requirements of this EPSRC call.

Konstantinos Zografos (Lancaster University Management School) – confirmed they are involved in 2 proposals - Operational Research Capacity Building and 2) on Disaster Management Research.

Tim Connelley (Roslin Institute, University of Edinburgh) is Director of the International Veterinary Vaccinology Network. This network established was with GCRF funding. TC was invited along to share insight and lessons learned. Having heard the different talks he drew parallels with the vaccinology network and gave an overview of the IVV Network – which would be an interesting model for Maths to consider. Questions raised by TC highlighted some of the overlap and the benefits of the community coming together.

Comments on IVVN – has hub to co-ordinate activity and enable a balanced portfolio. Attractive model to consider

TC: What infrastructure is needed?

A: Not labs! Mentoring, basic university infrastructure. Modern/fundamental. Predominantly – human capacity, big teaching loads exists – so **time** is the big thing.

TC – look at existing GCRF programmes – how much maths in year.

TC – could 'someone' do a gap analysis on the EPSRC proposals (post proposal submission) to see what the strengths/weakness are – identify where the maths is.

ODA discussion

There was a discussion that the ODA statement will be key to the proposals. DW had discussed with the University of Edinburgh– GCRF advisor. A handout was provided (this contained the info from the research councils on this, and the UoE distillation of the info). Bottom line is to be ODA compliant proposals need to promote economic/welfare development in the country. Outcomes need to relate to the economic challenges. There can be a tendency to refer to lots of *Sustainable Development Goal* (STG) in general terms, whereas time much better spend giving detailed responses against fewer STGs.

PG confirmed that ODA compliance will be an essential element of these proposals likely to be scrutinised. Advice was to focus on answering Q2 (How is your proposal directly and primarily

relevant to the development challenges of this country/countries?) – Time spent on this will help with Q3 (How do you expect that the outcomes of your proposed activities will promote the economic development and/or welfare of this country/countries? )

General consensus was that local GCRF POC are keen to support academics to engage and will have useful insight when writing ODA statements etc – Involve them early in your proposals!!

### General Discussion/Topics

Time is to support Early Career Researchers. Post Docs not viewed favourably (East Africa) so support to this career stage vital.

There has been recent activity in Kenya (Mesano University), David Stern – to broaden doctoral training. A priority has been how to teach and assess 400 students efficiently. This might be a good model worth considering

CB: What % of university faculty have PhDs?

A: Lower than you think, there is a huge teaching load on PhD students, so PhDs typically take 7-8 years.

MR noted that PhD at home institution then ‘time out’ at a UK university would be preferable.

Want impact to be in the home countries. Aim for the majority of activity to be in home countries (where possible)

Equitable Partnerships – consider is this a genuine collaboration

Ethical Good Practise - molecular genetics experience may be worth considering. Animal/Plant ethical framework – key to ensure that methods are practical. Low cost community engagement – worth considering how you include this in programme.

Role of overseas partners – to generate/collate problems

PG flagged – EBOLA workshop

MR- this is an emerging area – so what is crystallising is who to represent the UK community. PG – role of INI/ICMS to offer the infrastructure. – a model comparable to the IVVN is an interesting start point. Website

TC highlighted the forthcoming UK & International Veterinary Vaccinology Network Conference 2019 (9-10 January). If anyone from the emerging UK Maths Community would like to participate they would be welcome to and can contact Tim. Contact details for meeting participants are given below.

<http://intvetvaccnet.co.uk/uk-international-veterinary-vaccinology-network-conference-2019>

MR discussed some future ideas regarding CDTs either a specific GCRF Maths CDT OR GCRF students dispersed across the existing Maths CDTS

## Publication

The conflict that arises from the requirement for African students to obtain 4 publications before they get their doctorate. This has led to predatory journals and predatory conferences. There was some initial discussion regarding this

- GCRF workshops with conference proceedings/Special series
- Online platforms – submit article. (e.g. PeerJ (<https://peerj.com/>) or AAS Open Research, <https://aasopenresearch.org/>)
- Output from activity a Maths for development textbook

Complex area, need to ensure – efforts to solve do not make matters worse, and the pressure to publish can be overwhelming.

Also need to be aware of enabling collaborators to publish etc.

## **Actions arising from meeting**

DW to write up and distribute to participants and those who provided info.

DW to share participants contact details

If participants happy, then distribute meeting write up to wider community

All – consider is anyone appropriate from community to attend IVVN meeting in January.

ICMS – continue to keep community updated with info over the coming months.