Some thoughts on obtaining research funding

Alison Ramage, University of Strathclyde

ICMS Retreat for Women in Applied Mathematics

January 2023

About me

- Reader in Mathematics and Statistics at University of Strathclyde.

- EPSRC panel experience (all Mathematical Sciences):

  - Member of Responsive Mode Prioritisation panel (2008, 2011)

  - Chair of Responsive Mode Prioritisation panel (2012, 2015, 2022)

  - Member of Programme Grant Interview panel (2016)

  - Chair of Fellowship Interview panel (2019)

  - Chair of online Fellowship Interview panel (2021)

- Other reviewing experience includes member and chair of NordForsk review panels; reviewer for EPSRC, NSF (USA), NSERC (Canada); Carnegie Trust Assessor; European Research Council; Science Foundation Ireland; etc.

Getting started

- Have a bright idea!
    - A good proposal stems from a good concept.

- Ask yourself
    - what you want to do;
    - what you need to achieve it;
    - where is the best place to apply.

- Consult
    - more experienced colleagues;
    - funders' websites;
    - funding opportunities emails;
    - institutional funding support services;
    - previous applications.

Choosing the right funder

- Be prepared to
  - look around for the most appropriate scheme;
  - think creatively about how your project might be presented.

- Make sure you fit with
  - the aims/objectives of the particular sponsor/call/panel;
  - the sponsor's typical range of project funding.

- Be aware that
  - success rates can vary greatly among schemes;
  - success rates can be particularly high in early years of new/highly targeted schemes;
  - some funders pre-process, e.g. EPSRC "Remit Query" form for interdisciplinary projects;
  - most funding bodies will offer advice over the phone.

Essential basics

- A good proposal is always
    - readable and understandable;
    - well-organised;
    - grammatically correct.

- You must
    - read and follow the funder's guidelines carefully;
    - be aware of the review procedure;
    - start writing well in advance of the deadline.

- You should also
    - sound enthusiastic;
    - use positive language;
    - try to make your application stand out from the crowd;
    - begin with a clear stand-alone summary of the whole proposal.

- Remember that
  - your proposal may be 'pre-assessed' by a non-specialist programme manager;
  - all reviewers and panel members will not be experts in your field;
  - you may need to nominate suitable reviewers:
    - Friend or foe?
    - Multidisciplinary area?
    - Knows UK/UKRI systems?

- Learn what you can about
  - the sponsor's review procedure;
  - the specific criteria for proposal evaluation;
  - the reviewer's form.

- Include
  - phrases you would like the reviewers to use.

What does a reviewer want to know?

- What
  - do you want to do?
  - has already been done in the area of your project?
  - difference will your project make?

IMPORTANCE proposition
The research problem is important to the funder,
as defined by their remit.

- Which
  - methodologies do you propose to use?
  - techniques will be used to evaluate the results?
  - routes will be used to disseminate the results?

SUCCESS proposition
The project offers a realistic promise of a solution.

- How
  - does the proposal relate to the sponsor's interests?
  - much will it cost and much time will it take?

<div style="color:red; text-align:center">

VALUE proposition
The resources requested are necessary, sufficient and appropriate to the scale of the problem.

</div>

- Why
  - you, rather than someone else?

<div style="color:red; text-align:center">

COMPETANCE proposition
PI, team and institution are capable of carrying out the project.

</div>

What additional information may be required?

- Justification for Resources.

- Workplan.

- Pathways to Impact document.

- CVs of students, postdocs, visitors.

- Letters of support from project partners.

- Equipment quotes.

- Host organisation statement.

Common criticisms (1)

- The proposal
  - is badly presented or incomprehensible;
  - cannot be judged on the evidence presented;
  - is a routine application of known techniques;
  - contains so much detail that all flexibility is eliminated;
  - is too expensive for the probable gain.

- The research question to be addressed
  - cannot be identified;
  - is woolly or ill formed;
  - has already been addressed;
  - is not worth addressing.

Common criticisms (2)

- The proposers
  - seem unaware of related research;
  - are attempting too much for the funding requested and time-scale envisaged;
  - have not shown that they will succeed where others have failed;
  - appear pretentious, pompous or arrogant;
  - should be funded by their own institution.

- The budget
  - contains inadequate detail;
  - contains items not described and justified in the narrative.

- The impact
  - has not been clearly identified.

Some final advice

- Always
  - provide all requested information and answer all questions asked in the format indicated, no matter how irrelevant such requests may seem;
  - emphasise how your project is unique;
  - let as many people as possible read your proposal;
  - listen to their advice.

- Be ready to
  - respond to reviewers' criticism in a well-argued and non-aggressive way;
  - be realistic about your prospects;
  - use failure in a positive way;
  - try, try, and try again . . .

Many supporting resources available

- **Advice on Writing Proposals**
  EPSRC

  `https://epsrc.ukri.org/funding/applicationprocess/preparing/`

- **How to write a good research grant proposal**
  ESRC

`https://esrc.ukri.org/funding/guidance-for-applicants/how-to-write-a-good-research-grant-proposal/`

- **Writing a Good Grant Proposal**
  Simon Peyton Jones and Alan Bundy

`https://www.microsoft.com/en-us/research/academic-program/how-to-write-a-great-research-proposal`

- **Parker Derrington Ltd**
  `https://parkerderrington.com/`

- ...

- What skills are most important for writing grant applications and where can the process go wrong?

- What does the current UK funding landscape look like and how is it likely to evolve?

- What role should our institutions and learned societies be playing in supporting grant writing activities?

- ???