

Proposal Writing

Or my 2 cents about it

Anna Nelles & other seniors



HELMHOLTZ RESEARCH FOR
GRAND CHALLENGES



ERLANGEN CENTRE
FOR ASTROPARTICLE
PHYSICS

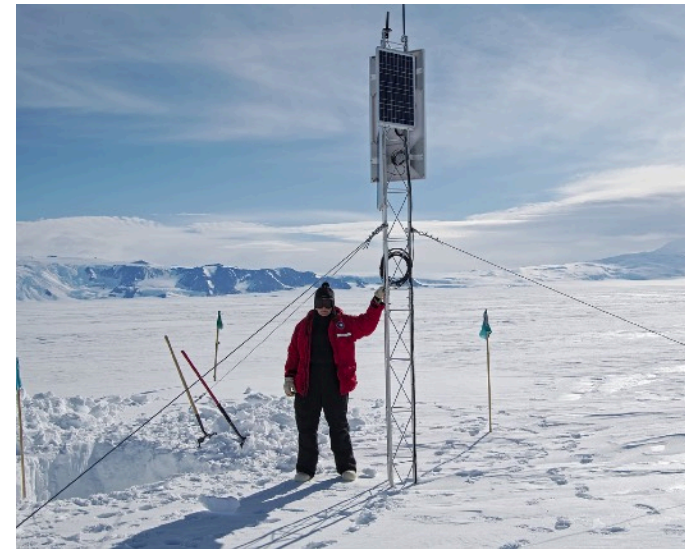


Friedrich-Alexander-Universität
Erlangen-Nürnberg

CV

The nominal steps

- 2004 - 2010: Physics at RWTH Aachen, Germany (Diploma)
- 2008 - 2012: Business and Economics at RWTH Aachen (MBA)
- 2010 - 2014: PhD in Astrophysics at Radboud University Nijmegen, The Netherlands
- 2015 - 2018: Postdoc and DFG Fellow at University of California, Irvine, USA
- 2018 - 2019: Emmy-Noether Group Leader, HU Berlin, Germany
- Since 2019: Professor of Astroparticle Physics (Erlangen) and Staff scientist at DESY Zeuthen
- *Served in MANY university bodies as student, PhD, post-doc rep*
- *Married since 2015, two children (3 and 6 years old)*



Lets face it

No one will have a career in science without successfully securing funding

- Why?
- Research institutions have a hole in the budget
- Universities compete for money / people / prestige / ideas
- Third party funding is needed to get large projects going
- For every funded grant, the university gets 'overhead'
- Big projects with publicity are good for prestige / ...
- Hiring people is one of the largest expenses
 - O(80k) per year for PhD student / post-doc
 - O(150k) (or more) per year for Professor + pension + for life + ...

In order to get funded, you need funding

Start early, start young

- Why?
- No one wants to be wrong, so if you were funded before, you are probably good
- Things like travel grants, scholarships to go abroad are much easier to get
- Build expertise in writing, thinking about ideas, defending proposals, and presenting yourself
- If you are a senior post-doc and haven't gotten funding people will start to get suspicious
- There is always a section on each application form for 'funding' and you don't want that empty

My funding track record

* recommended
+ Individual application

Red = Not funded, Green = Funded

Before PhD	- Studienstiftung*	- Femtec Scholarship+ - e-fellows* - Karman Price*
During PhD	- Frye Stipendium*	- 5 Travel Fellowships+
After PhD	- DAAD fellowship+ - Rubicon grant+	- German Research Foundation Fellowship+
During Post-Doc		- Emmy Noether Grant+ - Helmholtz-Professorship* - IUPAP C4 Young Scientist Price*
As faculty	- DFG Germany-Russia Program - Collaborative Research Center (Co-I) - AKF Price* - DFG Grant (1) - DFG Grant (2)	- Professorinnen Program+ - ERC Starting Grant+ - Helmholtz-Weizmann Graduate School (Co-I) - Erum-Data (Co-I) - Erum-Universe LOFAR (Co-I) - Erum-Universe IceCube (Co-I) - Erum-Transfer (PI)
Currently Pending	- DFG Grant (3) - DFG Grant (4)	

Please remember from this slide: Don't despair if your proposals don't get funded

How does a proposal process typically work?

Unfortunately, every one is different — double-check your funding line

- May or may not involve:
 - Expert reviewers:
 - Experts in your field who review your proposal for feasibility and science content (e.g. first step of DFG proposals); typically knows the experiment you work on and the details
 - Review panel:
 - Experts in your broader field, e.g. astronomy (in general) or particle physics (in general); understands the context of your research, but probably not the technical details
 - General panel:
 - Experts of all sciences or even politics; will not know the technical details and sometimes not even the scientific context, looks for broader impact, uniqueness, your ability to convey your science, ...
- All of these require very different proposals!

How does one even start?

There is no golden recipe to writing a proposal, otherwise everyone would have it

- A good proposal can be summarized in 5 sentences — ideally even in one
- You need to think about the one unique selling point that your proposal has
 - Why you?
 - Why this?
 - Why now?
- Easier said and done
- Even a fantastic proposal still only has a < 1 chance of being funded
 - Reviewers may have prior knowledge: “XYZ is a dumb project, no money should go there.”
 - Your tone may just not resonate with the reviewer
 - Panel may have funded another ‘similar’ one already
 - ...

Proposal Workshop

Write your own proposal

- Pick either a topic you want to work on, or one you currently work on (pitch your thesis topic as proposal)
- Write the summary, ‘the elevator pitch’ targeted at a astroparticle review panel (*assume that people have a similar background as everyone here, but may not be from your exact field*) (30 minutes)
- Find a partner to review each other’s proposal, who is from your field (gamma, neutrino, cosmic rays, theory) and improve if necessary (20 minutes)
- Find a partner to review each other’s proposal, who is NOT from your field (gamma, neutrino, cosmic rays, theory) (20 minutes)
- General feedback round and discussion of a couple of examples

CV workshop

How to make sure your CV works

- EVERY proposal needs a targeted CV
 - Adjusted to the focus of the proposal AND the focus of the call
 - Annoyingly all have a different template
- Basic structure can always be the same, but needs sharpening
- Never leave a field empty
- Don't be afraid to name small things, but don't deviate from the truth

CV Guidelines

Some programs give guidelines about the structure, some don't

- A typical one:
 - Personal Details
 - Education
 - Current position
 - Previous positions
 - Fellowships and Awards
 - Teaching activities
 - Academic Service
 - 5 most relevant publications
- Take 30 minutes to write your academic CV according to the DFG guidelines
- https://www.dfg.de/formulare/53_200_elan/

Summary of work instructions

Write elevator pitch + write CV

- **Pick a topic**
(one you want to work on, or pitch your thesis topic as proposal)
- **Write elevator pitch**
targeted at a astroparticle review panel
- Discuss with person from your field
- Discuss with person not from your field
- **Volunteer for presentation**, seniors in the room will give their impressions
(*now and Wednesday*)
- **Write CV** according to this format and match your proposal
https://www.dfg.de/formulare/53_200_elan/
- Peer-review each others CVs
- **Volunteer to have your CV evaluated**
(*Wednesday*)