Trifecta Grant Writing Workshop
Funding Background

Please introduce yourself and talk about your funding background.
Funding background: Dr. Johannes Bauer

• Federal
  – National Science Foundation
  – U.S. Department of Commerce
  – U.S. Department of Defense
• Foundations
  – Ford Foundation
  – Alexander von Humboldt Foundation (Germany)
• International organizations
  – Organisation for Economic Co-operation and Development (OECD)
  – International Telecommunication Union (ITU)
• Private sector corporations
Funding Background: Dr. Nora Rifon

• Internal to MSU
  – Small department and college grants
  – IRGP (now SPG)

• State of Michigan
  – Department of Natural Resources
  – Michigan Children’s Trust

• Federal
  – NSF
  – NIH

• Foundations
  – Microsoft Research
Funding Background: Dr. Subir Biswas

• Venture Capital funding for software product development
• Core Engineering Innovation: National Science Foundation (NSF)
• Cross-cutting Applied Projects
  – National Institutes of Health (NIH)
  – Michigan Initiative for Innovation and Entrepreneurship (MIIE)
  – National Aeronautics and Space Administration (NASA)
  – United Stated Department of Agriculture (USDA)
  – Michigan Department of Transportation (M-DOT)
  – Air Force Research Laboratory (AFRL)
  – MSU Strategic Partnership Grant (SPG) for Center Formation
  – US Center for Food Integrity
  – Sustainable Michigan Endowed Project (SMEP)
Funding Background: Dr. Gwen Wyatt

Gwen Wyatt, PhD, RN, FAAN
Professor
College of Nursing (CON)

Funding

• Internal - CON, CTSI
• External - ONS, ACS, DoD, NIH
Writing exceptional grant proposals

• How did you learn to write exceptional grant proposals?
How did I learn it?: Dr. Nora Rifon

• I did not receive any formal training and learned through trial and error and tears
  – No budget officers or research deans or grant help
• Late in career received advice from successful grantspeople
• Networked
• Participated in activities to meet people
How did I learn it?: Dr. Gwen Wyatt

- Team effort
- Engage statistician on day-one
- Follow template exactly
- Excite reviewer on first page
- Make strong logical arguments
- Keep significance separate from innovation
- Demonstrate past experience
How did I learn it?: Dr. Subir Biswas

• Try to be “Exceptionally Innovative”
  – A panelist should feel “why didn’t I come up with the idea”
  – Idea first, writing and everything comes after that
• “The First Idea on Functionality” or “Massive Performance Improvement”
  – E.g., “First Contactless Blood-pressure Monitor” or “Significant Improvement of the Existing Devices”
• Preliminary result helps even when it is not mandatory
  – Generate prelim. results for the \((n+1)\)st proposal within your \(n\)th funded project
• Find cross-cutting panels
  – E.g., NSF: Cyber-physical System, NSF/NIH: Connected Health, etc.
  – Reviewers in traditional panels can be little myopic
• Writing should be impeccable
  – It could be the discriminant when competing with an equally innovative idea
How did I learn it?: Dr. Johannes Bauer

- Trial and error
- Grant writing workshops
- Working with more experienced colleagues
- Getting input from pre-award staff
- Serving on review panels and as an individual external reviewer
3 Pieces of Advice

• What three pieces of advice would you give to an inexperienced grant writer?
3 Pieces of Advice: Dr. Subir Biswas

• Start planning early
  – Last minute “quick proposal” never worked for me
  – Do not send half-baked ideas
  – Write, forget, and come back after two weeks to critique my own idea

• Speak with the program manager and get early response
  – They would never say no or yes
  – But you would know when they mean no
  – Modulate your idea based on the PM’s feedback

• Choose your collaborators smartly. You need:
  – Complementary skills
  – Balance between skills and agency-contacts
3 Pieces of Advice: Dr. Gwen Wyatt

1. Exciting aims page

2. Strong match with program announcement

3. Discuss idea with program officer
3 Pieces of Advice: Dr. Johannes Bauer

• Make sure the proposal matches the solicitation
• Make sure to explain
  – The nature of the problem to be solved and/or the knowledge gap to be filled
  – Why the proposed approach is novel and different from the received knowledge
  – How you will know whether the project has succeeded
  – The broader impact the research will have
• Develop an innovative yet credible proposal
3 Pieces of Advice: Dr. Nora Rifon

• Work with an experienced PI
• Principled Negotiation: Getting to Yes
  – Identify the common goals
  – Seek to satisfy the higher order goals that satisfy all parties
  – Collaborators: other PIs
  – Teamwork
  – Outreach partners
  – Funders
• Give the Grantor What It Asks For!
• Learn to Write WELL!
Revision of grants

• What are the best ways to effectively revise grants that are not funded?
Revision of Grants: Dr. Gwen Wyatt

- Create a grid across comments by reviewers
  - Look for themes
- Decide with program officer if it is worth resubmitting
  - Scored vs unscored
- External reviews
Revision of Grants: Dr. Johannes Bauer

• Read the feedback in a detached way and assess whether resubmission makes sense
• Clarify whether the funder is open to a resubmission; if not, find an alternative
• View feedback as an opportunity to improve the substance and presentation of the rejected proposal
• Revise within a reasonably short time period that allows substantive improvements
Revision of grants: Dr. Nora Rifon

• Decide if the revisions are “doable”
• DO IT!
• Don’t take any criticism personally
• Address each and every comment
• Be concise
• Talk to POs
Revision of Grants: Dr. Subir Biswas

• Consider spinning the idea for a possible different application
• Search for other programs/agencies to resubmit
• Give up only when you yourself no longer believe in the idea
Success and Failures

• What have you learned from your successes and failures?
Lessons from successes and failures: Dr. Johannes Bauer

• Reasons for successes and failure are manifold
• It is not clear whether successes or failures are the better teacher
• Success and failure typically are temporary, what is important is to move on
• We are all small cogs in a much larger collective undertaking
• One key lesson: overly ambitious projects can paralyze a team
Lessons from Successes and Failures: Dr. Nora Rifon

• Identify and be explicit about individual goals and expectations of those on the team.
• Be clear that the transmittal is a contract
• There is no failure
• Don’t agree to work on a project that you won’t enjoy
Lessons from successes and failures: Dr. Subir Biswas

• Failure is when I brand it as failure
  – Resubmit
  – Re-spin
  – Give up when you don’t believe in the idea any more
    • Around 20% of my proposals did not survive
• Success is when:
  – Proposals that I am excited about get funded
  – I can plan my next proposal with the same set of collaborators
  – Work is done and my next proposal is seeded
Lessons from Successes and Failures: Dr. Gwen Wyatt

• Keep application simple and clear
  – E.g., Testing 3 interventions vs 1

• Bend your idea to match funding priority

• Work with a solid and dependable team
Questions?

• Any last advice?