

# Pursuing Funding From Industry



**University of Texas at Arlington**

**May 12, 2023**

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Academic Research Funding Strategies, LLC

# You can download...

- These slides with active hyperlinks
- Other resources and examples
- These can also be downloaded from <https://bit.ly/UTA-Industry-2023>

# Before we begin...

- This webinar is being recorded
- You will receive a link to
  - Electronic versions of these slides (with links)
  - A location where you can stream the webinar recording
- Please do not post these slides on an open website

# Academic Research Funding Strategies, LLC

**Our goal:** to help your institution, faculty, and students to develop the skills they need to compete successfully for research funding.

<http://academicresearchgrants.com>

# Lucy Deckard

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- Established *Academic Research Funding Strategies* in 2010
- Nine years in proposal development at Texas A&M University
- NSF, NIH, DOE, DoD, NEH, DoED, EDA, USDA, IMLS, Foundations
- Research Engineer (16 years in applied industry research, with extensive proposal writing experience to NSF, DARPA, ONR, AFOSR, ARO, DoE)
- B.S. Rice University, Materials Science and M.S. Northwestern University, Materials Science and Engineering

# Why Would Industry Fund Academic Research?

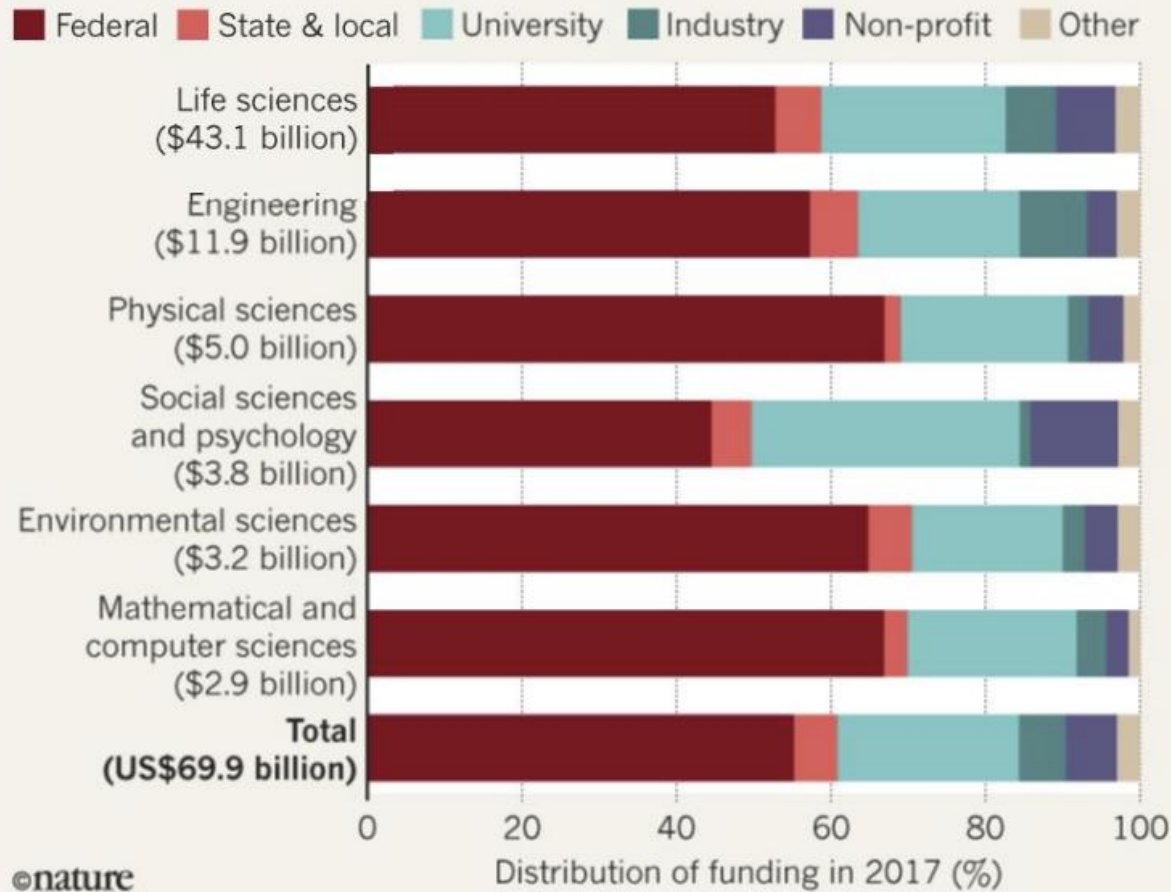
- Complement internal R&D investments
- Take advantage of external expertise
- Take advantage of instruments and facilities not otherwise available
- Access to students who could be future employees

# General Flavors of Industry Funding

- Fund education, social, philanthropic projects through a corporate foundation
  - Benefits customer region or population
  - Burnishes corporate image
- Fund research or development that aligns with their technology or business needs
- Team with industry partners to pursue Federal funding

## BANKROLL BREAKDOWN

In the United States, every scientific field relies heavily on government support, and the importance of other funding sources varies.



Nature 570, 127-129 (2019); doi: <https://doi.org/10.1038/d41586-019-01734-1>



# Important!

- Check with your Corporate & Foundation Relations Office
  - They can provide help connect you to interested companies
  - They can help you navigate the process

# Types of Funding

## ● Grants

- For specific project but on best-effort basis
- Carries indirect costs

## ● Gifts

- No expectations
- No indirect costs
- Could be a gift of money or equipment – be careful!

## ● Contracts

- Specific deliverables
- Often for service (e.g., testing, analysis) rather than research

# Most Industry Funding for Research Results from **Networking**

- Present at industry-focused conferences in your field
- Keep a good webpage
- Keep contact with your students who go to industry
- Talk to your colleagues and program officers
- Let your Corporate Relations Office know what you do
- Explain your research in an accessible way

# Developing a Relationship

- Get to know the scientists, engineers, or technologists at the company
  - Seek to understand their challenges and problems
  - Often involves a visit and tour
  - Listen carefully!
- Describe your research in a way that connects with the company's needs
  - Invite them to visit and tour your lab
  - Introduce them to your students

# Take Advantage of UTA Infrastructure

- Core facilities or special equipment
- UTA Center for Entrepreneurship and Economic Innovation
- Collaborations with TechFW, other regional incubators, accelerators

# Consider Intellectual Property

- Do you need to protect IP you have already generated?
- How will the IP generated on the project be shared?
- Talk to the UTA Innovation and Commercialization Group
  - Remember that you want to be protected!
  - Know the policies and procedures
- Are there any export control considerations?

# May want you to sign an NDA

- Non-Disclosure Agreement
  - They can share aspects of their technology/trade secrets with you
  - You commit not to disclose that information to others
- Check with appropriate UTA offices first!

# Discuss the Statement of Work and Budget

- Funds typically much lower than for Federal grant
- What are the expected deliverables?
- Timeline often much faster
- What are the limits on dissemination (if any)?
- Be sure you're on the same page!



# Writing a White Paper

- Avoid a long academic introduction
- Describe the proposed project concisely  
(typ. 2 – 4 pages)
  - Problem, goal and expected outcomes (tied to the company's needs)
  - Approach and how it is different/novel/innovative
  - Special qualifications/capabilities you bring
  - Deliverables
  - Rough cost and project period
- Better to under-promise and over-deliver

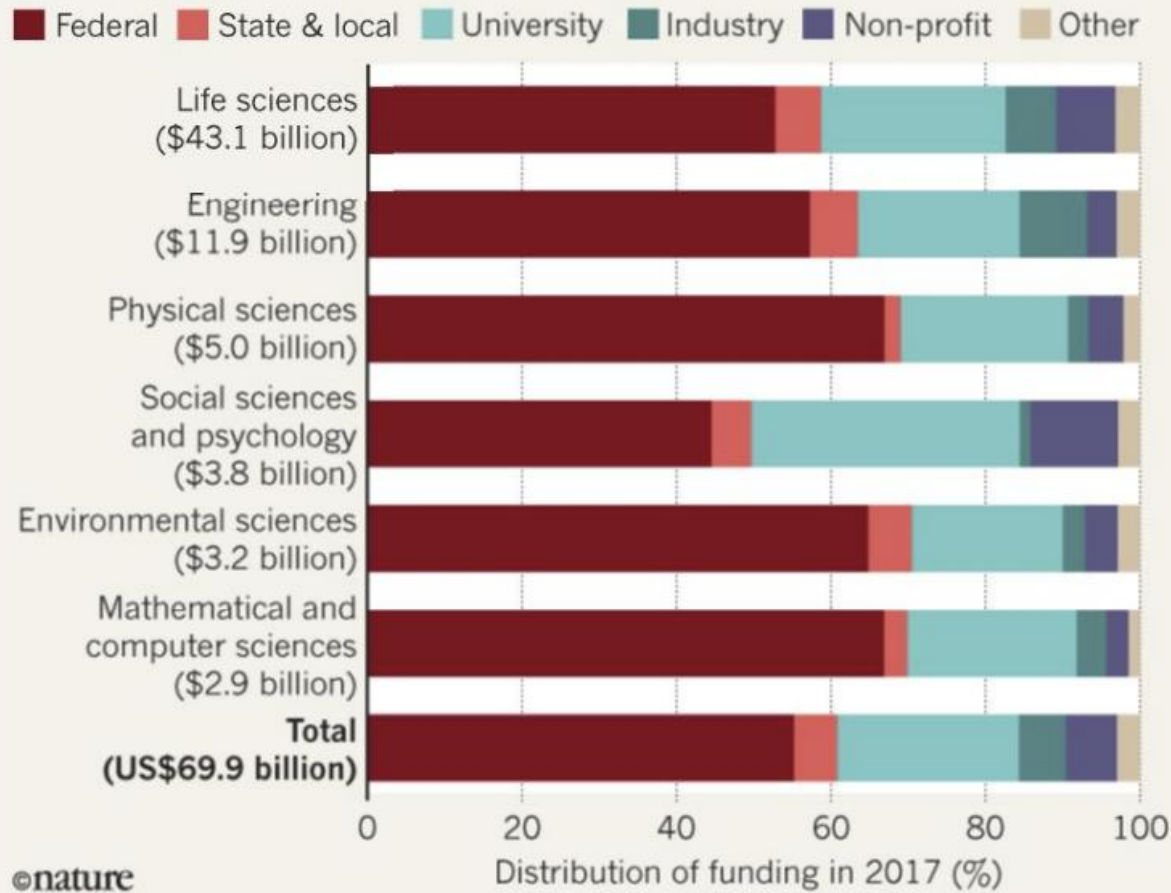
# If you get corporate funding

- Understand the expectations
  - Contracts vs. grants
- Follow the rules of your institution
- Keep your funder informed
- Involve your students

# Another Approach: Collaborating with Industry Partners to Seek Federal Funding

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# Various Roles

- You are providing solutions to a company's technology challenge
- You are transferring a new technology to a company for commercialization
- You and the company researchers are collaborators
- The company provides user/stakeholder input
- The company provides internships to your students

# NSF Has a Number of Grants that Require or Expect Industry Involvement

- New NSF Technology, Innovation and Partnerships ([TIP](#)) Directorate
  - Funded by Chips & Science Act
  - 3 Areas
    - Technology Ecosystems
    - Translation
    - Workforce Development
- NSF Industry – University Cooperative Research Centers ([IUCRC](#))
- NSF Engineering Research Centers ([ERC](#))

# Bringing Together a Consortium of Industry Stakeholders

- Usually established around a team of faculty with unique expertise (“Center,” “Institute”)
- Usually focused around a technology problem or solution (e.g., lubricants for extreme environments)
- Often pay to be members and share in technology developed
- Provides access to your students

# NSF IUCRC

- Funding to develop long-term partnerships among industry, academe and government
- Primarily supported by industry members
- Example IUCRCs:
  - Advanced Electronics through Machine Learning
  - Center for Advanced Non-Ferrous Structural Alloys
  - Center for Advanced Design and Manufacturing of Integrated Microfluidics



# Other Federal Funders

- DOE-Tech

- Huge increase in budget
- Energy Efficiency and Renewable Energy ([EERE](#))
- [Nuclear Energy](#)
- [Fossil Energy](#)
- [ARPA-E](#)

- DoD

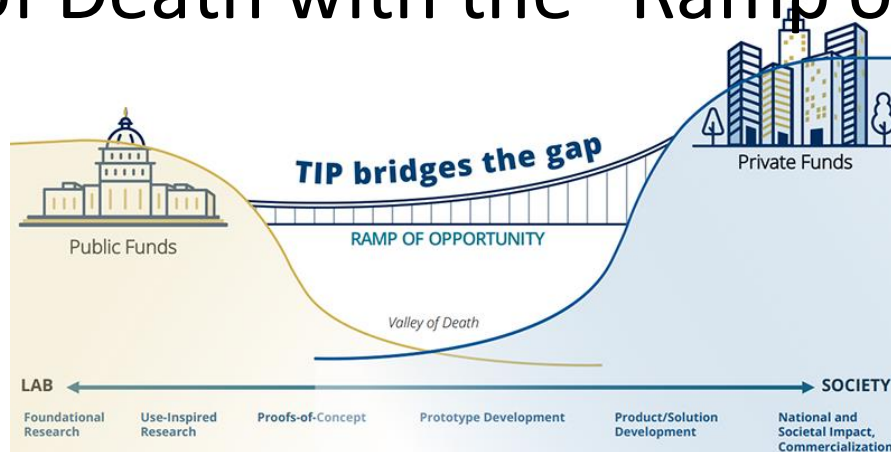
- 6.1 - Fundamental
- 6.2 - Applied
- 6.3 – Integration into defense systems

# SBIR/STTRs

- Funded **by all federal agencies** that fund extramural research over a specific amount (NSF, NIH, DoD, DOE, etc.)  
– **rules and amounts vary by funder**
- Small Business Innovation Research ([SBIR](#)) – 11 agencies
  - PI's primary employment with small business (< 500 employees)
  - Phase I (Proof of Concept) - \$275K for 6-12 months (NSF)
  - Phase II (Development) - \$1M for 2 years (NSF)
- Small Business Technology Transfer (STTR) – 5 agencies
  - Research institution performs at least 30% of R&D, SBC at least 40%; PI can be at research institution
  - Phase I - \$256K for 6-12 months (NSF)
  - Phase II - \$1M for 2 years (NSF)

# Commercializing Your Own Invention

- May want to establish your own start-up company
- Talk to [UTA Innovation Commercialization](#)
- Check out NSF Partnership for Innovation ([PFI](#)), [I-Corps](#), [SBIR](#) sequence for overcoming the Valley of Death with the “Ramp of Opportunity”



# See UIDP Report and Resources

- University Industry Demonstration Partnership (UIDP) [webpage](#)
- [Publications and Reports](#)
  - Researcher Guidebook
  - Quick Guide

# Questions?

