

The NSF/BSF Program: Tips for Writing a Successful Proposal

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A “successful proposal” is one that wins funding.

- Israel has some of the best and most innovative scientists in the world.
- ...but all funding for Israeli scientists under the NSF/BSF program comes from BSF!

So why should an NSF Program Director come all the way to Israel to tell you how to win funding?

Well, Israel is a fascinating country and I am really happy to visit...



But most importantly...

For NSF/BSF proposals, it is **NSF** that handles every aspect of the scientific review...

- The relevant NSF Program Director reads the proposal
- The NSF Program Director (with assistance from support staff) determines whether it is compliant (meets the minimum regulations concerning format and content --- to be discussed)
- The NSF Program Director selects appropriate reviewers (either ad-hoc reviewers or Panelists or both --- to be discussed)
- The NSF Program Director evaluates the recommendations of the reviewers, and also assesses other programmatic concerns that go beyond the reviewers (to be discussed).
- The NSF Program Director “makes the recommendation” (i.e., decides) whether to fund it or not, and at what level

... and the BSF has automatically committed to follow the lead of NSF!



So, when you are writing your NSF/BSF proposal, you are mostly writing to (and hoping to impress)...

- External reviewers who are most likely to be based in the US and who are used to the NSF / American funding culture (which can be very different than the Israeli culture in many important ways)
- Panelists who are most likely to be drawn from US institutions and who will carry certain expectations of their own into the Panel room
- NSF Program Directors who have their own cultural expectations and programmatic constraints

In this talk, I will aim to focus on these aspects of the reviewing process, and provide tips for things that tend to work --- and things that don't --- at each stage of NSF's proposal evaluation process.



Step 1: Deciding whether to apply

Answering this question requires two separate evaluations:

- Is the proposed research area appropriate for NSF?
- Do you have a credible American research partner who will join you on this proposal?
 - *NB: In this talk, “American” means based in the US. Actual US citizenship or immigration status of the researcher is irrelevant to NSF.*

To answer the first question, you need to understand the NSF context: what our mission is, what we fund, and how we are organized. This will tell not only *if* you should apply, but also *where* you should apply and what kind of proposal is most likely to resonate.



NSF: The U.S. National Science Foundation

“Where Discoveries Begin”

<http://www.nsf.gov/>



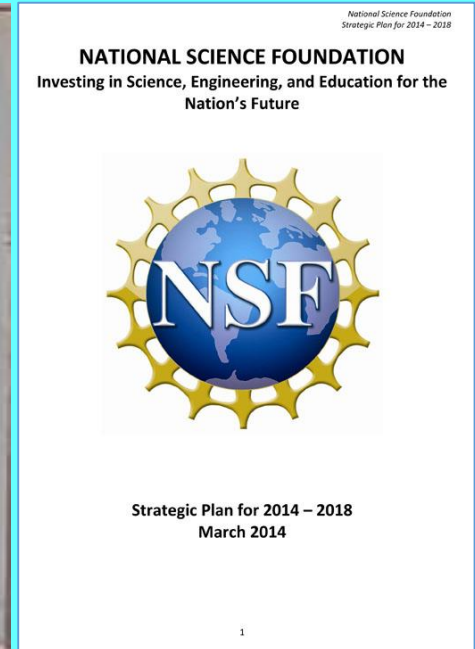
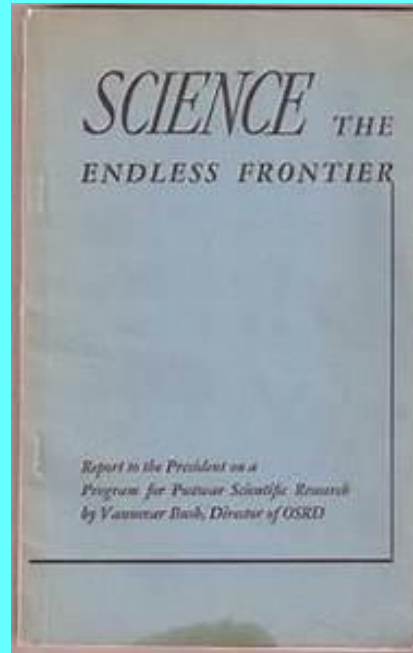
- An independent agency of the US Federal government, established in 1950
- Thousands of employees, hundreds of Program Directors in almost every branch of the sciences

NSF headquarters in Alexandria, Virginia (just outside Washington DC)
New!! (moved in August 2017)



NSF Mission and Goals

- **Mission:** To promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense...
- **Strategic Goals include:**
 - To transform the frontiers of science and engineering
 - To stimulate innovation and address societal needs through research and education



Note!! Very important for NSF!



NSF is Unique Among US Federal Agencies

- Mandate to fund both research and education
- Focus on basic research in all areas of science & engineering
- All areas of science, engineering, computer science, and social sciences are housed in one agency
- Funding decisions are based on advisory peer review to Program Directors. Program Directors (many of whom are current and/or former university faculty) also have discretion to use their own scientific judgments and to set direction/balance portfolio.



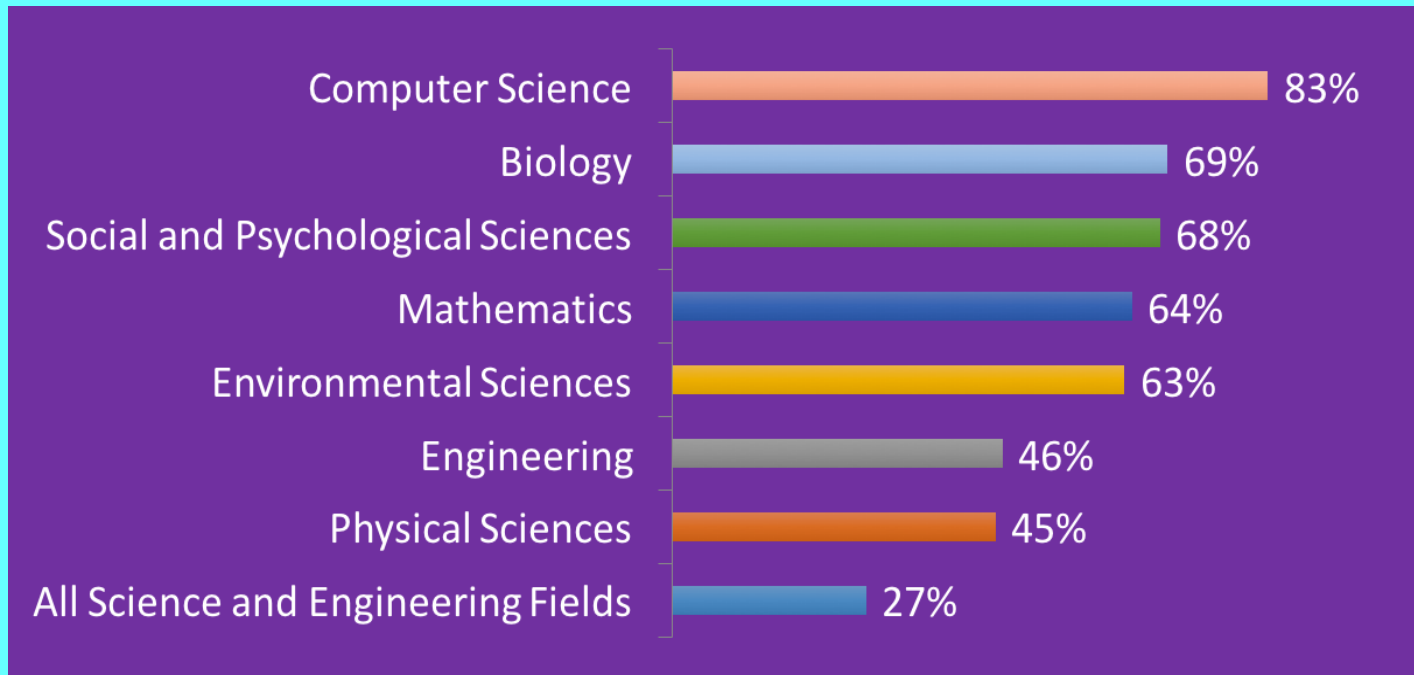
NSF by the Numbers

\$7.8 billion	FY 2018 Appropriations (does not include mandatory accounts)
1,800	Colleges, universities, and other institutions receiving NSF funding in FY 2018
48,300	Proposals evaluated in FY 2018 through a competitive merit review process
11,700	Competitive awards funded in FY 2018
223,800	Proposal reviews conducted in FY 2018
386,000	Estimated number of people NSF supported directly in FY 2018 (researchers, postdoctoral fellows, trainees, teachers, and students)
57,700	Students supported by NSF Graduate Research Fellowships since 1952



NSF Support of Academic Basic Research in Selected Fields

(as a percentage of total federal support in 2015)



fairly
substantial!

Note: Biology includes Biological Science and Environmental Science. Biology and Psychological Sciences exclude National Institutes of Health funding from the total amount of federal support.

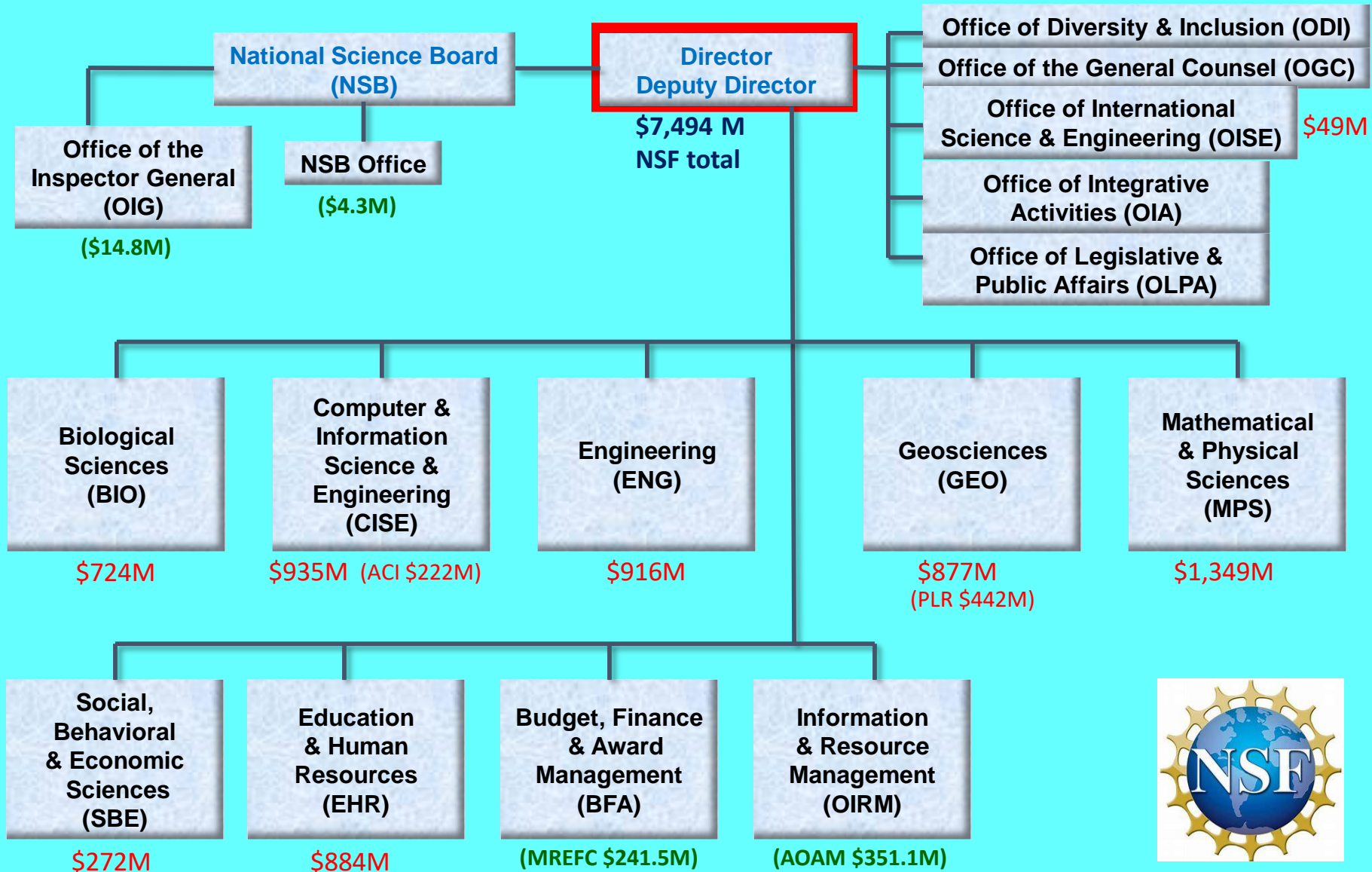
Source: NSF/National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development



NSF Organization Chart

NSF is organized in terms of *Directorates*:

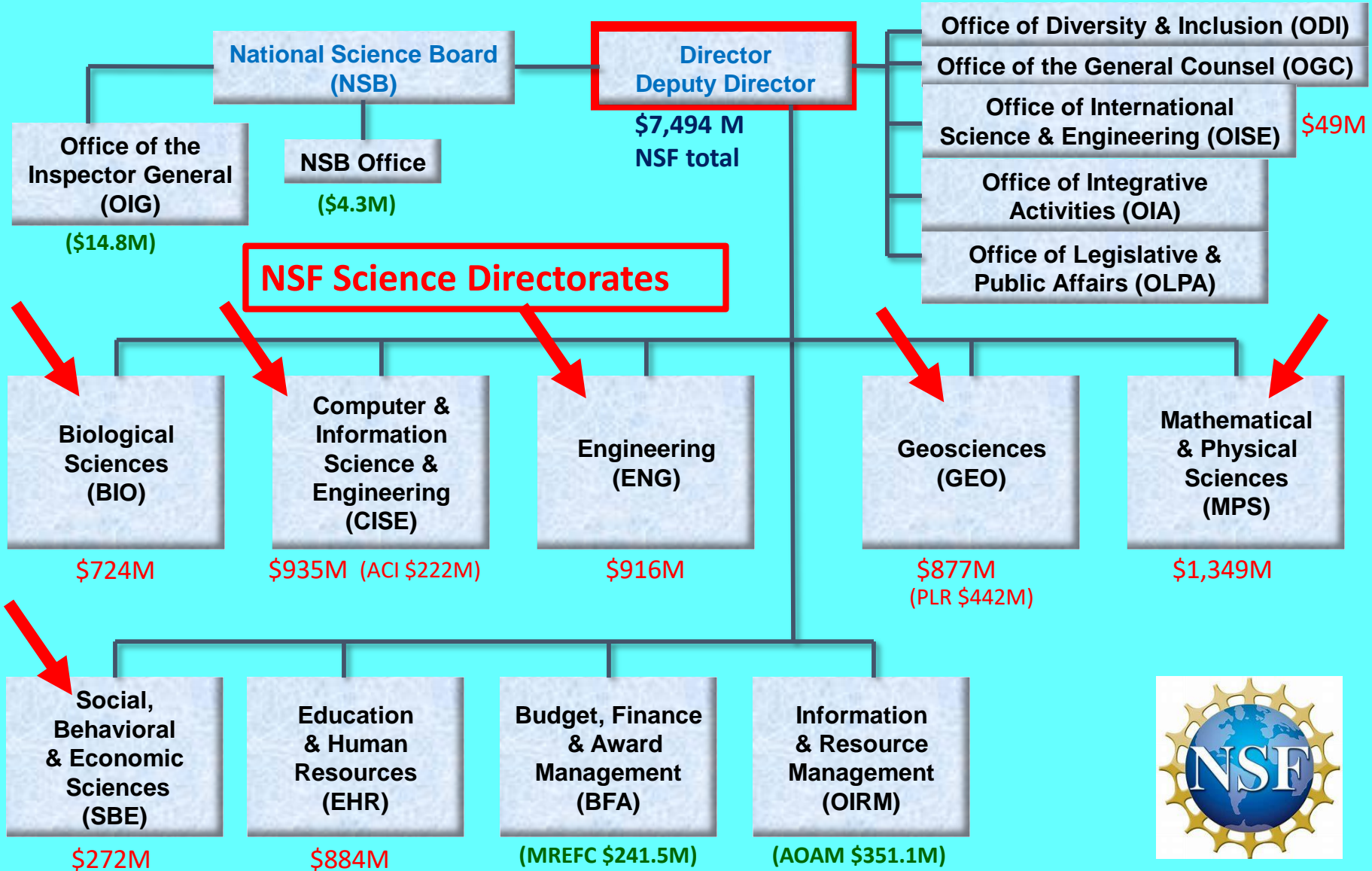
Budget numbers
are FY2016 Actuals



NSF Organization Chart

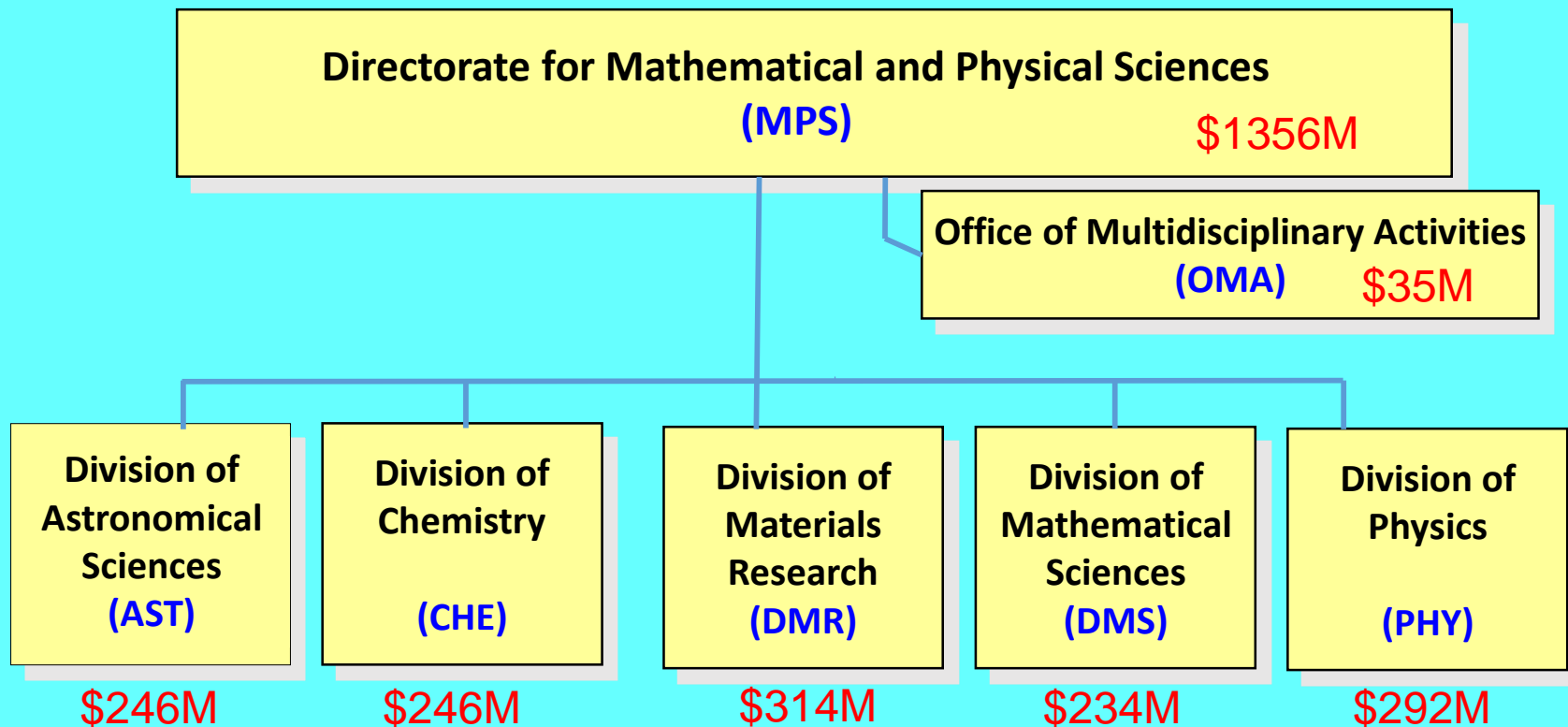
NSF is organized in terms of **Directorates**:

Budget numbers
are FY2016 Actuals



And inside each Directorate is a set of Divisions...

For example...



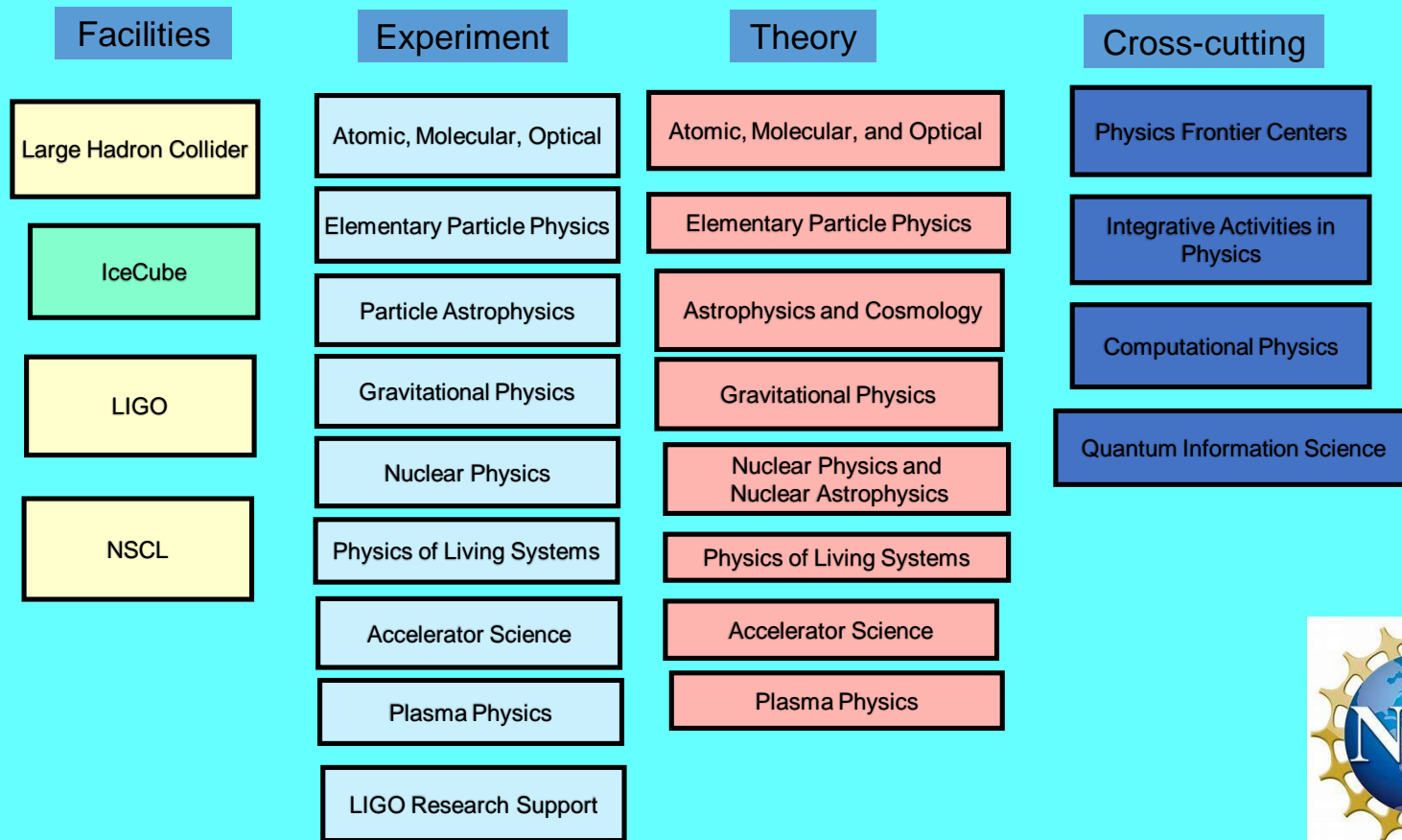
Numbers are
FY 2017 Actuals



And inside each Division is a set of Programs...

For example...

Division of Physics



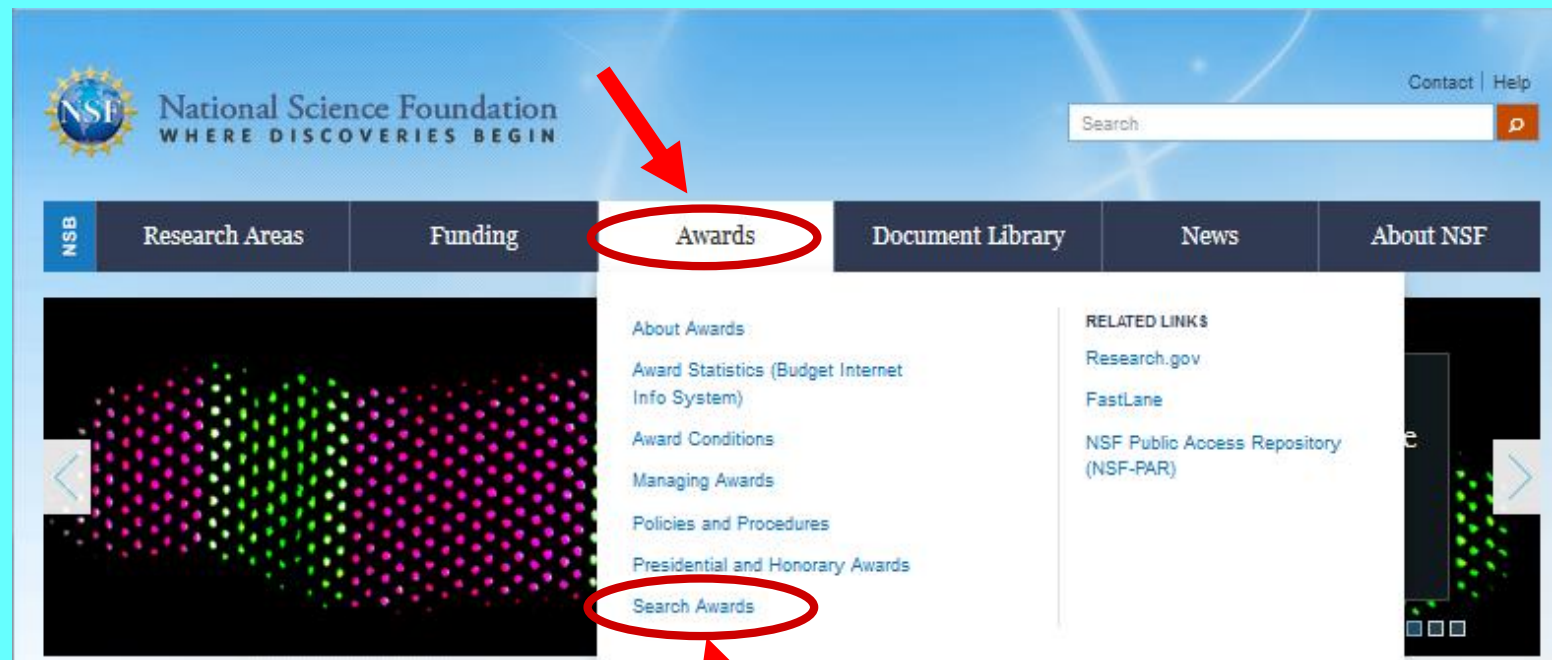
It is important to understand this organizational structure because you will most likely be applying to an individual **Program**.

- Each Program has its own Program Director (or team of PD's).
- Each Program has its own culture and its own scope of research.
- Each Program also usually has its own budget. Your proposal will be competing against all of the other proposals that were submitted to that Program for the funding available for that Program. This includes not only other NSF-BSF proposals but also the regular NSF proposals that American PI's normally submit. If the Program Director opts not to fund the American side, the Israeli side will also be declined.
- In many Divisions, each program is fairly autonomous. Yet in other Divisions, programs are coordinated according to Division-wide (or even Directorate-wide) missions and objectives.
- **Become familiar with your target program. Does it make sense for you??**



One way to learn about a given Program is to look at the grants that are currently funded by that Program.

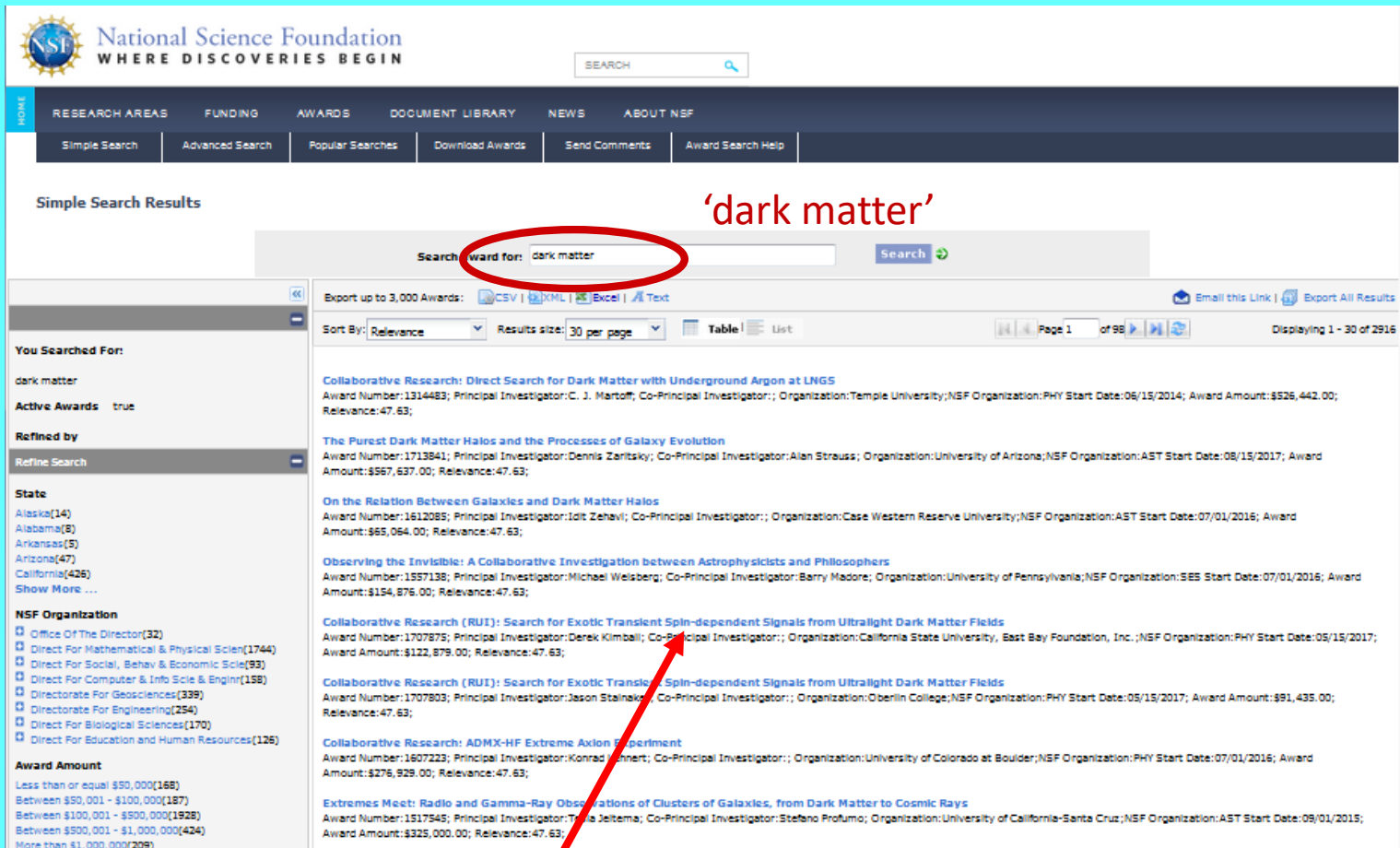
www.nsf.gov – Search NSF Award Database



The screenshot displays the NSF website's navigation menu. The 'Awards' link is circled in red, and a red arrow points to it from above. Below the 'Awards' link, a dropdown menu is visible, containing several options. The 'Search Awards' option at the bottom of this menu is also circled in red, with a red arrow pointing to it from below. The website header includes the NSF logo, the text 'National Science Foundation WHERE DISCOVERIES BEGIN', a search bar, and links for 'Contact' and 'Help'. The main navigation bar includes 'Research Areas', 'Funding', 'Awards', 'Document Library', 'News', and 'About NSF'. A 'RELATED LINKS' section on the right side of the dropdown menu lists 'Research.gov', 'FastLane', and 'NSF Public Access Repository (NSF-PAR)'. The background of the website features a grid of colorful dots in shades of purple, green, and blue.



www.nsf.gov/awardsearch



The screenshot shows the NSF Award Search interface. At the top, the NSF logo and tagline "WHERE DISCOVERIES BEGIN" are visible. A search bar contains the text "award for: dark matter". Below the search bar, the results are displayed in a table format. The first result is "Collaborative Research: Direct Search for Dark Matter with Underground Argon at LNGS". A red circle highlights the search bar, and a red arrow points from the text "Click on any grant" to the first result. The left sidebar shows filters for "You Searched For", "Active Awards", "Refined by", "State", "NSF Organization", and "Award Amount".

Search: award for: dark matter

You Searched For: dark matter

Active Awards: true

Refined by:

State: Alaska(14), Alabama(8), Arkansas(5), Arizona(47), California(426), Show More ...

NSF Organization: Office Of The Director(32), Direct For Mathematical & Physical Sci(1744), Direct For Social, Behav & Economic Sci(93), Direct For Computer & Info Scie & Engin(158), Directorate For Geosciences(339), Directorate For Engineering(254), Direct For Biological Sciences(170), Direct For Education and Human Resources(126)

Award Amount: Less than or equal \$50,000(168), Between \$50,001 - \$100,000(187), Between \$100,001 - \$500,000(1928), Between \$500,001 - \$1,000,000(424), More than \$1,000,000(209)

Collaborative Research: Direct Search for Dark Matter with Underground Argon at LNGS
Award Number:1314483; Principal Investigator:C. J. Martoff, Co-Principal Investigator;; Organization:Temple University;NSF Organization:PHY Start Date:06/15/2014; Award Amount:\$526,442.00; Relevance:47.63;

The Purest Dark Matter Halos and the Processes of Galaxy Evolution
Award Number:1713841; Principal Investigator:Dennis Zaritsky; Co-Principal Investigator:Alan Strauss; Organization:University of Arizona;NSF Organization:AST Start Date:08/15/2017; Award Amount:\$97,637.00; Relevance:47.63;

On the Relation Between Galaxies and Dark Matter Halos
Award Number:1612085; Principal Investigator:Idit Zehavi; Co-Principal Investigator;; Organization:Case Western Reserve University;NSF Organization:AST Start Date:07/01/2016; Award Amount:\$65,064.00; Relevance:47.63;

Observing the Invisible: A Collaborative Investigation between Astrophysicists and Philosophers
Award Number:1557138; Principal Investigator:Michael Welsberg; Co-Principal Investigator:Barry Madore; Organization:University of Pennsylvania;NSF Organization:SES Start Date:07/01/2016; Award Amount:\$154,876.00; Relevance:47.63;

Collaborative Research (RUI): Search for Exotic Transient Spin-dependent Signals from Ultralight Dark Matter Fields
Award Number:1707875; Principal Investigator:Derek Kimball; Co-Principal Investigator;; Organization:California State University, East Bay Foundation, Inc.;NSF Organization:PHY Start Date:05/15/2017; Award Amount:\$122,879.00; Relevance:47.63;

Collaborative Research (RUI): Search for Exotic Transient Spin-dependent Signals from Ultralight Dark Matter Fields
Award Number:1707803; Principal Investigator:Jason Steinke; Co-Principal Investigator;; Organization:Oberlin College;NSF Organization:PHY Start Date:05/15/2017; Award Amount:\$91,435.00; Relevance:47.63;

Collaborative Research: ADMX-HF Extreme Axion Experiment
Award Number:1607223; Principal Investigator:Konrad Lehnert; Co-Principal Investigator;; Organization:University of Colorado at Boulder;NSF Organization:PHY Start Date:07/01/2016; Award Amount:\$276,929.00; Relevance:47.63;

Extremes Meet: Radio and Gamma-Ray Observations of Clusters of Galaxies, from Dark Matter to Cosmic Rays
Award Number:1517545; Principal Investigator:Talia Jeltema; Co-Principal Investigator:Stefano Profumo; Organization:University of California-Santa Cruz;NSF Organization:AST Start Date:09/01/2015; Award Amount:\$325,000.00; Relevance:47.63;

Click on any grant



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How to Manage Your Award
Grant Policy Manual
Grant General Conditions
Cooperative Agreement Conditions
Special Conditions
Federal Demonstration Partnership
Policy Office Website

Award Abstract #1713841
The Purest Dark Matter Halos and the Processes of Galaxy Evolution

NSF Org:	AST Division Of Astronomical Sciences
Initial Amendment Date:	May 17, 2017
Latest Amendment Date:	May 17, 2017
Award Number:	1713841
Award Instrument:	Standard Grant
Program Manager:	Peter Kurczynski AST Division Of Astronomical Sciences MPS Direct For Mathematical & Physical Science
Start Date:	August 15, 2017
End Date:	July 31, 2020 (Estimated)
Awarded Amount to Date:	\$567,637.00
Investigator(s):	Dennis Zaritsky dzaritsky@as.arizona.edu (Principal Investigator) Alan Strauss (Co-Principal Investigator)
Sponsor:	University of Arizona 888 N Euclid Ave Tucson, AZ 85719-4824 (520)626-6000
NSF Program(s):	EXTRAGALACTIC ASTRON & COSMOLO
Program Reference Code(s):	1207
Program Element Code(s):	1217

ABSTRACT

A galaxy contains a mixture of gas, stars and dark matter. The gas and stars emit light making them easy to study. But the dark matter is, well, dark: It does not emit light; so, it is difficult to study. Theories of galaxy formation try to account for the mixtures of gas, stars and dark matter in galaxies of all types. Recently, a new type of galaxy was discovered, the so-called ultra-diffuse galaxies (UDGs). These galaxies contain dark

Division that made the award.

Program Director currently managing the award.

Funds allocated to date. See 'expired' awards for standard level of investment per award.

Program(s) that funded this award.

Abstract for this award – reviewing abstracts provides information on research scope of the program!



You and your American partner(s) may also wish to contact the relevant Program Director and discuss your ideas.

- **Don't be shy** --- Program Directors would rather fill you in early than receive an inappropriate proposal later.
- **Do not request a scientific evaluation from the Program Director. Ask only about appropriateness for the Program he/she oversees.**
- Email first to set up a good time to phone or skype.
- **Let your American partner make the first contact and lead the conversation.** The NSF Program Director is probably thinking mostly in terms of funding the American side of your collaboration, not the Israeli side, so your American partner should probably take the initiative here.



The second part of deciding whether to apply concerns your choice of a suitable US partner.

Common questions...

- Is it better to choose someone with previous NSF experience?
- Someone who has existing NSF funding?
- Someone who is more junior versus more established?
- Someone from a “famous” institution?
- *etc...*



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- *etc...*

In my opinion as a Program Director managing a core scientific program, these are the wrong questions!



Just as you didn't choose your career based on a particular funding opportunity, you shouldn't choose your collaborators this way either.

- You know what interests you, and what your main lines of research are
- You know which Americans have similar or complementary research backgrounds which will enhance your research and vice versa.
- You're probably already "close" to these individuals, talking extensively with them at conferences, hiring their students as your postdocs (and vice versa), perhaps even refereeing their papers, etc.
- Maybe you've already formed a collaboration, or talked about doing so.
- These are your natural collaborators!

Such a collaboration develops *naturally* --- indeed, *organically* --- and is therefore *credible*. Outside experts in your field will see it this way and want to support it. You cannot "force" this into existence. **A credible collaboration is unbeatable, and should supersede all other concerns.**



That said, the identity of your collaborator can have a *smaller* effect on your funding probability...

- *It is helpful if he/she has previous NSF experience?*
 - Yes, if he/she knows what NSF expects and how to write a proposal.
- *Is it helpful if he/she has existing NSF funding?*
 - Not necessarily. Could even hurt: Some programs have limitations on applications from American PIs with current NSF funding. There are also NSF-wide limits on total summer salaries.
- *Is it helpful if he/she is more junior, or more established?*
 - NSF does not discriminate in this way. Commitment and relevance to the project is the important thing. However, funding to members of under-represented groups (women, African-Americans, Hispanics, etc.) can increase the diversity of the program, which is an asset.
- *Is it helpful if he/she is from a “famous” institution?*
 - Not necessarily. NSF funds all sizes and types of institutions. NSF even has special pots of money for proposals that come from scientifically-disadvantaged parts of the US (see EPSCoR). Note that Lead PI must work at a US academic or non-profit institution. Some programs allow private companies to apply (not a federal lab or NIH intramural researcher).



Step 2: Prepare your proposal

In general, your proposal must comply with three sets of rules/expectations:

- Those listed in the **“Dear Colleague Letter” (DCL)** which provides general instructions for all NSF-BSF proposals, regardless of the individual NSF program: <https://www.nsf.gov/pubs/2017/nsf17120/nsf17120.jsp>
- Those listed in the **PAPPG** (minimal NSF-wide expectations/requirements for all proposals to NSF) [last update 2/2019 --- keep checking!] https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf19001
- Those listed in the **Solicitation** (specific to program, may supplement or override the PAPPG)



Parts of an NSF Proposal

Non-conforming proposals
may be returned without
review!!!

- **Cover Page**
- **Project Summary** --- must explicitly and separately address Intellectual Merit and Broader Impact
- **Project Description** --- must explicitly and separately address Intellectual Merit and Broader Impact; also include Results from Prior NSF support; describe US/Israel collaboration and how it will operate
- **References** -- All authors, titles of articles
- **Biographical Sketches**
- **Budget and Budget Justification** --- your declaration about the funds you need for the proposed research (including overhead, etc.)
- **Current and Pending Support**
- **Post Doc Mentoring Plan** --- if needed, one page in Supplementary Docs
- **Data Maintenance Plan** --- max two pages in Supplementary Docs
- **Collaborator & Other Affiliations List** --- needed for Israelis too! PhD advisors and students, collaborators, etc. Read rules carefully.
- **Other Documents** (suggested Reviewers, commitment letters, etc.)... see PAPPG



Special instructions for NSF-BSF proposals

- In Project Description, **describe an integrated collaborative US/Israeli effort**. Outline role of Israeli investigators and how the US and Israeli components will work together.
- Title for proposal must have **the prefix “NSF-BSF:”**
- Do not check “collaborative” box unless *multiple US institutions* are involved.
- **List Israeli PIs as “Senior Personnel”**, not as PIs or co-PIs.
- **List “N/A” for Current and Pending Support for Israeli PIs who have no American sources of current or pending funding**. Note that NSF-BSF funding for Israelis is *not* American support (since funds come from BSF).
- **Biographical Sketches** should be provided for Americans *and* Israelis, along with Collaborator and Other Affiliations forms for each.
- **Postdoctoral Mentoring Plan** required if postdoc funding is requested. How will you develop the career of the postdoc, help build their professional network, enable them to transfer to permanent job?
- **Israeli portion of budget should be provided as a Supplementary Document**, along with Budget Justification, in English and in US dollars. Follow BSF rules/expectations for this budget. Don’t forget costs of adequate travel between US and Israel in support of collaboration!!



Things to consider while writing

- Why *this* research project? Address an important problem.
- Why you and not someone else?
 - Uniqueness of qualifications, available facilities, educational opportunities, etc...
- Capture the reviewers' attention in the Summary and Introduction. Maintain enthusiasm. Make them want to read more. YOU must convince the reviewer you are worthy of funding
- Describe the mechanics of the US/Israel collaboration. How will the collaboration function? Explain all issues and show you've carefully considered all angles.
- Express yourself clearly. It's not the reviewer's job to figure out what you are trying to accomplish and why. Good expository writing is key!



Moreover, if appropriate (e.g., experimental proposal)...

- Create a strong, clear, testable **hypothesis**
- Provide **comprehensive background and preliminary data** to justify the hypothesis, **specific aims and experimental plan**
- Write the experimental plan as if reviewers do not know what you know about the technology, methods, etc.
- Demonstrate that each (and every) aim supports the hypothesis
- **Spell out plans for collaboration between the two labs (and include funding for it!)**
- **Include plans for assessing the results of outreach, training, education efforts**



Step 3: Your proposal is reviewed.

- **Proposals are evaluated** by combination of
 - **External (“ad-hoc”) reviews:** Program Director selects experts from relevant scientific community to evaluate proposal on its **intrinsic** merits and supply written review and overall score
 - **Panel evaluation:** Program Director convenes Panel of experts from community to evaluate proposal and **compare** it with competing proposals in order to develop recommended relative rankings. Panel ultimately writes Panel Summary outlining their recommendation and why.
- Within the constraints of available funding, **Program Director** then makes “final” decisions: which proposals and at what funding levels? **Funding levels might be negotiated with PI as needed.** *NSF rarely offers the full amount requested!*
- **Division Director** then “concur”, giving final scientific approval. Results also communicated to BSF. If funding recommended, NSF’s **Division of Grants and Agreements** then gives final overall approval and establishes the new grant. BSF does same.

Congratulations!



It may happen that your proposal reaches beyond a single Program. Two examples relevant for NSF-BSF are:

- **NSF's “Ten Big Ideas”**, six of which are



Read about them online. If your proposal connects to a Big Idea, special reviewing and funding opportunities (for the US side) might be possible, which might be a strength for your proposal.

- **Interdisciplinarity**: If your proposal involves multiple NSF programs, you can indicate this on the Cover Page. It could potentially be co-reviewed (and the US side co-funded) by both programs, even across NSF Divisions. *This is easiest if each program participates in the NSF-BSF initiative.*



But how are these decisions made?

What criteria are imposed at each stage of the reviewing process?



Merit Review Criteria

NSF-funded Projects are expected to be of the highest intellectual quality with the potential to advance --- if not transform --- the frontiers of knowledge.

Projects are also expected to contribute more broadly to achieving societal goals, either through the research itself or through activities related or complementary to the research.

Two Merit Review criteria are considered when evaluating **ALL** NSF proposals:

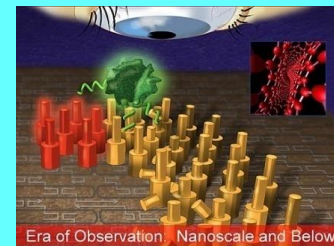
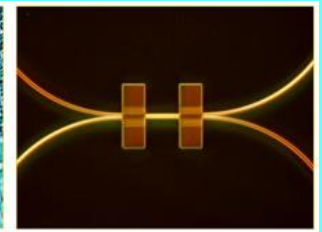
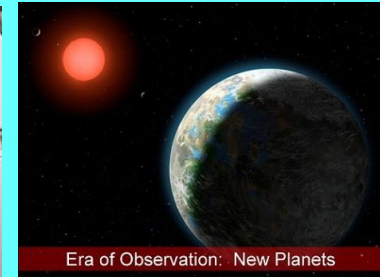
- **Intellectual Merit**: the potential to advance knowledge
- **Broader Impacts**: the potential to benefit society and contribute to the achievement of specific, desired societal outcomes



Intellectual Merit

For example...

- How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields?
- How well qualified is the proposer (individual or team) to conduct the project?
- To what extent does the proposed activity suggest and explore creative, original, or potentially transformative concepts?
- How well conceived and organized is the proposed activity?
- Is there sufficient access to resources?



Broader Impacts

For example...

- How well does the activity advance discovery and understanding while **promoting teaching, training, and learning**?
- How well does the proposed activity broaden the participation of **underrepresented groups**?
- To what extent will it enhance the **infrastructure** for research and education, such as facilities, instrumentation, networks, and partnerships?
 - Will the **results be disseminated** broadly to enhance scientific and technological understanding?
 - What may be the benefits of the proposed activity to **society**?



Examples of Broader Impacts

NSF Broader Impacts are (intentionally) broadly defined. Examples include, but are *not limited to*:

- improved STEM education and educator development at any level;
- increased public scientific literacy and public engagement with science and technology;
- increased participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM);
- improved well-being of individuals in society;
- development of a diverse, globally competitive STEM workforce;
- enhanced partnerships between academia, industry, and others;
- improved national security;
- enhanced economic competitiveness of the US;
- enhanced infrastructure for research and education.



But that is not all. All of the input from ad-hoc reviewers and Panelists is merely advisory to the Program Director. Even after the reviewer and Panel assessments and rankings are provided, Program Directors can still choose to fund or not fund based on additional scientific and criteria.



Note: NSF Program Directors generally hold PhD's in their fields, and many/most are either current or former University professors who have led (or continue to lead) their own research programs “on the ground”. They are deeply engaged and many remain research-active themselves. They know their stuff.

Using this expertise, there are several additional things NSF Program Directors consider when developing their funding plans...



Programmatic Balance (Scientific)

- Does the funded research portfolio support emerging growth areas as well as areas critical for ongoing scientific operations, capitalizing on prior research investments?
- Is there a mix of solid bread-and-butter as well as transformative (high-risk/high-reward) research? Of disciplinary as well as inter-disciplinary research?
- Is the Program portfolio well-poised to take advantage of new scientific breakthroughs and emerging disciplines and technologies?

Integration of Research and Education

- Fostering integration of research and education through the programs, projects, and activities NSF supports at academic and research institutions is deemed critical.

Integrating Diversity into Programs, Projects, and Activities

- Broadening opportunities and enabling the participation of all citizens --- men and women, underrepresented minorities, and persons with disabilities --- is essential to the health and vitality of the entire scientific enterprise.



Each year, many scientifically strong proposals are left unfunded. Scientific excellence is not the only consideration!



Many funded NSF proposals were declined on their first attempts.

If your proposal is declined, the American PI will receive copies of

- all of the ad-hoc reviews of your proposal, and/or
- the Panel Summary, which summarizes the deliberations of the Panel and explains their reason for your overall Panel ranking.

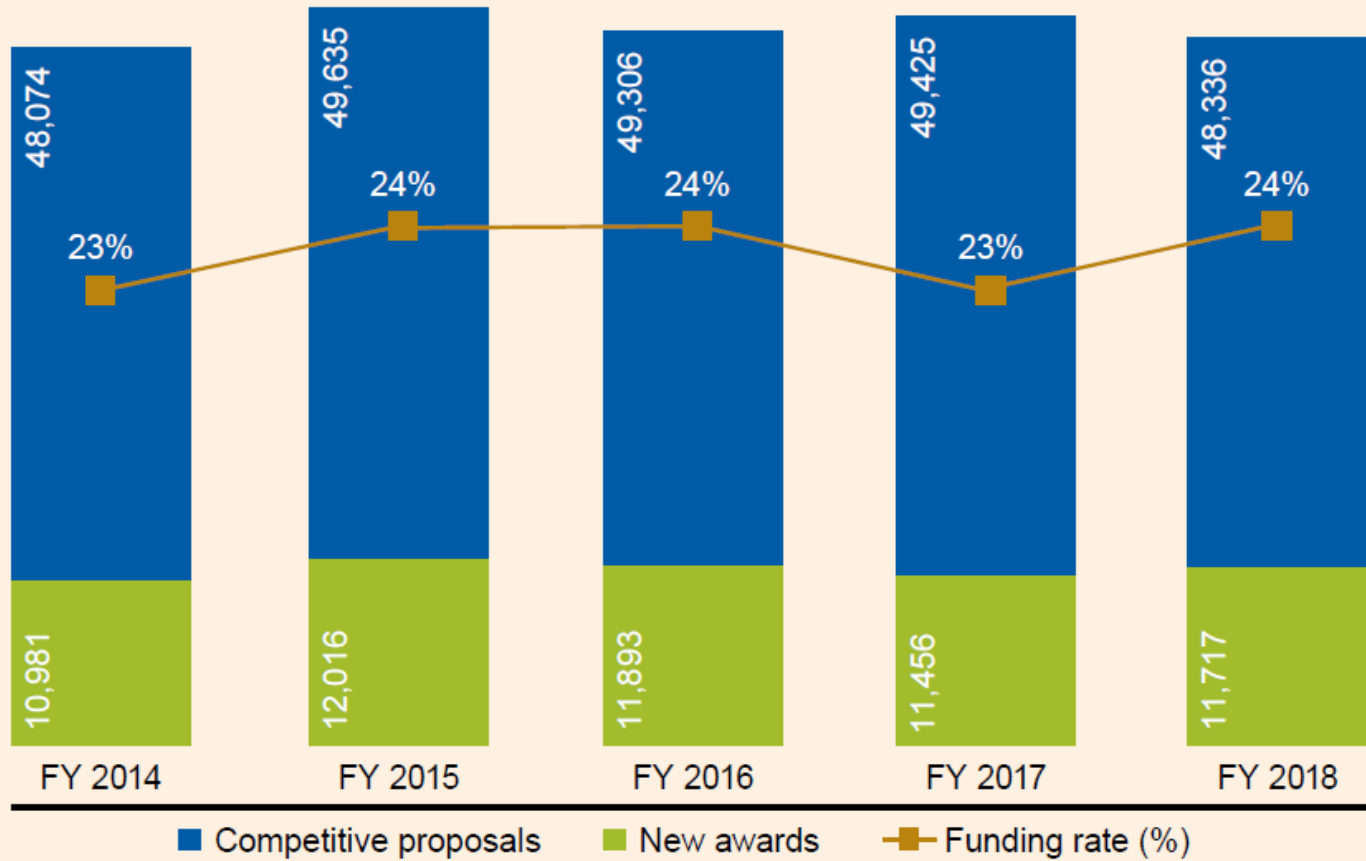
Treat this as a learning experience!

You may also discuss the review outcome with the Program Director to get further input and advice.

Sometimes it may make sense to submit a new proposal the next year. **If you do so, be sure that you have modified your proposal in order to successfully address the specific comments of the reviewers.** If so, your proposal will be admitted into the next competition and be judged fresh as a new proposal.

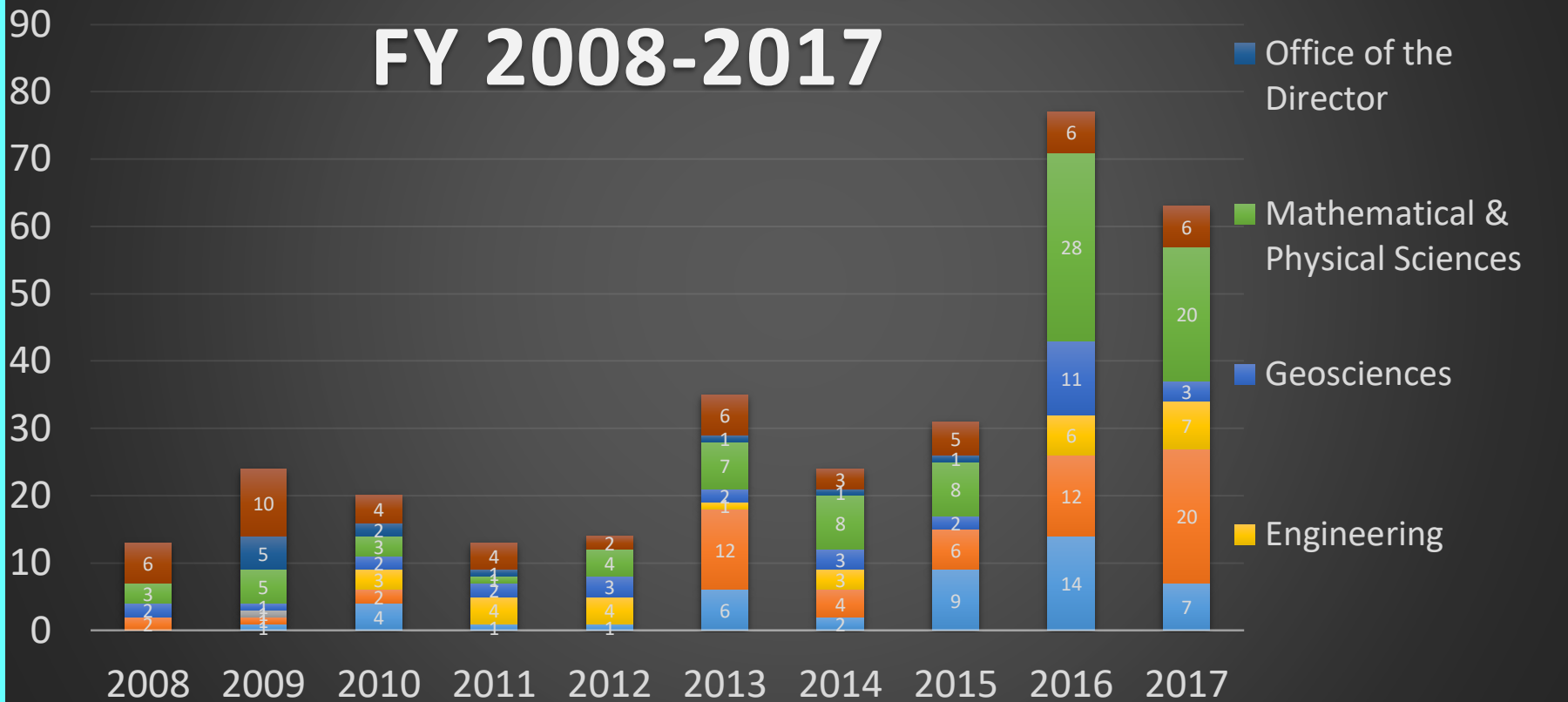


Number of NSF Competitive Proposals, New Awards, and Funding Rates

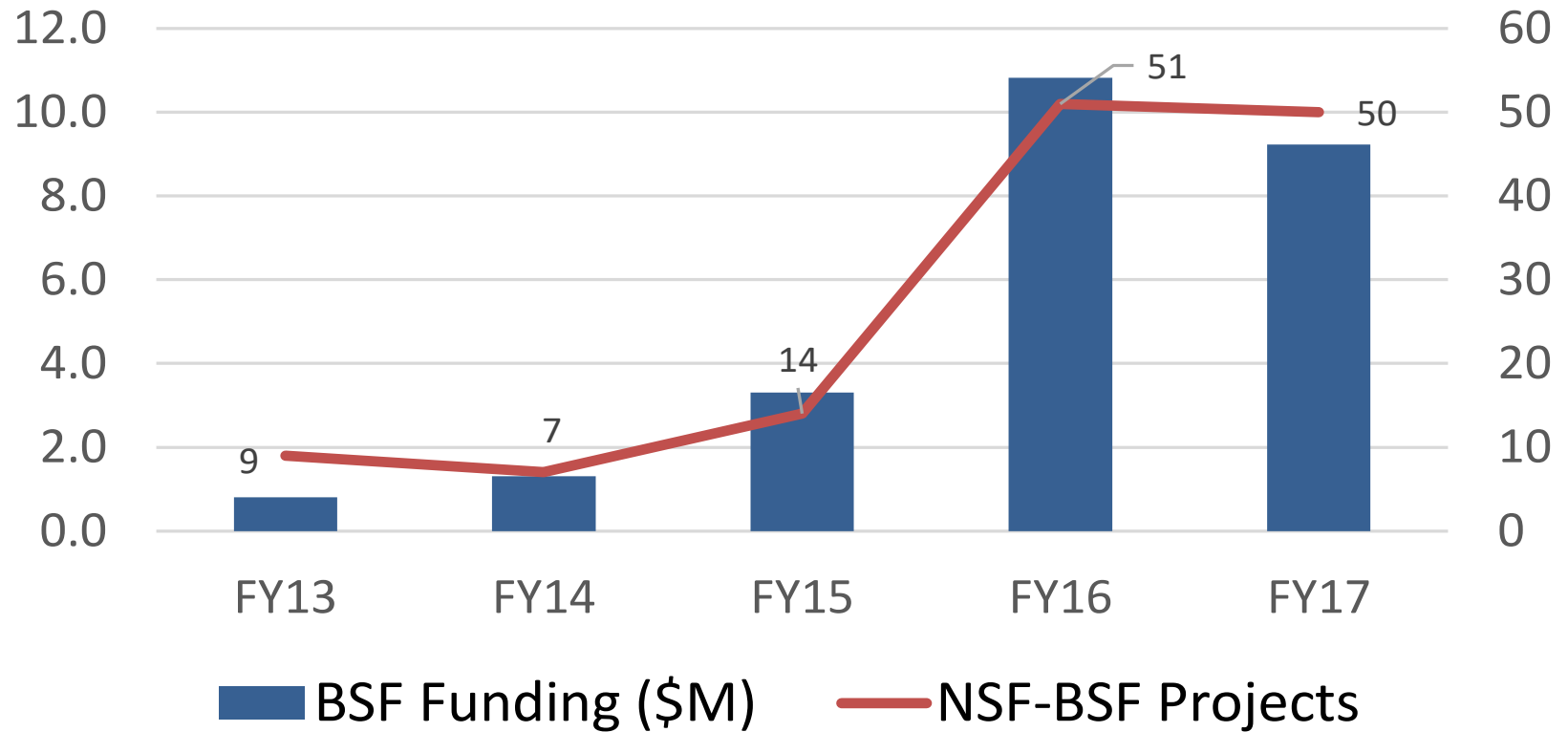


NSF Awards Involving Israel

FY 2008-2017



NSF-BSF Program Growth



Overview of NSF-BSF Success Rates

(by Program)

Division or program	FY 2014	FY 2015	FY 2016	FY 2017	FY17 NSF funding rates
BIO/DEB		3 (33%) **	9 (33%) **	?	24%
BIO/IOS			12 (33%)**	4 (?)	19%
BIO/IOS EDGE			2 (0%)		
BIO/MCB			37 (11%)	28 (25%)	17%
BIO Ecol. Evol. Of Inf. Disease		3 (33%)		0	
CISE/CCF			17 (29%)	21 (38%)	22%
CISE/CNS				2 (100%)	21%
CISE/IIS (joined 2017)					14%
CISE/SaTC		12 (33%)	12 (25%)	10 (40%)	
CRCNS	12 (8%)	14 (14%)	12 (25%)	15 (33%)	
BRAIN (EAGER FY14-15 only)	49 (6%)	1 (100%?)			
ENG/ECCS			12 (33%)	4 (25%)	19%
ENG/CBET Sust. Energy			10 (10%)	8 (25%)	
ENG/CBET (all programs in 2019)					14%
GEO/EAR			12 (25%)	5 (20%)	26%
GEO/OCE	10 (10%)	7 (0%)	20 (25%)	6 (??)	29%
MPS/DMR			48 (25%)	38 (21%)	19%
MPS/PHY		24 (29%)	16 (31%)	10 (20%)	31%



Final Tips for a Successful Review

- **Know the rules.** Make sure your proposal is compliant.
- **NSF takes the Broader Impacts very seriously.** Devote a good fraction (approx. 20-30%) of your proposal to this section. Don't just brush it off or give platitudes. How large an audience will be reached? Develop an assessment plan to determine the effectiveness of your efforts.
- **There is no special pot of NSF-BSF money.** NSF-BSF proposals compete against regular proposals within each program. *Why should this proposal be funded at the expense of a "regular" proposal?* The proposed research must be competitive *regardless of the international connection.*
- **Are the US and Israeli components equally strong?** NSF reviewers will evaluate each side as well as the collaboration. If either side is deemed weak, the whole proposal will fare poorly.
- **The US/Israel collaboration must be genuine and transcend what each component could accomplish on its own.** What new synergies or opportunities does this format provide, and has this proposal capitalized on them? Benefits for students and postdocs?? This includes not only Intellectual Merit but also Broader Impacts. Think creatively about this!



Final Tips for a Successful Review

- In discussing the research plan, motivate both the general (why is this research question an important one?) and the specific (why will we succeed whereas others might not have made progress?).
- External “ad hoc” reviewers will generally be experts in your research area. Know the literature! Give a detailed research plan, but avoid unnecessary jargon. Will there be specific deliverables on each side?
- By contrast, Panelists are likely to be drawn from a larger pool of experts beyond your own research subspecialty. Reading the Abstracts of grants already funded in the Program will give you an idea of entire scientific scope of the Program, and thus the likely makeup of the Panel and their research specialties. Your proposal should aim to impress as many of the Panelists as possible.
- Funding in the US has become increasingly competitive. American reviewers are likely to react negatively if the US side appears to exploiting the NSF-BSF program in order to get “yet another” grant or to overcome weaknesses of their own. Put the science first!
- By contrast, Panelists are usually excited to learn that BSF commits to fund the Israeli side if they give the green light. They intrinsically want to do this. To help seal the deal, make them feel that this is a good investment.



Good luck!

בהצלחה!

