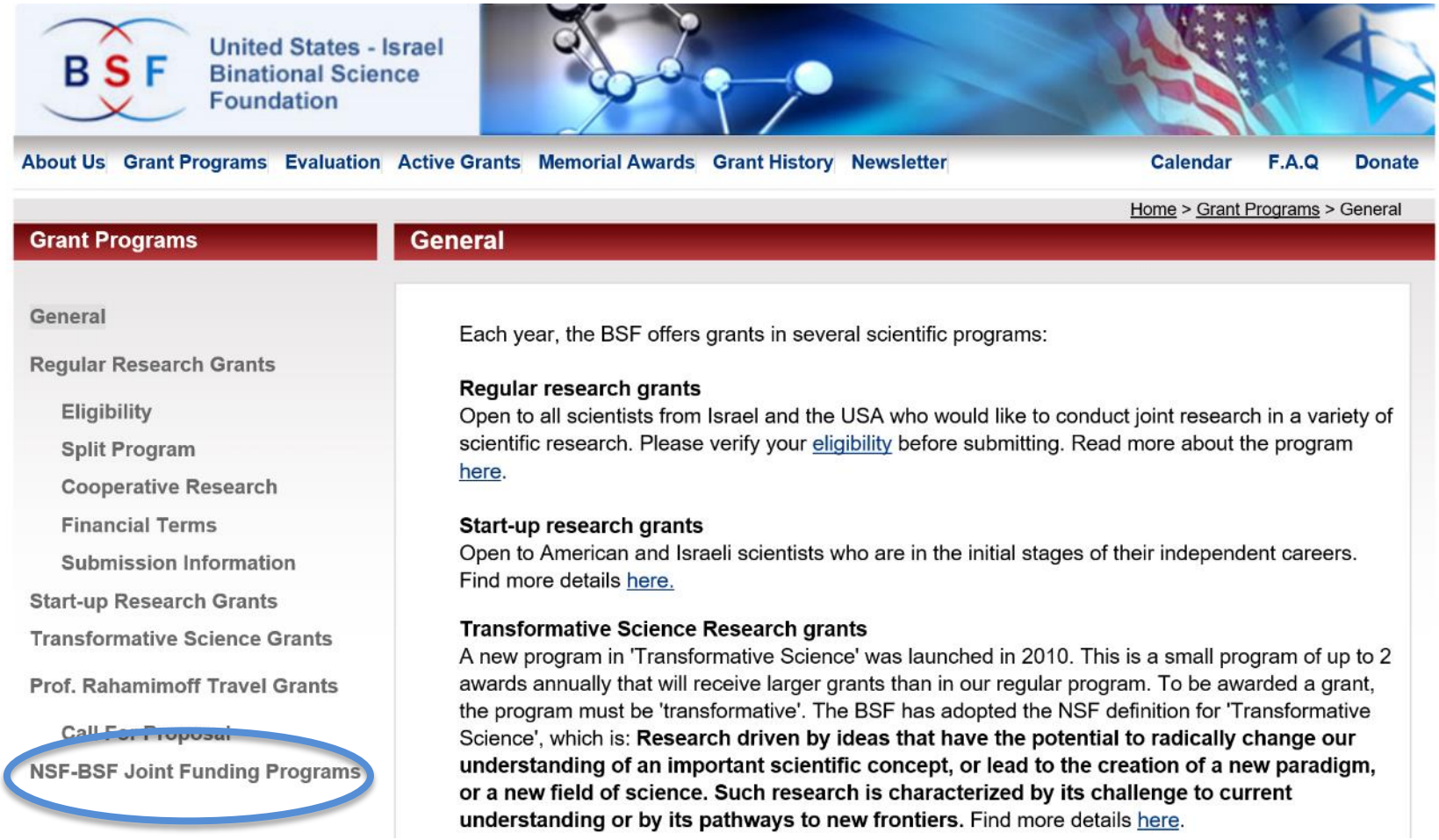
NSF/CISE -- US-Israel BSF International Opportunity Collaborative Proposals

Sol Greenspan & Jack Snoeyink
CISE: Directorate for
Computer & Information Science & Engineering
NSF: National Science Foundation

Want to tell you about these..



National Science Foundation
WHERE DISCOVERIES BEGIN

HOME | RESEARCH AREAS | FUNDING | AWARDS | DOCUMEN

Simple Search | Advanced Search | Popular Searches | Down

Advanced Search Results

You Searched For:

NSF Organization Direct For Computer & Info Scie & Enginr

Keyword BSF

Active Awards true

Expired Awards true

Refined by

Refine Search

State

Arizona(1)
California(9)
Connecticut(2)
Georgia(3)
Massachusetts(7)
Show More ...

Award Amount

Less than or equal $50,000(20)
Between $50,001 - $100,000(5)
Between $100,001 - $500,000(16)
Between $500,001 - $1,000,000(4)
More than $1,000,000(1)

Award Instrument

Standard Grant(45)
Continuing Grant(1)

Export up to 3,000 Awards:

Sort By: Start Date

Results size: 30 per page

Table | List

BSF:2012304:Methods for Preprocessing Population Sequence Data
Award Number:1331176; Principal Investigator:Eleazar Eskin; Co-Principal Investigator:;
Organization:University of California-Los Angeles;NSF Organization:CCF Start Date:09/01
Award Amount:$40,000.00; Relevance:77.8;

BSF:2012338:Shortest Paths: Upper and lower bounds
Award Number:1330843; Principal Investigator:Virginia Williams; Co-Principal Investigato
Organization:University of California-Berkeley;NSF Organization:CCF Start Date:09/01/2(
Award Amount:$44,999.00; Relevance:77.8;

BSF:2012348:The Boundaries of Privacy
Award Number:1331343; Principal Investigator:Katrina Ligett; Co-Principal Investigator:;
Organization:California Institute of Technology;NSF Organization:CCF Start Date:09/01/2
Award Amount:$60,000.00; Relevance:77.8;

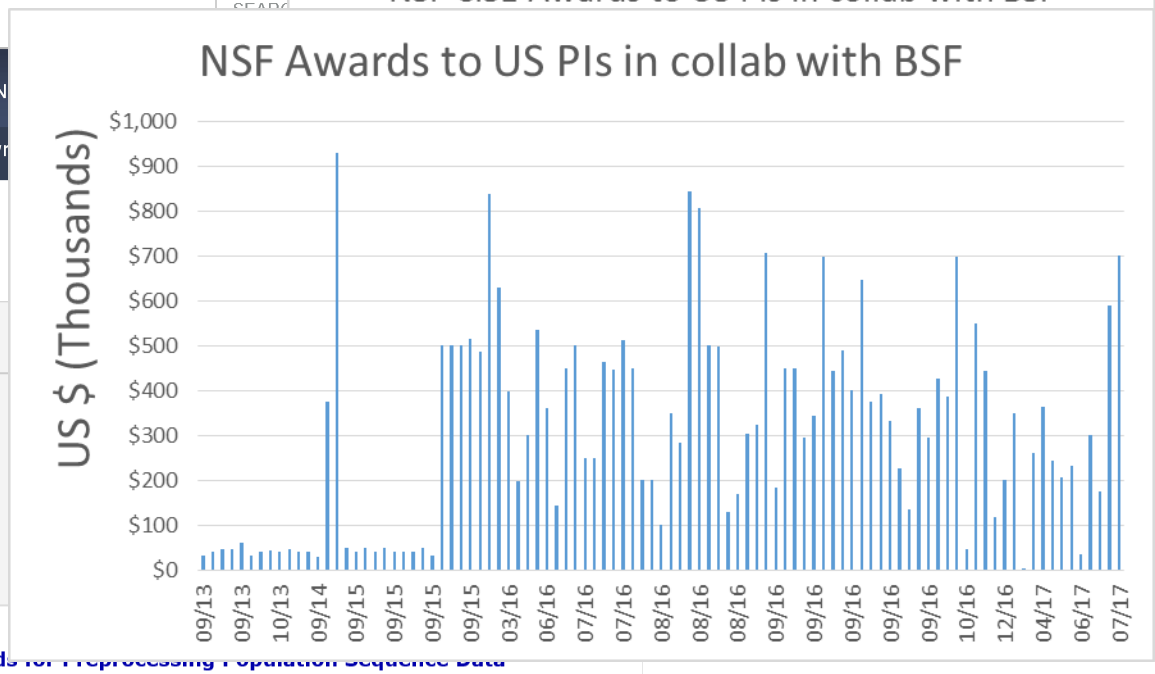
BSF:2012338:Shortest Paths: Upper and lower bounds
Award Number:1417238; Principal Investigator:Virginia Williams; Co-Principal Investigato
Organization:Stanford University;NSF Organization:CCF Start Date:09/01/2013; Award
Amount:$44,999.00; Relevance:77.8;

BSF:201229:Efficient Algorithms for Geometric Optimization
Award Number:1331133; Principal Investigator:Pankaj Agarwal; Co-Principal Investigator
Organization:Duke University;NSF Organization:CCF Start Date:09/01/2013; Award
Amount:$32,843.00; Relevance:77.79;

BSF:2012139:Computing Structures Beyond Moore and von Neumann
Award Number:1329374; Principal Investigator:Eby Friedman; Co-Principal Investigator:
Organization:University of Rochester;NSF Organization:CCF Start Date:10/01/2013; Awa
Amount:$40,000.00; Relevance:77.8;

BSF:2012362:Parallel GPU Algorithms for Proximity Analysis of Freeforms

NSF CISE Awards to US PIs in collab with BSF

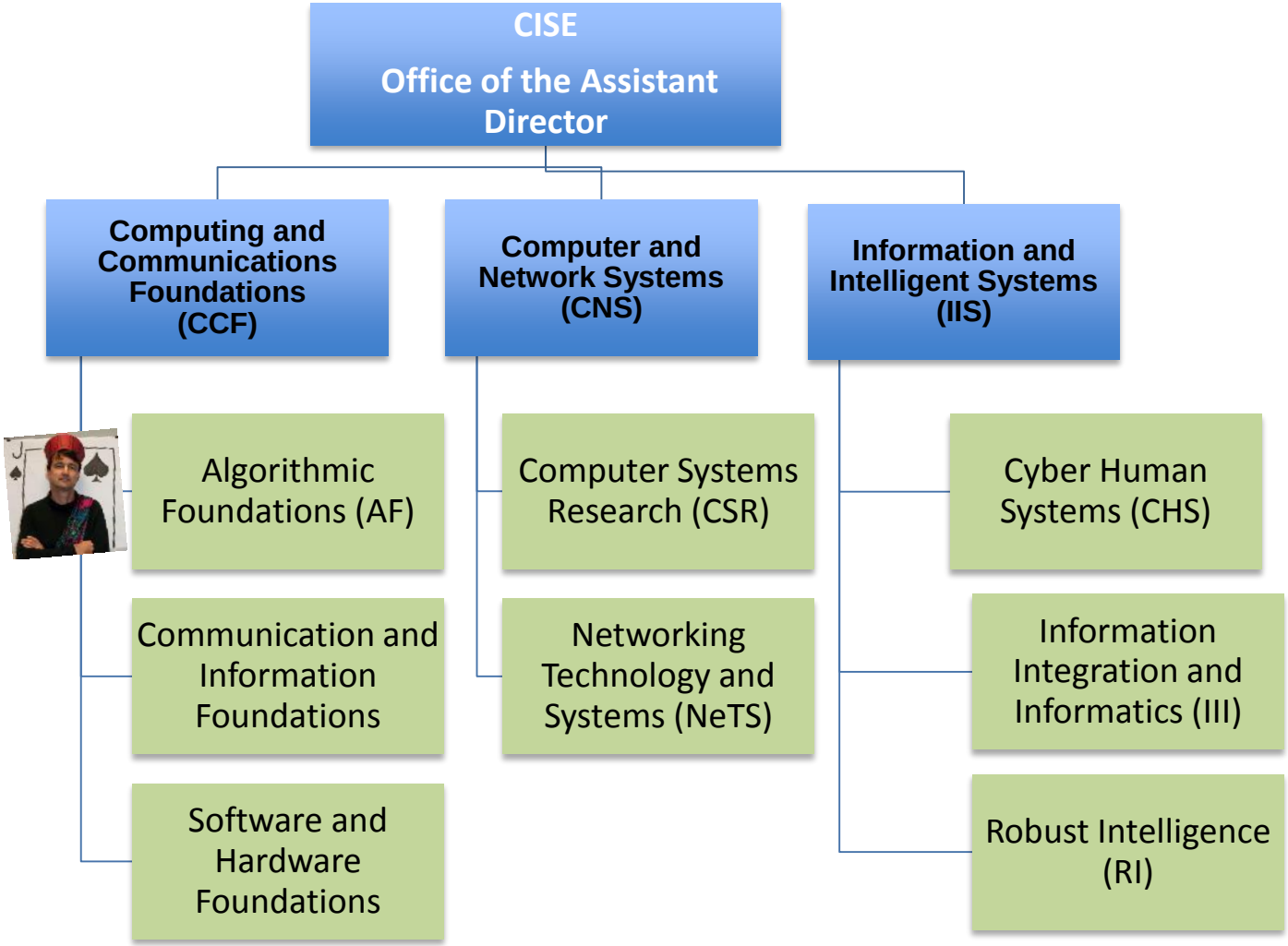


NSF Award Search:
CISE awards with
BSF in title/abstract;
bar = award
height = amount.

Goal & Structure of the Program

- Goal: Increase collaboration between US & Israeli researchers
  - NSF funds US researchers (<$500K/3 years in CISE)
  - BSF funds Israeli researchers
- PIs submit same proposal (body) to NSF & BSF
  - If recommended for funding by NSF, BSF will fund their part (no additional reviews; no “double jeopardy”)
  - BSF allows simultaneous submission (as regular grant); NSF does not.
- Instruction links:
  - Special, CISE Dear Colleague Letter (DCL) NSF 17-020
  - General, Policy Guide (PAPPG) NSF 17-1 general
  - BSF site: NSF-BSF Joint Funding Programs
  - BSF: Tips for Israeli applicants to NSF/BSF

CISE Core Programs



Participating NSF CISE Solicitations

Submission window for Small proposals: ***01 - 15 Nov 2017***

- *Secure and Trustworthy Cyberspace (SaTC) Program, since fall '14*
  Solicitation NSF 17-xxx (to appear) Prior year NSF 16-580
- *Computing & Communication Foundations (CCF) core, added fall '15*
  Solicitation NSF 17-xxx (to appear) Prior year NSF 16-578
- *Computer & Network Systems (CNS) core, added fall '16*
  Solicitation NSF 17-xxx (to appear) Prior year NSF 16-579

Success rates about ***20%***

- *Information & Intelligent Systems (IIS) core, added ?*
  Solicitation NSF 17-xxx (to appear) Prior year: NSF 16-581
- Watch for update to Oct '16 DCL: NSF 17-020, and BSF news.

What to do…

follow instructions carefully

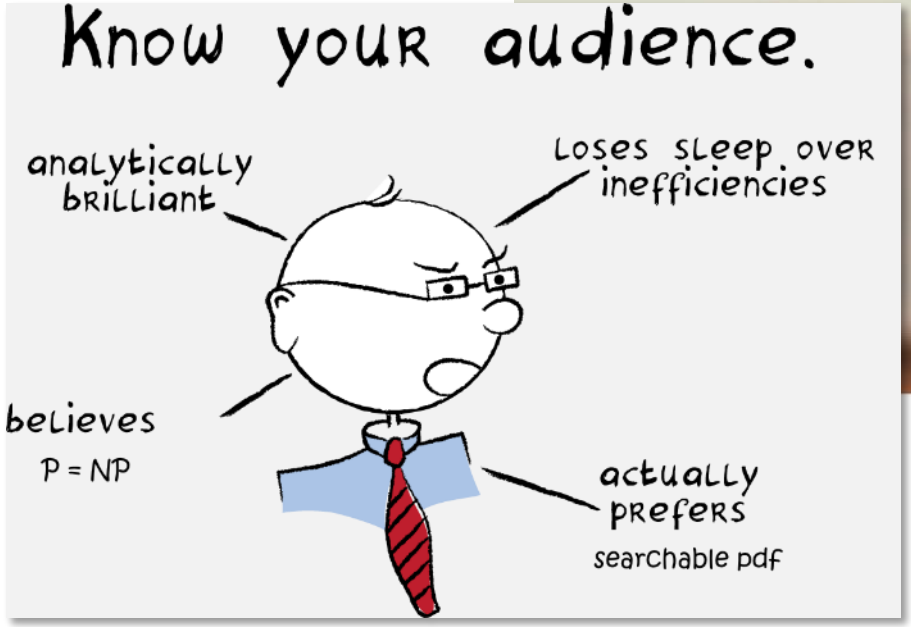
NSF Reviewers see Israeli team details in “Supplemental Docs”

- Authorization to share proposal & reviews
- Bio sketches for Israeli collaborators
- Budget for Israeli collaborators

- Collaboration Plan: joint document

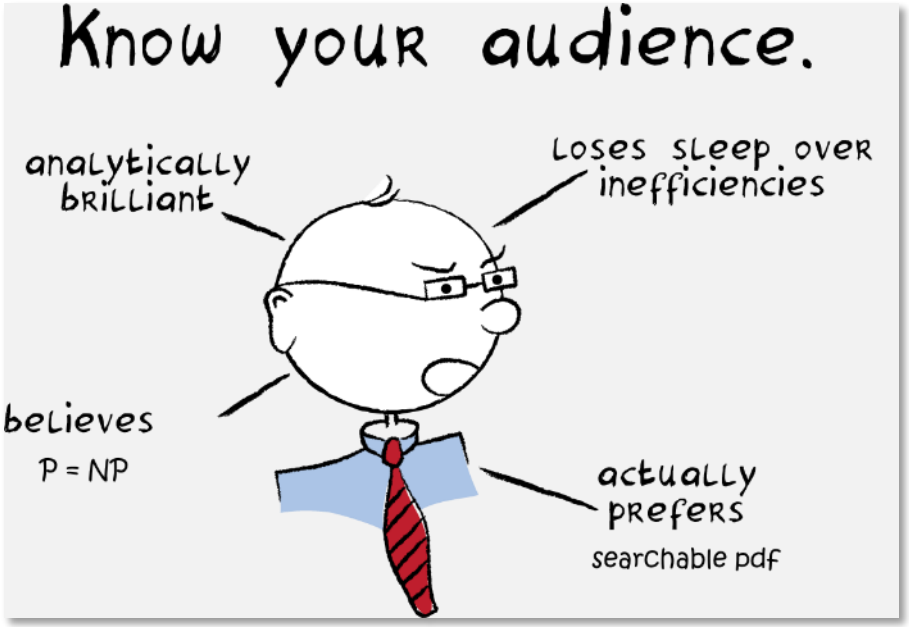
What to do…

follow instructions carefully



Know your audience

- Smart people, willing to serve their community
- Busy people, reviewing 7-10 proposals, knowing that the majority will not get funded
- People from diverse research areas in a program

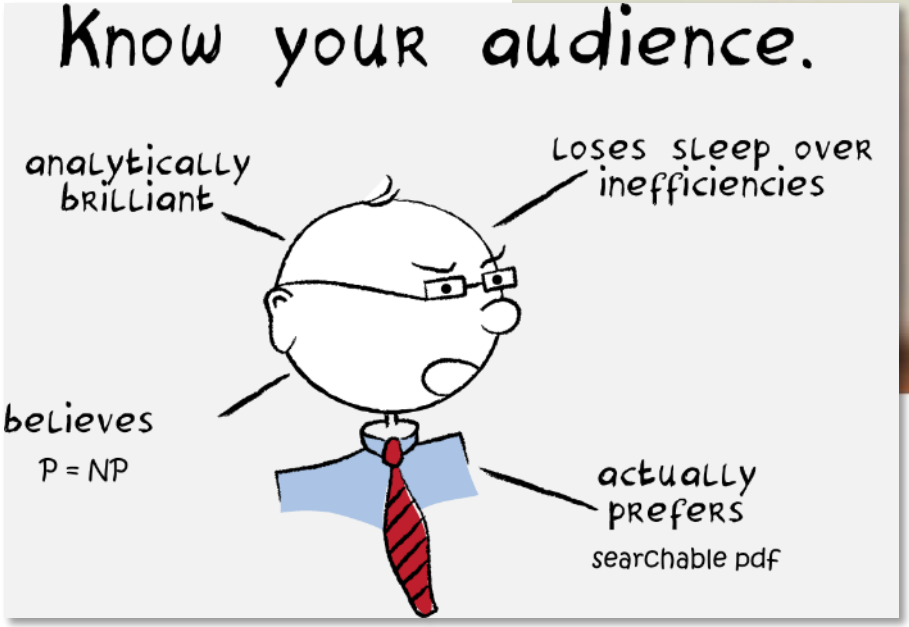


What you can do:

- Ask colleagues to read your proposal
- Suggest reviewers in your proposal
- Volunteer to serve on a panel

What to do…

follow instructions carefully



The NSF Review Criteria

- NSF programs assemble panels of experts to review proposals for its programs
- Proposals with “BSF” in the title are reviewed with other proposals in the targeted program(s)
- Panelists use standard NSF Merit Review criteria
  - Intellectual Merit
  - Broader Impacts
  - Solicitation-specific criteria
- Also comment on:
  - Description of the collaboration with Israel
  - Roles of both US and Israeli collaborators

Standard NSF Evaluation Criteria:

Intellectual Merit

- Importance of proposed research
  - to advance knowledge and understanding
  - within the field and across fields
- Creativity and originality
- Significance of expected contributions
- Qualifications of the PIs
- Access to necessary resources
  - Students, equipment, facilities, etc.

Standard NSF Evaluation Criteria

Broader Impacts

- Benefits to society and the nation(s)
- Benefits to the field and to other research fields
- Broad dissemination of tools, methods, data, results
- Integration of research and teaching, training, and learning
- Broadening participation of underrepresented groups and creating diversity in the computer systems workforce,
  - e.g., gender, ethnicity, disability, geographic, etc.
- Linkages to technology transfer opportunities
- Outreach to community, region, organizations where research outcomes (e.g., knowledge) can be shared in valuable ways

Examples, not a checklist!

Don't need all, but want creative novelty in significant impacts.

Important to US side; Israeli impacts help.

Standard NSF Evaluation Criteria:
Solicitation-Specific Criteria

- Core programs have no specific criteria except submit matter scope.
- Secure and Trustworthy Cyberspace (SaTC) checks that the topic is in scope and not a good fit for one of the Core programs.
- For NSF-BSF, the appropriateness of collaboration is considered: the whole should be greater than the sum of the parts.

Merit Review Timeline

NSF Announces Opportunity

Research & Education Communities

Submit

FastLane www.fastlane.nsf.gov

GRANTS.GOV™

NSF

NSF Program Officer

Ad Hoc

Panel

Combination

Internal

Program Officer Analysis and Recommendations

Division Director Concurrence

Can be returned without review/withdrawn

Award

Via Division of Grants and Agreements

Decline

Organization

Proposal Receipt at NSF

DD Concur

Award

90 Days

Proposal Preparation

6 Months

Proposal Receipt to DD Concurrence of PO Recommendation

30 Days

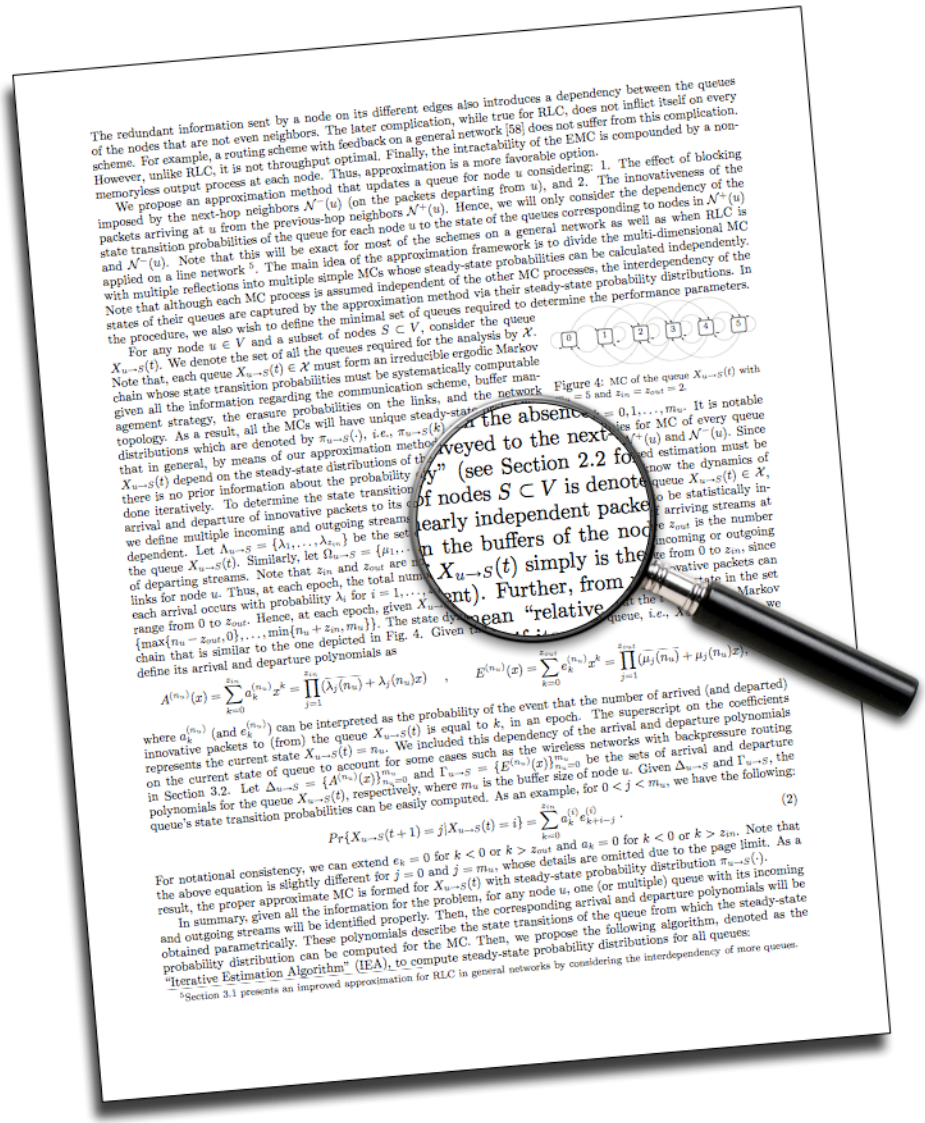
DGA Review & Processing

Proposal Writing Tips

- Explain the importance of the problem area, as if it were not obvious to the reader. Not only technically sound, but important!
- NSF considers both the Project and the People
  - PI capabilities are important, but the PI track record alone is not sufficient to merit new funding
  - The project description must give sufficient detail to understand the research activity and believe it is worth investing in it
- The scope of new/original work needs to be clear vis-à-vis related work by others and prior work of PIs
- Top 10 list of what to avoid...

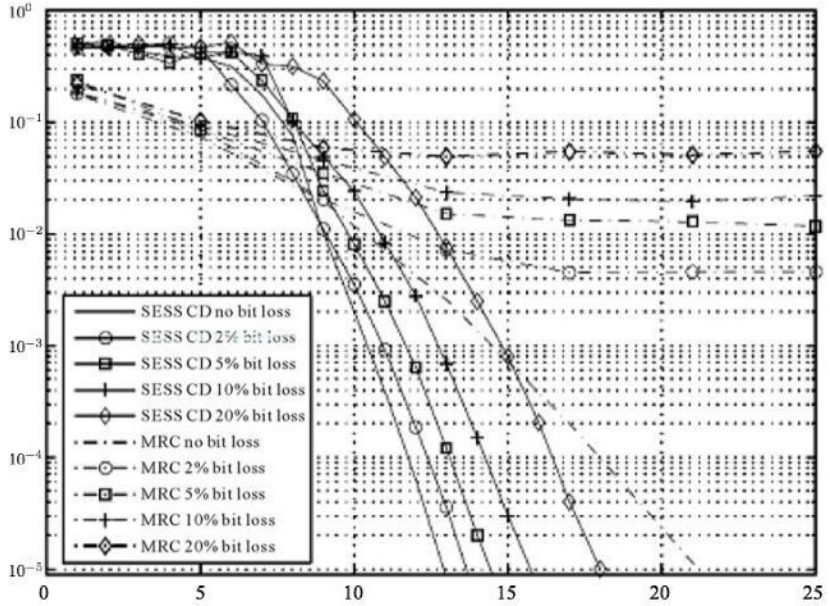
Number 10: Fonts Too Small

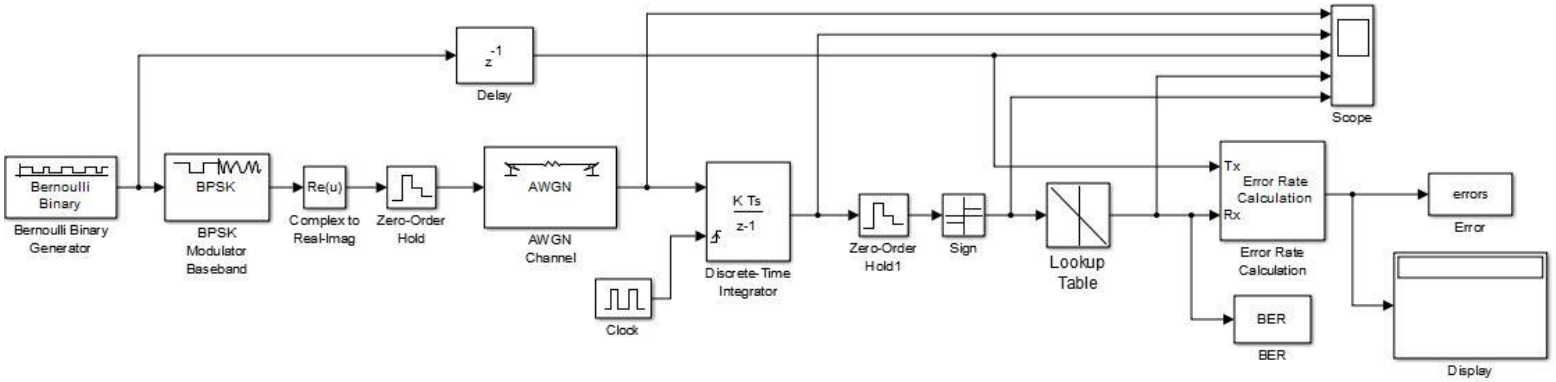
- Small fonts promote reader fatigue
- Reviewers HATE small fonts
- PAPPG mandates:
  - 11 point font minimum
  - 1 inch margins
  - 6 lines max per vertical inch



Number 9: Figures Illegible

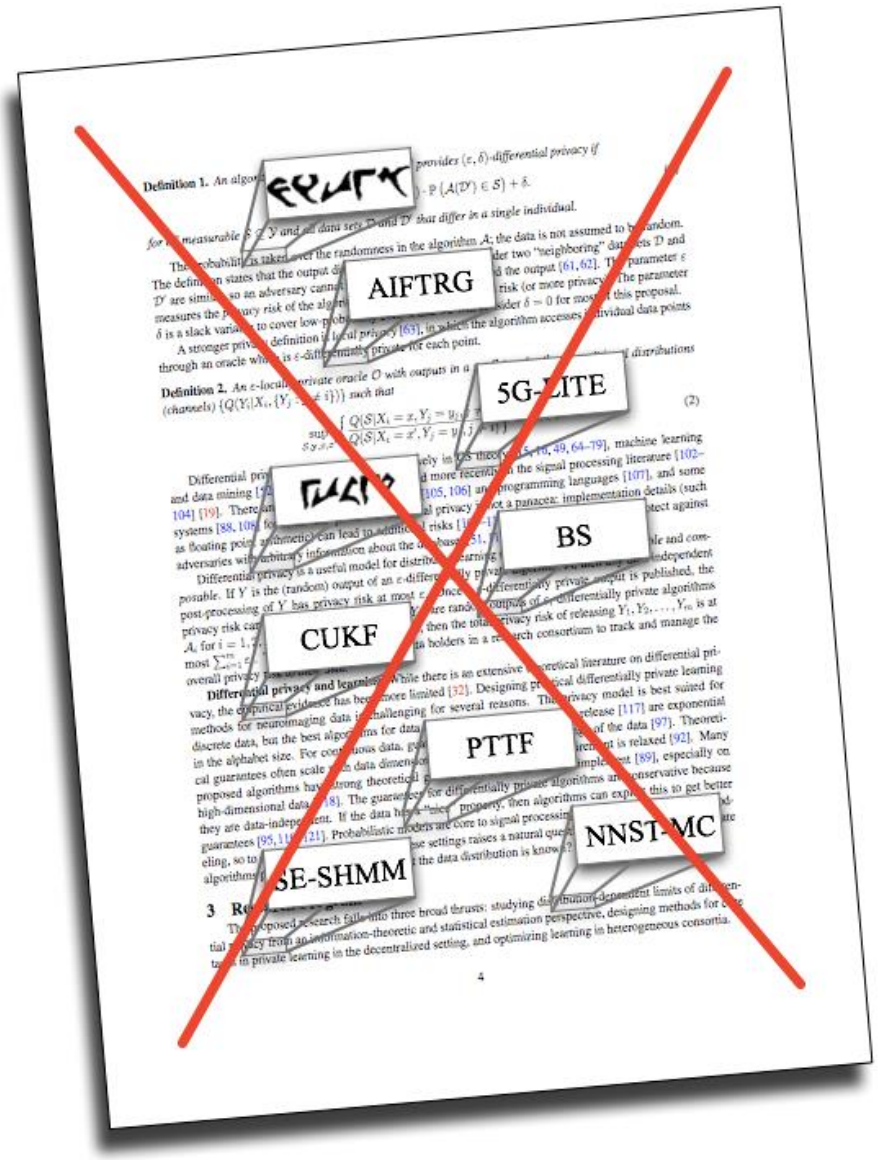
- Avoid “crowded” visuals
- Don’t assume reader will print in color
- Use vector graphic formats





Number 8: Acronyms

- Acronyms are **UGLY**, and make text hard to read.
- Acronyms limit your audience to those who already know them…



Number 7: Dissing the Competition

- Good idea: Citing others' work
- Bad idea: Slighting others' work

("Others" might be sitting on the panel)

Number 6: Poor distinction between preliminary results and proposed work

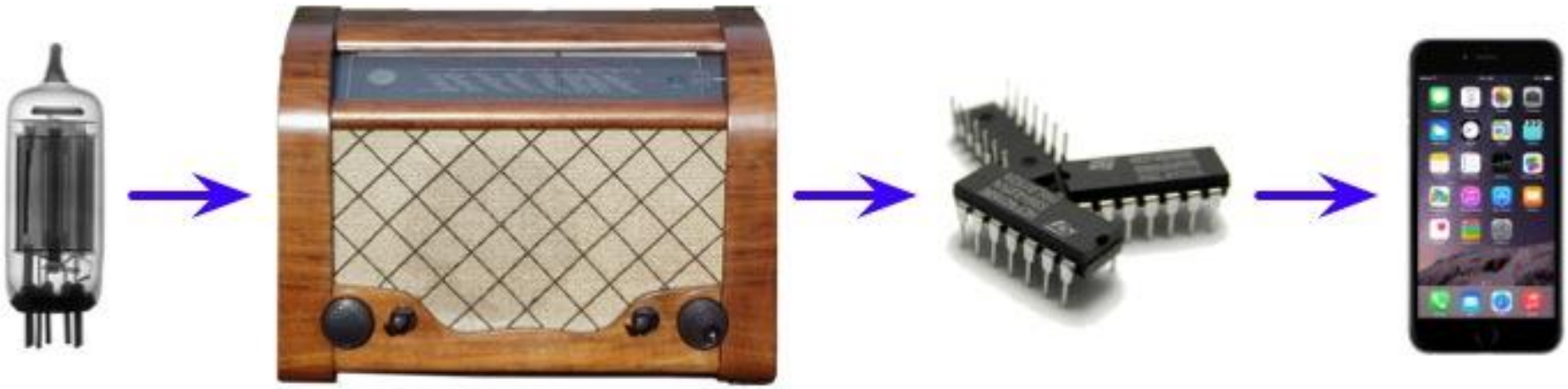
- Make a clear demarcation
- Distinguish your results from others'
- Provide clear road map for future work

Number 5: Lackluster Education Plan

- Should be integrated with research plan
- Think **beyond** your present teaching duties

Number 4: Dull Broader Impacts

- Broader Impacts ask:
  - How will this work change society?
- Don't confuse this with "extracurricular activities" not supported by the research plan
- Outreach plans should be substantiated



Number 3: (for new Pis)
Confining yourself to your PhD work

- Proposals should be forward-looking
- Move above and beyond your PhD work
- "Imagine a world …"

(yes)

(no)

Number 2: “It wasn’t clear …”

Symptoms:

- Long-winded explanations
- Too many superfluous details
- Poor organization of thoughts into words

Remedies:

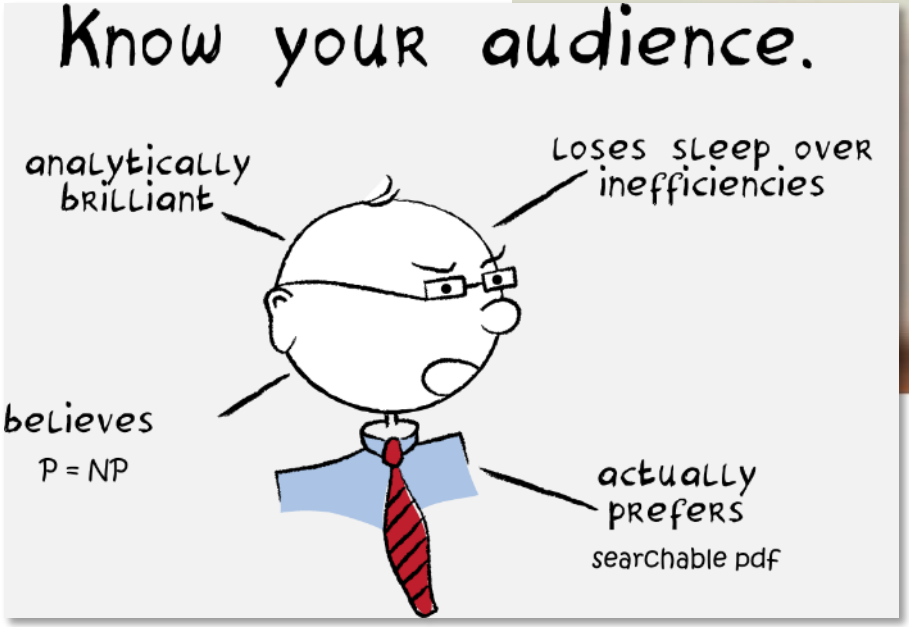
- Use fewer words
- Read first two pages aloud
- “Make every word tell”

Number 1:
Research Plan lacking Cohesion

- Don’t staple together unrelated ideas
- Don’t offer a laundry list with no prioritization
- Don’t make everything look like a nail to your one hammer
- Tell a story with your narrative

What to do…

follow instructions carefully



Jack's favorite writing exercises

5 rules for good writing:
write, rewrite, rewrite,
rewrite, rewrite.

Context first (Gopen and Swan)

Underline verbs: active, passive, being
Consider rewriting if half are being or passive.

Find parallelism and strengthen it

Scratch out words without changing meaning

Acronyms

NSF: US National Science Foundation

BSF: US/Israel Bi-national Science Foundation

TLA: Three-letter acronym

CISE: Computer and Information Science & Engineering Directorate of NSF

CCF: Computing & Communication Foundations Division of NSF CISE

DCL: Dear Colleague Letter – gives information about NSF programs or priorities