



**University
of Idaho**

*Zoom participants: Please
keep your microphone muted
until the Q&A session*

NSF: UNDERSTANDING PROPOSAL REVIEW

**RESEARCH AND FACULTY DEVELOPMENT
FACULTY SUCCESS SEMINAR SERIES**

Carly Cummings, PhD, CPRA
Director
Research and Faculty Development

Special Guest: Dr. Luke Harmon
Professor, Biological Sciences

Please note that this session is being recorded



OFFICE OF RESEARCH AND FACULTY DEVELOPMENT

I We provide proposal development assistance across the spectrum*



I Meet goals in the UI strategic plan – grow research and creative efforts across all disciplines

I Reach out to request service – uidaho.edu/orfd

*Not including budget preparation

All services are optional and are granted on a first come, first served basis

OFFICE OF RESEARCH AND FACULTY DEVELOPMENT (RFD)



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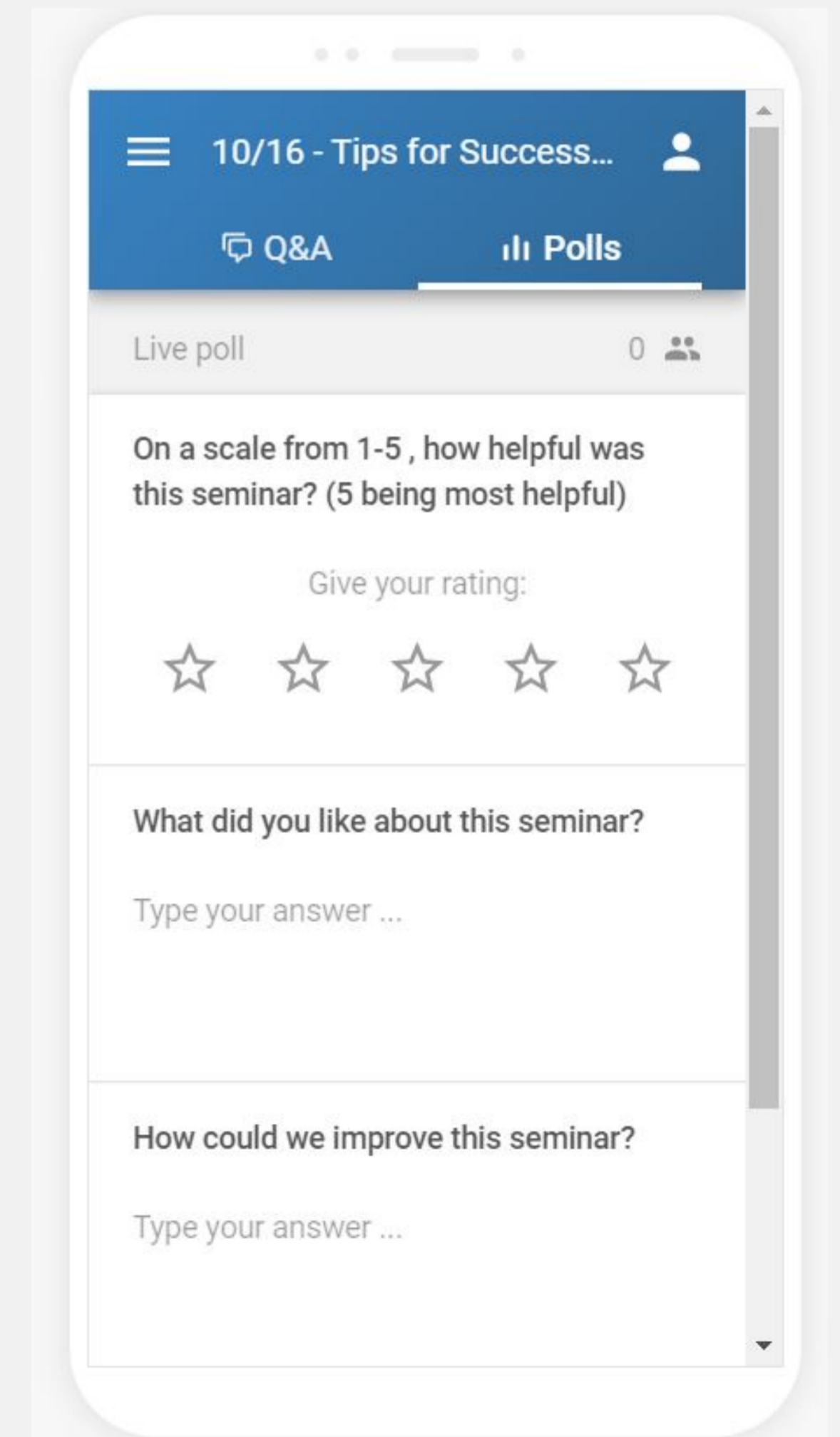
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Morrill Hall
Room 103 – come say hello!

HELP US IMPROVE OUR SEMINARS

- I After the Q&A session: brief 3 question sli.do poll
- *On a scale from 1-5, how helpful was this seminar?*
 - *What did you like most about this seminar?*
 - *How can we improve this seminar?*

www.slido.com or use the **sli.do** app (Use code #FSS)



AUDIENCE POLL



- I Submitted a proposal to NSF?
- I Served as a reviewer for NSF?
- I Feeling confident in understanding the NSF proposal review process?

OBJECTIVES



- I Understand what happens when you submit an NSF proposal
- I Tips for a successful review
- I Learn from our expert about what happens on the “inside”

Enhance the competitiveness of your next NSF proposal!



NSF MERIT REVIEW PROCESS

I FY2017 [Report](#) on NSF Merit Review Process (May 2019)

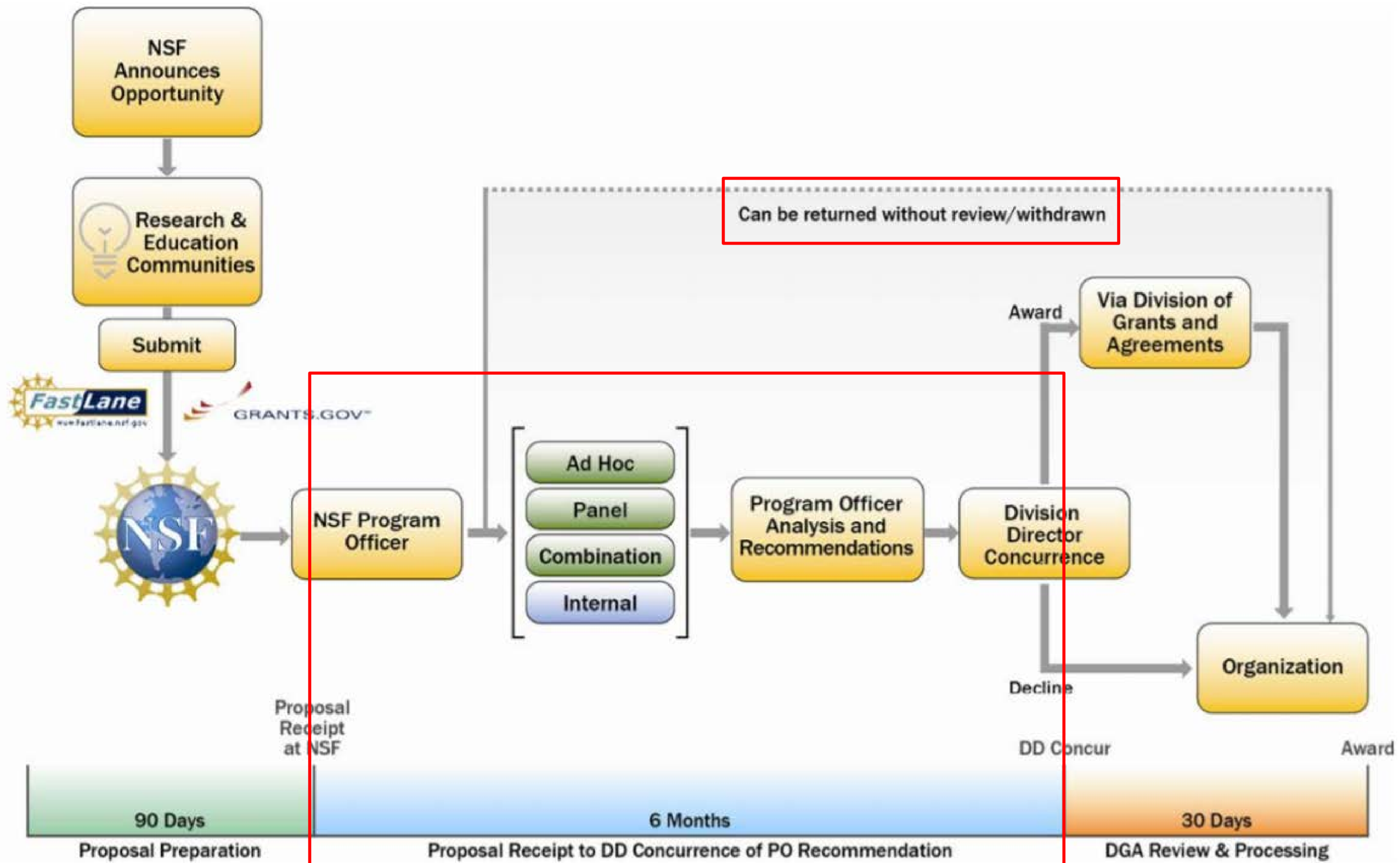
- 49,415 proposals competitively reviewed; **33,966 reviewers**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Proposals	44,577	44,428	45,181	55,542	51,562	48,613	48,999	48,051	49,620	49,285	49,415
Awards	11,463	11,149	14,595	12,996	11,192	11,524	10,829	10,958	12,007	11,877	11,447
Funding Rate	26%	25%	32%	23%	22%	24%	22%	23%	24%	24%	23%

Source: NSF Enterprise Information System, 10/01/17.

- Funding rates vary among directorates
- Average number of proposals to be submitted before an award is made = 2.4
- NSF's goal is to inform at least 75% of PIs of funding decisions *within six months* of receipt of their proposals

NSF MERIT REVIEW PROCESS





NSF MERIT REVIEW PROCESS



I Proposals returned without review (RWR)

Fiscal Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Number of Proposals RWR	1505	1287	1741	2628	1794	1813	1871	1659	1843	1399	1144
Percent of all Proposal Decisions	3.3%	2.8%	3.7%	4.5%	3.4%	3.6%	3.7%	3.3%	3.6%	2.8%	2.3%

Source: NSF Report Server, 04/11/18.

Appendix 14 - Proposals Returned Without Review, by Reason

Full Proposals	
Reason	Number returned
Inappropriate for NSF	56
Insufficient lead time	8
Preliminary proposal did not result in an invitation to submit a full proposal	4
Duplicates a proposal in review	50
Format problem	147
Does not contain a required section	299
Not responsive to solicitation, program announcement, or Proposal and Award Policies and Procedures Guide	608
Received past the deadline	136
Not substantially revised after a previous declination	75
Duplicates an existing award	16
TOTAL	1,399



NSF MERIT REVIEW PROCESS



- I Fair, competitive, transparent, in-depth review process
 - Gold standard



Details [here](#)



NSF MERIT REVIEW PROCESS



I Phase II – steps 4-7

- Step 4: PO receives proposal and selects peer reviewers
 - Compliance checking
 - At least 3 external reviewers
 - *Ad hoc*, panel, or combination
 - Varied levels of expertise – consideration when writing
 - Not standing panels (like NIH) – lots of variability
 - Some categories *not* externally reviewed (RAPID, EAGER, RAISE)



NSF MERIT REVIEW PROCESS



I Phase II – steps 4-7

- Step 5: External peer reviewers evaluate proposals
 - 2 NSF review criteria (Intellectual Merit, Broader Impacts) – **5 considerations**
 - 1. What is the potential for the proposed activity to:
 - Advance knowledge and understanding within its own field or across different fields (IM); and
 - Benefit society or advance desired societal outcomes (BI)?
 - 2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
 - 3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?



NSF MERIT REVIEW PROCESS



I Phase II – steps 4-7

- Step 5: External peer reviewers evaluate proposals
 - 2 NSF review criteria (Intellectual Merit and Broader Impacts) – cont'd
 - 4. How well qualified is the individual, team, or organization to conduct the proposed activities?
 - 5. Are there adequate resources available to the PI (at the home organization or through collaboration) to carry out the proposed activities?
 - Solicitation-specific review criteria
 - Culture of the panel influences scoring
 - Reviewers make funding recommendations to PO (not funding decisions)



NSF REVIEWER FORM

The following elements should be considered in the review for both criteria:

1. What is the potential for the proposed activity to
 - a. advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
 - b. benefit society or advance desired societal outcomes (Broader Impacts)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team, or institution to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home institution or through collaborations) to carry out the proposed activities?

In the context of the five review elements, please evaluate the strengths and weaknesses of the proposal with respect to intellectual merit.

In the context of the five review elements, please evaluate the strengths and weaknesses of the proposal with respect to broader impacts.

Please evaluate the strengths and weaknesses of the proposal with respect to any additional solicitation-specific review criteria, if applicable.



NSF MERIT REVIEW PROCESS



I Phase II – steps 4-7

- Step 6: PO Analyzes input and makes recommendation to Division Director
 - External reviews
 - Maintaining a balanced portfolio
 - Capacity building in a new/promising research area
 - Geographical considerations (EPSCoR state)
 - Early career v. established Pis
 - Other

TAKE HOME: Funding decisions not necessarily determined by the peer review recommendations

CONSIDER YOUR AUDIENCE



REVIEWER PERSPECTIVE:

I Peers

- Potentially varying backgrounds
- Proposal needs to be understood by an educated individual who isn't necessarily an expert in your field
- **But!** You also need to provide the details that experts in your field will expect to see

I Volunteers

- Consider their state of mind...



CONSIDER YOUR AUDIENCE

It is no longer sufficient to write a proposal aimed only at the experts in the field. Investigators need to outline their research, its contribution, and its impact to a diverse audience.

Jan 4, 2018 Article:

<https://www.chronicle.com/article/10-Common-Grant-Writing/242150>



NSF MERIT REVIEW PROCESS



I Phase II – steps 4-7

- Step 7: Division level funding decisions
 - Division of Grants and Agreements for award processing
 - PI notified
 - Context of proposal review (#s)
 - Individual review comments (anonymous)
 - Panel summary, if applicable



COMMON REASONS FOR LOW REVIEW RATINGS

- No well defined hypotheses or tests of same. Lack of focus. “Why all the rambling, this seems like a fishing expedition.”
- Scope of the work is out of proportion to the budget and amount of time needed to do the work.

Source: How to get NSF funding: a view from the ‘inside’



COMMON REASONS FOR HIGH REVIEW RATINGS

- “This proposal suggests a clear, elegant, well-documented approach to a problem that has plagued this field for decades.”
- “The PI has a beautiful plan. Undergraduates or new graduate students can step right into this work, yet it solves a major problem and will be publishable in a first-rate journal.”
- “This reads like a dream. I have rarely seen a proposal, even from long-established investigators, that shows such careful thought and meticulous presentation.”

Source: How to get NSF funding: a view from the ‘inside’



NSF REVIEWER FEEDBACK

- Scores:
 - Excellent (E), Very Good (V), Good (G), Fair (F), Poor (P)
 - Strengths and weaknesses
 - How well addresses both review criteria
- Receive individual reviewer comments and scores
- Receive panel summary, if appropriate – *THIS IS KEY*
- PO may provide individual comments to applicant

- Questions directed to PO



VOLUNTEER TO BE AN NSF REVIEWER **I**

I Why?

- Watch how the reviewers work – what they like/dislike
- Read good (and bad) proposals
- Networking with peers and PO

I How?

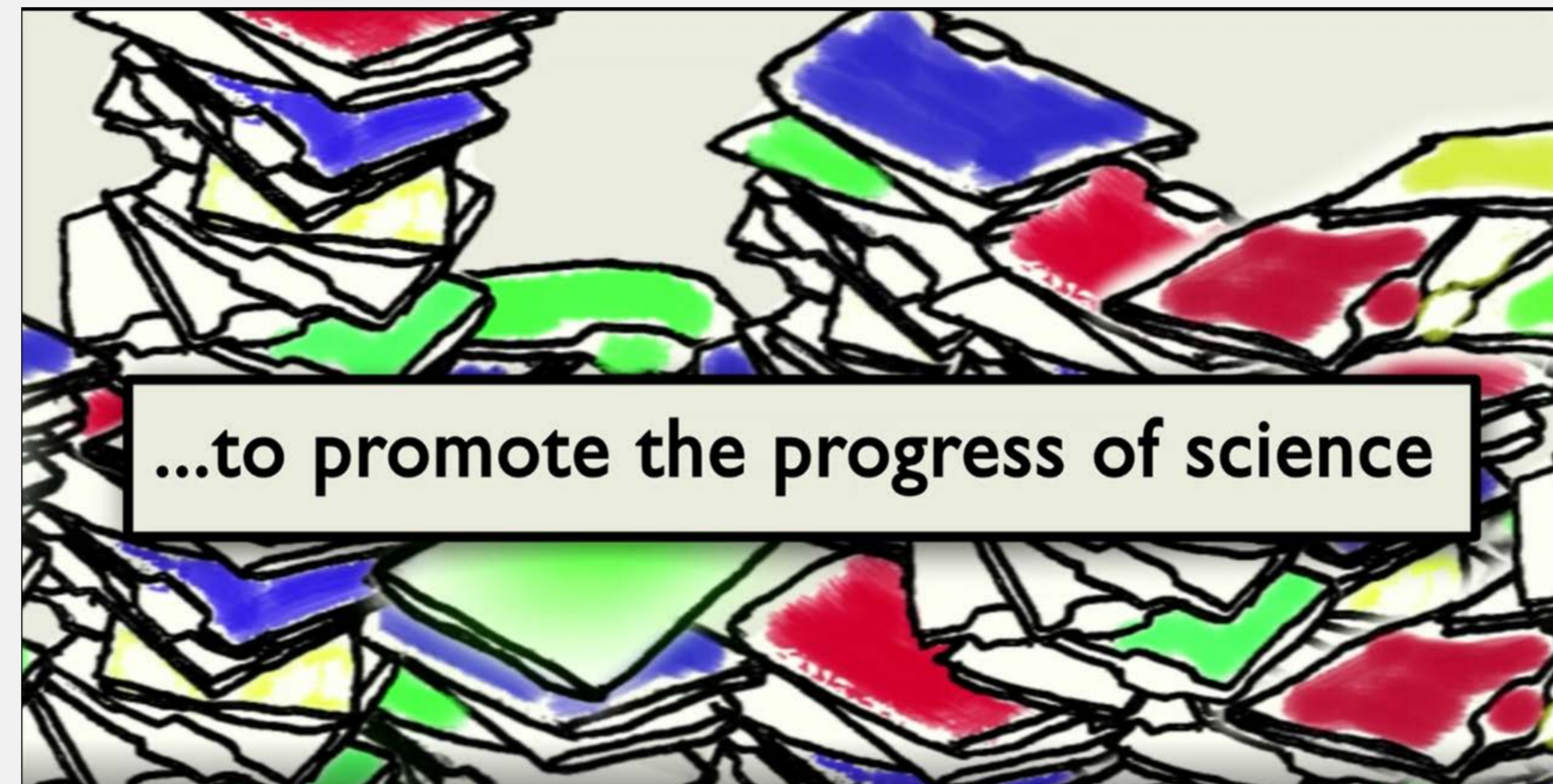
- Reach out to PO
 - Introduce yourself and research experience
 - Indicate interest in serving on a panel
 - Send them 2-pg NSF Biographical Sketch



NSF REVIEW RESOURCES



- I Introductory [video](#) (6:12)



- I Talk with your NSF funded peers
- I Attend an [NSF Grants Conference](#)
 - May 18-19, 2020, Minneapolis, MN
 - 2019 [presentation](#) on merit review process



LET'S ASK OUR EXPERT

DR. LUKE HARMON

- I** Quick introduction about research and NSF experience
- I** Experience serving on NSF review panels
 - Differences between programs/directorates?
 - Surprising things you learned
 - How this affected your proposal writing
- I** What happens during an NSF panel meeting?
 - Overview of process and role of PO
- I** Advice to early career PIs

<https://www.webpages.uidaho.edu/webteam/research/rfd-faculty-success-seminars-postcard.pdf>



FACULTY SUCCESS SEMINARS

*Let Us Be Your Guide
Through the Proposal
Development Process*



**JOIN US IN IRIC 305
12:30 P.M. – 1:30 P.M. PT**

Can't join us in person? Then join us live via Zoom:
uidaho.zoom.us/j/798224314. Each seminar will
be recorded and be available on our website.



University of Idaho
Office of Research and
Faculty Development

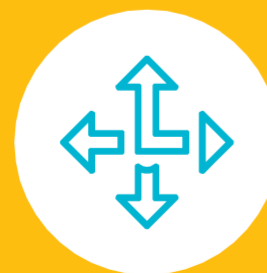


FALL 2019

- Sept. 4** HERC IGEM Info Session
- Sept. 11** Find Funding Opportunities: Intro to Pivot
- Sept. 25** NSF CAREER All Year: An Introduction
- Oct. 2** W.M. Keck Foundation Info Session
- Oct. 16** Tips for Successful Proposal Writing
- Oct. 23** NSF CAREER All Year: Getting Started
- Oct. 30** Exploring Humanities Funding Opportunities
- Nov. 13** MW CTR-IN Funding Opportunities
- Nov. 20** NSF CAREER All Year: Integrating the Research and Education Plans
- Dec. 11** M.J. Murdock Trust Commercialization Initiation Program Info Session

SPRING 2020

- Jan. 22** Developing Successful Project Management Plans for Large Proposals (**Rescheduled Apr 15**)
- Feb. 5** NSF: Broader Impacts Really Do Matter!
- Feb. 12** NIH: Funding Mechanisms Overview (R03, R21, R01)
- Feb. 19** NIH: Developing Your First RO1 Proposal
- Mar. 4** NIH: Understanding Proposal Review
- Mar. 11** NSF: Understanding Proposal Review
- Mar. 25** Fulbright Faculty Scholar Program Info Session
- Apr. 1** Find Funding Opportunities: Intro to Pivot
- Apr. 8** NSF MRI: Creating Competitive Proposals
- Apr. 15** Developing Successful Project Management Plans for Large Proposals



**WE GUIDE THE DEVELOPMENT
OF COMPETITIVE EXTERNAL
GRANT PROPOSALS**

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and Faculty
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THANK YOU FOR COMING!



QUESTIONS?

BEFORE YOU GO...

Please take a brief 3-question sli.do poll

www.slido.com or use the **sli.do** app

Use code #FSS

