## Facilitator's

## Guide to

Running the
RPT Bias
Literacy Workshop


Changing Research Experiences Structures and (in)Tolerance through the Adaptation of Promising Equity Practices

## ADVANCE

## PROJECT CREST

ADVANCE Project CREST, University of Colorado Colorado Springs

Jeffery Montez de Oca<br>ADVANCE Project CREST<br>Faculty Fellow<br>Professor Sociology<br>Jessi L. Smith<br>ADVANCE Project CREST Principal Investigator Vice Provost and Associate Vice Chancellor of Research<br>Sylvia Mendez<br>ADVANCE Project CREST Co-PI<br>Professor, Leadership, Research, and Foundations

Heather Song
ADVANCE Project CREST Co-PI
Professor, Electrical and Computer Engineering
Emily Skop
ADVANCE Project CREST Co-PI
Professor, Geography
Jennifer Poe
ADVANCE Project CREST Project Manager

Suggested citation: Montez de Oca, J., Smith, J. L., Poe, J., Skop, E., Mendez, S., \& Song, H. (2023). UCCS Facilitator's Guide to Running the RPT Bias Literacy Workshop. University of Colorado Colorado Springs.

ADVANCE Project CREST
Location: Cragmor 108
Email: advance@uccs.edu
Website: www.research.uccs.edu/advanceprojectcrest


The material in this document is based upon work supported by the National Science Foundation (NSF) under Grant No. 2117351. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

## ADVANCE <br> PROJECT CREST

## Contents

The Workshop ..... 4
The Presentation ..... 5
Practice ..... 5
List of Participants ..... 6
Scheduling the Workshop ..... 6
Getting People to Show Up ..... 6
Prepare for the Workshop ..... 6
Sample Budget ..... 7
Run the Workshop ..... 9
Agenda: ..... 9
Outline of educational material ..... 9
Follow up Afterwards ..... 11
Appendix ..... 12
Evaluation Form ..... 12
Simulation Materials ..... 13
Abridged Version of RPT Criteria ..... 13
ABRIDGED Dossier Packet for: Dr. Samia Manasur ..... 15
RPT Committee Meeting for Samia Manasur ..... 20
Observer Instructions ..... 26
Post-Meeting Discussion ..... 26
Bibliography ..... 27

The Workshop

This workshop and its materials were adapted from the Georgia Institute of Technology "ADEPT" program as well as the Montana State University ADVANCE Project TRACS. The goal of the workshop is to increase people's literacy regarding bias in the retention, promotion, and tenure (RPT) process so that they can take conscious, affirmative steps to minimize it. The workshop has two parts: education and practice. The educational part consists of a PowerPoint lecture that first presents research on bias in the RPT process and then strategies to minimize bias. The practice part consists of a simulated RPT meeting where workshop participants will be assigned roles. Three people will play faculty with different backgrounds and rank who are holding a RPT meeting. A fourth person will take on an observer role by taking notes on the simulated meeting and the discussion of the meeting that follows.


The premise of the workshop is that people who will participate in RPT evaluation meetings together whether in a unit or on a committee should be trained together so that they can refer back to the training during actual review meetings. Therefore, the workshop should be organized into tables of three to five people and have a seating chart so that units/committees are trained together when possible.

Plan for the workshop to take three hours even though it rarely takes that long. That way people have time to sit with and process the information, talk to each other, and no one will leave early. When inviting people to the workshop be sure to emphasize that they need to block out the time and attend the entire workshop. Actively discourage people from showing up late or leaving early.

You do not have to call it a workshop but try to avoid words like "training" since people are reticent to attend trainings and will show up defensive to a "sensitivity training" or anything that they expect will make them feel guilty.

In advance of running the workshop, it is important to

1) build an effective presentation,
2) practice it,
3) build a list of participants,
4) schedule the workshop,
5) get people to show up to it,
6) prepare for the workshop,
7) run the workshop, and
8) follow-up afterwards.

## The Presentation

The presentation should present up to date published research on bias in the RPT process. The goal of the presentation is to provide useful, credible information on bias and how to minimize bias for participants so that they have useful strategies and information when performing reviews in their units and committees.

## Education Part 1: Outline

- Judgements and Biases
- RPT Elements: Research, Teaching, Service/Outreach
- Strategies for ensuring an equitable and inclusive process


Cry university of Colorado

During the interactive educational portion, participants will learn:

1. How biases and norms impact our judgements
2. What biases show up in evaluations of Research, Teaching, and Service
3. How we can mitigate these biases

The simulation portion is adapted for an R2 (high research activity) university setting using materials created by the Georgia Institute of Technology "ADEPT" program*. Their activities were "designed to help members of unit-level promotion and tenure committees understand the subtleties of bias in the evaluation process" and include an abridged curriculum vita and narrative synopsis of the external reviews and personal statement (see appendix). *Copyright 2004, Georgia Tech Research Corporation, Atlanta, Georgia 30332-0415. All Rights Reserved.

During the simulation portion, participants will:

1. Read over the scenario which includes an abridged Dossier Packet with an abridged CV (see appendix).
2. Three people at each table are assigned to speaker roles and will each read a part of the Simulation Script. Any others at your table are observers and receive instructions to make personal observations of bias and take notes.
3. These groups will discuss observations of the "committee meeting" per the instructions.
4. Interactive report-out on group discussion.

## Practice

Be sure that facilitators have several chances to practice running the workshop in front of an audience so they can receive feedback on their performance and presentation. You might think of these as a rehearsal so you can have at least one dress rehearsal as well as some private ones. It is good to both debrief at the practice and ask pointed questions as well as have evaluation forms to capture feedback. The practice sessions help to hone and sharpen the presentation, this way obvious questions and confusions will be addressed in advance.

## List of Participants

Determining the audience of the workshop is important. Is it administration? Is it administrative committees (e.g., dean's review committee, provost's review committee, etc.)? Is it a primary unit committee? It is likely that over time the intended audience will change as you run the workshop for different audiences and the needs of campus change. However, once you have determined the audience, creating a "map" of the audience is important. For instance, if the audience is administrative committees, the first step is building a list of all of the dean's review committees and the university's review committee. Next build lists of everyone that sits on each of the committees and their best contact information (e.g., email address). This workshop should be delivered before committees meet to start discussing cases. For example, we conducted them in the early fall and included department heads with their committees.

## Scheduling the Workshop



Contact everyone on your lists to find their best availability for the three-hour workshop. As you start contacting people, keep track of who has and who has not responded so that you know who to follow up with and who does not need to be bothered. Once a critical mass has responded, you can schedule a series of workshops that will accommodate everyone or almost everyone's schedules.

The rooms you use for the workshop should have tables and projector capabilities. Participants will sit in groups at tables by unit or committee. You will need an effective projector for your presentation.

## Getting People to Show Up

Send personal invitations to everyone since group invitations are less effective. Keep track of who RSVP's so that you can follow up with people that do not respond. It is important to get commitments from the deans and the provost to attend the workshops since that will give you leverage to get busy faculty to attend. You should also ask the deans and the provost to contact people who report to them, so they are encouraged to attend one of the workshops.

## Prepare for the Workshop

Once the attendance is set, you can put together a seating chart. Every table must have three people at a minimum. You, an assistant, or another committee member might on occasion need to sit at a table to meet the minimum. Five is
 the maximum since you do not want more than two observers and the discussion after the simulation will be less effective.

You should prepare all of your materials at least a day in advance (see appendix for materials).
You will need:

- The abridged CV and portfolio
- One for every participant
- Scripts for the simulation
- It is best if each character role is printed on different color paper
- Observer instructions
- Two for every table even if you will only need one
- Debrief instructions
- One per table
- Abridged RPT criteria for the unit
- One for every participant
- Handouts
- What sorts of supplemental information do you want people to take with them?
- Evaluation forms
- One for every participant
- Refreshments (optional)
- It is a long meeting so you may want to keep people's blood sugar up.
- Arrive in the room at least a half hour prior to the workshop to set up.
- Make sure the tables are set correctly and be prepared to move them around. Separate tables that allow for small group discussions work best.
- Set up and test the presentation.
- Be sure to have contact information for technical support in case there is a problem.
- Have extra batteries for your clicker or a backup clicker.
- Every table should have a number or name so you can direct people to the correct table according to your seating chart.
- Put your handouts and evaluation forms at every seat on the tables.
- Create organized stacks of the material for the simulation so that you can put that material down on tables quickly and unobtrusively during the break.


## Sample Budget

This budget shows the amount of time and cost of materials needed to implement the outlined training. It is based on 15 departments having faculty undergoing review and 8 colleges. The administration time is for support staff to coordinate communications, scheduling and material preparation. The faculty time (facilitator) is estimated for updating materials and delivering the training.

ADVANCE
PROJECT CREST

| Part | Activity | Item | Hours/ <br> Number | $\begin{array}{\|l\|} \hline \text { Cost } / \\ \text { Unit } \end{array}$ | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Preparation | Communications about trainings | Admin time | 5 | \$ 20 | \$ 100 |
|  | Scheduling trainings | Admin time | 7.5 | \$ 20 | \$ 150 |
|  | Refreshments (optional) | Catering | 14 | \$ 75 | \$ 1,050 |
| Educational | Preparation/updating of materials | Facilitator time | 6 | \$ 100 | \$ 600 |
|  | Production of materials | Printing | 96 | \$ 15 | \$ 1,440 |
|  | Delivery of materials | Facilitator time | 14 | \$ 100 | \$ 1,400 |
| Simulations | Preparation/updating of materials | Facilitator time | 6 | \$ 100 | \$ 600 |
|  | Production of materials | Printing | 96 | \$ 10 | \$ 960 |
|  | Delivery of materials | Facilitator time | 14 | \$ 100 | \$ 1,400 |
|  |  |  | TOTAL $=$ |  | \$ 8,400 |
| Committees |  | \# of committees | Total \# of People | Meetings |  |
|  | 4 people per department (with DH) | 15 | 45 | 5 |  |
|  | 6 people per college (with Dean) | 8 | 40 | 8 |  |
|  | 11 people on the University | 1 | 11 | 1 |  |
|  |  | TOTAL $=$ | 96 |  |  |
|  |  | \# of meetings = | 14 |  |  |

## novarce PROJECT CREST

## Run the Workshop

Agenda:

1. Participants arrive and are directed to their specified table (5min)
2. Ice breaker/introductions ( 10 min )
3. Summary of workshop and trigger warning ( 5 min )
4. Educational portion ( 75 min )
5. Break (10min)
6. Simulation ( 10 min )
7. Discussion ( 15 min )
8. Wrap up (5min)
[total time 2hr 15min]
Outline of educational material

## Introduction

- Outline of workshop
- Emotional anecdote
- Why this matters?
- Snapshot of professoriate nationally and locally (your campuses)
- Critique pipeline metaphor
- Structural barriers in pipeline


## Outline of the presentation

- How inequities impact RPT
- Cognitive biases (selective attention, attentional biases)
- Implicit bias demonstration (e.g., the Implicit Association Test)
- Implicit associations of women in science
- Suspicions of this research


## RPT Elements (research on bias in each of the following)

- Scholarship
- Teaching
- Service
- Note: see bibliography for evidence


## Additional Considerations

- COVID 19


## Strategies for ensuring equitable process

- Reviewing the evidence
- Recognize impact of vagueness
- Look at our own language to see vagueness
- Different types of biases at review: hiring, years of service, norms, awards, citations, evaluation letters, etc.
- How to structure meetings to minimize bias

A few tips and suggestions to keep in mind:

- It is always a good idea to start with introductions. You might include an ice breaker such as asking participants to share something most people do not know about them.
- When introducing the workshop, set expectations:
- Make clear that the educational part is a long didactic slideshow and people should not interrupt you (but say it nicely) to avoid arguments or pushback.
- Give a trigger warning because some people find the presentation triggering.
- Emphasize that the workshop is not meant as a criticism of anyone and that we all have implicit biases.
- Address the model of justice used in the workshop.
- Point out that the model of gender used in the workshop is overly binary by design even though we recognize gender is far more complex.
- Think through any other potential concerns your specific audience will have. (e.g., library faculty, are generally not on the tenure track so that should be addressed).
- Try to keep your energy up since it is a long lecture and people can lose focus.
- Place the material for the simulation at every seat during the break. Use different color paper for each "role" in the simulation.
- Go over instructions for the simulation.
- Go over the materials on the table.
- People should all start at once in the time you allow.
- They should read the abridged dossier first and then read the script. Be sure they read their scripts out loud. They should not change the script.
- Outline the observer's role.
- Remind them that there are directions for the discussion and emphasize what they should focus on in the discussion.
- Keep track of the time and keep the groups focused and moving through the different parts of the simulation.
- Have a list of points you want to make during the general discussion at the end of the workshop so that if groups do not make those points, you can make them yourself. Some tips for facilitating the discussion:
- You can start the discussion by asking each group to report back on their discussions.
- If they did not address the "if-then" contingency plan, be sure to ask about that.
- Focus on issues that the groups found egregious, such as some of the especially biased statements the characters make and ask them what they would do in that situation.
- It is important to have some suggestions for the groups, such as "I would ask the person if that is in the RPT?" It is important to not create a dynamic where it is you against them. Instead focus on objective criteria that everyone must follow.
- Often times, one group will start talking to another which fosters excellent dialogue. If that does not happen organically, you might look for points of convergence where you can encourage the groups to talk to each other.
- You may want to suggest to the participants ways to use the workshop, such as "If something like this comes up, you can say to your colleagues, 'Remember how this was addressed in that workshop?' That way it is not you against them, but shared knowledge about mitigating bias."
- If people push back on the workshop and challenge you, it is better to not disagree with them so that you end up arguing, instead try to redirect their point in a productive direction. "That is a great point, what the research tells us..."
- Finally, remind people to fill out the evaluation forms.


## Follow up Afterwards

- Sending out emails thanking people for participating in workshop is an opportunity to remind them about the importance of the workshop, the work your committee is doing, and to share additional information, such as PDFs of your handouts.
- If you did not get $100 \%$ attendance of your intended audience, you can follow up with each of those people to schedule a make-up workshop.
- Check in with units/committees to see if they have adopted the information and suggestions you provided during the workshop. You can send them the handout again and offer a follow up meeting to support them.
- Plan for next year's workshops. What audiences do you still need to reach?
- Review evaluation forms to understand strengths and identify areas for improvement.


# ADVANCE PROJECT CREST 

## Appendix

## Evaluation Form

## RPT Bias-mitigation Workshop Evaluation

In what ways, if any, was this workshop informative?

What elements of this workshop do you see as being beneficial to improving the RPT culture at UCCS?

What suggestions do you have for improving this workshop for RPT reviewer members?

What other thoughts or feedback do you have regarding this workshop and its content?

Simulation Materials

Abridged Version of RPT Criteria

# Department of Chemistry and Biochemistry College of Letters, Arts and Sciences | University of Colorado Colorado Springs Criteria, Standards and Evidence for Reappointment, Promotion and Tenure 

 July 1, 2020
## Promotion to Associate Professor and/or Tenure Review:

The candidate's record in teaching, scholarly work, and leadership and service will each be evaluated separately with ratings of not meritorious, meritorious, or excellent. The candidate must be rated, at least, as meritorious in all three areas but must receive a rating of excellent in either teaching or scholarly work. The criteria and evidence for meritorious performance in teaching, scholarly work, and leadership and service is consistent with the Comprehensive Reappointment review with the additional expectation that development and maturation is evident in all three areas. Additionally, demonstrated impact of teaching activities should be described within the dossier submitted by the candidate. The candidate should also provide evidence (e.g., receipt of peer-reviewed grants or a strong publication/presentation record appropriate for the sub-discipline) that their program of scholarly work has long-term viability and impact on the candidate's sub-discipline.

| Meritorious | Excellent |
| :---: | :---: |
| Teaching |  |
| - Fulfilled assigned teaching duties, with attention given to content expertise, instructional design and delivery, and student engagement <br> - Course syllabi include learning objectives and the candidate has different assessment/evaluation strategies <br> - FCQ scores near or at the department averages, with consideration for course size, rigor, etc. <br> - Demonstrated growth and maturation in teaching as indicated from student evaluations/feedback (FCQs, midcourse evaluations), faculty peer observations, and/or participation in workshops/conferences focused on pedagogy <br> - Demonstrated mentorship to students outside of the classroom (research advisor, independent study director, etc.) | The requirements for Meritorious and the additional criteria: <br> - Demonstrated proficiency in content expertise, instructional design and delivery, and student engagement <br> - FCQ scores above department averages <br> - Participation in thesis or dissertation committees <br> - Accomplished significant improvements to instructional design (e.g., design a new course to increased breadth and depth of department curriculum, implement new pedagogical strategies, etc.) <br> - Innovations in teaching or creative instructional development <br> - Demonstrated impact outside of the candidate's immediate setting (college, campus, or national recognition of teaching practices) |

## Scholarly Work

- Demonstrated progress in establishing an active research program at UCCS, with evidence such as:
o accepted or published peer-reviewed manuscript(s) with UCCS student co-authors o awarded grants from internal funding agencies and submitted proposals to external funding agencies
o presentations at discipline-specific professional conferences (may include student co-authors)
o student presentations at local venues, such as CSURF, Mountain Lion Research Day, Graduate Student Research Showcase
- Active research program that includes mentorship of undergraduate and graduate student(s)
- Successful receipt of internal seed funding (Undergraduate Research Academy, CRCW)
- Generally positive letters from external evaluators
Leadership and Service
- Regular attendance and contributions to department meetings
- Service at the department level
- Service on a committee outside of the department (may be college, university, or system-level committee)
- Evidence of community or professional service

The requirements for Meritorious and the additional criteria:

- Multiple accepted publications with UCCS student co-authors and awarded grants from external funding agencies
- Strong support from external reviewers

The requirements for Meritorious and the additional criteria:

- Significant service at the department level (e.g., spearheading a new initiative or taking a major leadership role)
- Chairing a committee within the department or college
- Strong evidence of professional service (several manuscript reviews for peer-reviewed journals or serving on a review panel for an external funding agency, such as NSF)

ABRIDGED Dossier Packet for: Dr. Samia Manasur

## Candidate for Tenure and Promotion to Associate Professor

College: Letters, Arts \& Science Department: Chemistry and Biochemistry

Years of Service at the University of Colorado Colorado Springs: 7
Assignment of Effort: 40\% Research, 40\% Teaching, 20\% Service

## Packet Contents

1. Abridged Curriculum Vita
2. Narrative synopsis of Digital Measures Folders "02ExternalReviews" and "07PersonalStatement"

# ADVANCE <br> PROJECT CREST 

Samia Manasur<br>Candidate for Tenure and Promotion to Associate Professor

Abridged Curriculum Vita

## Educational Background

B.S. Biology, SUNY-Buffalo

Ph.D. Biochemistry, University of Wisconsin-Madison
Post-Doc Chemistry \& Biochemistry, Notre Dame

## Academic Employment

Assistant Professor: Current
Department of Chemistry and Biochemistry, University of Colorado Colorado Springs
Post-Doctoral Assistantship
Biosciences Institute, Oxford University

## Publications

Refereed: 7 articles, 4 in past two years (with students), 2 from post-doc experience, 1 from $\mathrm{Ph} . \mathrm{D}$. work (co-authored with R. Pilkens)
Conference Proceedings: 14, 5 in past two years

## Conference Presentations

12 seminars, 8 at other universities

## Funding

- Start-up package was used to develop experimental apparatus and acquire supporting computer control and data acquisition.
- Awarded the UCCS Committee on Research and Creative Works (CRCW) for $\$ 7500$ in my second year.
- NSF Engineering Research Initiation (ERI, \$200K for 2 years) submitted in my third year, not funded.
- \$50K NIH R03 grant awarded in my fourth year.
- 3-year, $\$ 300 \mathrm{~K}$ NIH R21 grant submitted in the fall, awaiting results.


## Research Overview

My doctoral advisor, Dr. Ross Pilkens, is a leading expert in the measurement of electrochemical response of various cells to external stimula such as mechanical force, imposition of electrical and magnetic fields, and effects of rapid temperature change. I have continued this research in a broad sense, having focused on effects of cryogenic preservation of tissue during my post doc, subsequently delving into development of in situ measurement systems for measuring cell responses under a wide range of stimuli.

## Graduate Student and Post Doc Supervision

- 4 MS students in-progress, 1 MS graduated (won first place in the UCCS Mountain Lion Grad Slam 3- Minute Thesis Competition)


# ADVANCE <br> PROJECT CREST 

## Teaching

- CHEM 1401 and 1411, general chemistry I and II, respectively.
- CHEM 2201 and CHEM 4221, an introductory biochemistry course and an upper- division undergraduate course focused on topics of biochemistry including amino acids and cell biology, respectively.
- CHEM 5731, graduate course in bioinformatics.


## Teaching Evaluations

- Many students cite my degree of organization as exemplary, and my teaching evaluations for upper-division and graduate courses are very strong.
- I have received mixed response from students in my introductory level courses, especially during my first year at UCCS; several students complained that I seem unaccustomed to American styles and fashion, and that my manner is frustrating in combination with difficulty to comprehend the lectures. I took steps to address those concerns in recent years, and feel my more recent evaluations reflect that effort.


## Service

- Chair, Cell Behavior sub-committee, Division of Biochemistry, American Chemical Society
- Organizer of sessions at two major international symposia
- Member, College of Letters and Sciences Committee on Faculty Development
- Member, University Committee on Women in Academia: Future Directions
- Member, Faculty Assembly Women's Committee
- Member, Research Capacity Team of ADVANCE Project CREST


## Honors and Awards

- B.F. Sloan Prize for one of five best papers in a given year, Journal of Chemistry and Biochemistry, Manasur, S.R. and C.K. Wyler Affecting Cellular Electrochemical Communication by Mechanical Stimuli
- Recent winner of LAS Outstanding Teaching Award which included a $\$ 500$ stipend and a $\$ 500$ increase in base pay.

Narrative Synopsis of Digital Measures Folders "02ExternalReviews" and "07PersonalStatement" for Dr. Samia Manasur Department of Chemistry and Biochemistry, LAS.

Samia Manasur, Ph.D. in Biochemistry from the University of Wisconsin-Madison, was hired as an assistant professor by the Department of Chemistry and Biochemistry at the University of Colorado Colorado Springs. Manasur's research field has long been central to the university; she joined many colleagues who do similar and complementary work in chemistry and related departments across campus. Her start-up package was slightly better than average; she had four offers to consider at leading universities. During her first semester at UCCS, Manasur was immediately asked to participate in a campus committee charged to study why so few women are employed in science, technology, engineering, and mathematics (STEM) fields within the university. In her second and third years, she was invited to serve on two similar committees at the university level.

During her first three years at UCCS, Manasur produced an extraordinary number of publications in respected journals in her field, including one prize-winning paper. She wrote most of her papers with a small group of faculty and graduate students, but some represented collaborations with just one or two individuals, typically graduate students.

Manasur's funding level as an assistant professor was within the average range for her field and slightly higher than the departmental average. She was able to secure a lab budget based on a National Science Foundation (NSF) grant for new faculty in her area as well as some training grants for individual graduate students. She also partnered with colleagues in developing novel methods for sensing cell responses to drug delivery on a moderate grant from a pharmaceutical company.

In her fourth year, she won a NIH R03 award for $\$ 50,000$ which puts her on track to receive additional funding from the NIH, including promise for her recently submitted NIH R21 award for multi-year funding. Also in her fourth year, Manasur won an Outstanding Teaching Award which shows her commitment to students and teaching at UCCS.

Her undergraduate and graduate students generally awarded her good teaching scores. Evaluations for the intro-level undergraduate course earned some negative comments from a few students about her casual attire; as a result, Manasur upgraded her wardrobe and began to wear tailored clothing. She attracted excellent graduate students to her lab, encouraging some undergraduates to continue graduate study at the university and welcoming new graduate students. At the end of her third year, she was nominated for a college teaching award by the undergraduate coordinator with a recommendation from the graduate director who cited her "dedication" and "long hours of working in her lab along with graduate students."

In addition to her work on women's issues, Manasur was appointed to a number of unit and college committees concerning visiting speakers, honors, and searches. She became especially active in networking activities sponsored by the Faculty Resource Center for junior faculty in sciences, and she helped organize a training on grant-writing for new faculty. Issues concerning women in her unit, and to some extent in sciences more generally, fell on her shoulders, as manifested by numerous invitations by STEM chairs and deans at UCCS to address student and alumni groups.

Manasur became pregnant during her fourth year and her baby was due in late summer. She consulted with her chair about stopping the tenure clock for the AY immediately following the due date, anticipating significantly less research productivity while she cared for her newborn. He encouraged her to "stop the clock," and pointed out to her that she had established a body of work and a set of achievements comparable to or exceeding others in her field within the Department of Chemistry and Biochemistry and her years of service. He expressed confidence that she would resume her usual level of productivity in her sixth year, and he and Manasur agreed she would stop the clock.

At the beginning of her seventh year, Manasur's case came up for review in her department. The letters of reference in her promotion and tenure dossier were generally good, except for one taking issue with her celebrated paper. The one negative review avoided addressing Manasur's entire scholarly output; instead, the reviewer took an extremely hostile approach to the argument of the celebrated paper. One member of the promotion and tenure committee noted that this review was so detailed that it could have been published as an oppositional argument in a journal along with Manasur's paper. This reviewer also commented negatively about Manasur's style of presenting papers at meetings of a professional society, raising some suspicions of a personal grudge. Another reviewer commented as much on the value of Manasur's service to the profession, especially for women in her field, as on the value of her scholarly research.

The departmental promotion and tenure review committee is split about whether to emphasize the negative external review or the one privileging service.

Roles: Each person reads the script from the perspective of one of the following characters. It is best to print a script for each person/role on different color paper (e.g., Terry on blue, Alex on purple, Chris on green). Put the role description at the top of the script.

Committee Chair (Terry) - You are a mid-career scholar who has served on many promotion and tenure committees, but this is your first time as chair. You considered stopping your tenure clock when you had children, but decided against it. You are fair-minded about stopping the tenure clock.

Member 1 (Alex) - You are newly tenured following the normal tenure timeline. This is your first time serving on a promotion and tenure committee. You generally feel it is important to protect and uphold procedures.

Your Role: Member 2 (Chris) - You are a senior professor who has served on many promotion and tenure committees. You are critical and have a somewhat skeptical attitude overall.

## RPT Committee Meeting for Samia Manasur

1. Committee Chair (Terry): OK, I think that about wraps it up for Johnson's case. I'm fairly sure I have good notes on everything we just discussed, so I'll draft up our letter and send it to you both in a day or two. Now let's move on and consider Manasur's case for promotion and tenure.
2. Member 1 (Alex): Sounds good to me. Let's start with her research. From my vantage point, Samia is a good scholar. Look at this award for her research.
3. Member 2 (Chris): It's an impressive award, but we should consider the sum total of research.
4. Committee Chair (Terry): She has more publications in good journals than any other untenured biochemistry faculty in our department.
5. Member 1 (Alex): Sure, she has significant quantity, but she also had an extra year to get papers out given that "stop the clock" deal. If you average her publication record over the actual time she's been here and her h-index rating, I don't think it clearly points to future excellence.
6. Member 2 (Chris): I don't think that's how it works, Alex. I doubt the extra time helped that much; it's not like she was getting a lot of writing done with the new baby. Although I would like to see more citations.
7. Committee Chair (Terry): No, that's definitely not how it works. Stopping the tenure clock means just that, it's not a bonus year. We must average across 6 years of service, Alex.

# ADVANCE <br> PROJECT CREST 

8. Member 1 (Alex): Fine, fine...maybe we should focus more on quality then. Does her best paper, the prizewinner, represent a significant contribution to the field?
9. Member 2 (Chris): Are you suggesting that the paper isn't as good as most reviewers have noted?
10. Member 1 (Alex): Let's look at the second reviewer's comments. He doesn't think it contributes much to the field.
11. Committee Chair (Terry): All the other reviews are positive. I wonder if the negative reviewer is impartial, given the tone of the letter and his focusing on that one paper. I heard this guy is known for writing negative letters.
12. Member 1 (Alex): His review does seem like it's a response to only one of Samia's papers, but the most important consideration ought to concern the range of research products over the past 7 years.
13. Member 2 (Chris): I agree all reviews have to be weighed carefully. The most positive one spends more time considering Manasur's service to the profession and campus rather than discussing her research. Do we really care that she does so much work for FAWC?
14. Committee Chair (Terry): Obviously, good service alone will not earn promotion and tenure. A tenure candidate has to demonstrate a more remarkable profile in research.
15. Member 2 (Chris): The letters don't demonstrate a profile of remarkable research. The most positive one is from a former student of her mentor. Other letters praise the research without understanding it. The negative reviewer is the only one who seems to know the area.
16. Member 1 (Alex): How do you know the positive reviewer has a personal connection?
17. Member 2 (Chris): I sat on an NSF panel with someone who knew Samia from graduate school. I believe this letter is from her.
18. Member 1 (Alex): OK, if you all see the negative letter as trumping the other letters, maybe I could go along with that.
19. Member 2 (Chris): Well, it seems that Manasur's work has yet to prove its value.
20. Committee Chair (Terry): Clearly, her work is good, but there could be red flags. Let's consider teaching.
21. Member 1 (Alex): I agree that the general impression of the six letters is that her work is very good.
22. Member 2 (Chris): Yes, Manasur's work has clearly been recognized as significant by some in her field, but what about that very negative letter?
23. Committee Chair (Terry): Alex is right that the general context of all the letters should be important. The quality of Manasur's work deserves recognition. Let's talk about teaching.
24. Member 1 (Alex): Yes, even though one person finds one paper to be somewhat controversial, I think we should set aside such an extreme judgment and look at the bigger picture.
25. Member 2 (Chris): OK, but does that mean we discount the concerns that the negative letter raises?
26. Committee Chair (Terry): We can if the reviewer seems to be biased. His basic complaint is that in the celebrated paper Manasur was only re-doing work already done by her mentor, who really deserves credit for her ideas.
27. Member 1 (Alex): I think this reviewer can't believe a young woman of color is capable of scientific insight.

# ADVANCE <br> PROJECT CREST 

28. Committee Chair (Terry): Exactly. The excellence of Manasur's research ought to earn her promotion and tenure. Let's discuss her teaching.
29. Member 1 (Alex): Yes, I agree that Samia's research is very visible. We need her to keep up momentum in that area. She really puts us on the map.
30. Committee Chair (Terry): If she doesn't get tenure here, some other department will hire her. We have to cover her area, or we won't be able to offer the MS in this area.
31. Member 2 (Chris): Alright, if you see this as a strong record, I won't object to a positive assessment of her research. Should we move on to teaching?
32. Member 1 (Alex): I can't believe that some students have the audacity to comment on her clothing. Let's make sure we judge her teaching accordingly.
33. Member 2 (Chris): The students are right. She's in America, so she should dress like an American. I'm glad she's changed her wardrobe.
34. Committee Chair (Terry): Manasur has a teaching award. She's been a good undergraduate teacher, and she is critical to the graduate program. She attracts the best grad students.
35. Member 1 (Alex): She's a good teacher for upper-division undergraduate and graduate students, even if first- and second-year students seem less comfortable with her.
36. Member 2 (Chris): Maybe it's her accent that bothers students. I sat in on one intro course, and I had trouble understanding everything she said.
37. Member 1 (Alex): I am not sure how we take her accent into consideration. We need to calibrate her teaching effectiveness. Considering all course scores, her teaching for the intro courses is average for our department. And, as Terry said, in graduate courses she does very well.

# ADVANCE <br> PROJECT CREST 

38. Committee Chair (Terry): Ok, we can see she isn't the best teacher for first-year students, but in general she is a good teacher. Let's talk about service.
39. Member 1 (Alex): That's a fair point. Her teaching scores have steadily improved over time and that other faculty also have low scores in those introductory courses.
40. Member 2 (Chris): I'll concede that her teaching is currently acceptable, but I hope she improves even more. I guess we're moving on to service.
41. Member 1 (Alex): Absolutely. Her students' written comments and the peer reviewers make it clear that Manasur has tried some innovative techniques in the classroom. The RPT requires us to weigh evidence of teaching excellence beyond just FCQs and she checks several of those boxes.
42. Committee Chair (Terry): We can note those details in our letter where we describe her teaching record when taken as a whole. Let's discuss her service.
43. Member 1 (Alex): Clearly we don't need to say much about her service, which seems exemplary, both in the university and to the profession.
44. Member 2 (Chris): But has she really contributed in any substantial way to influential committees on campus or among her disciplinary peers? All I see is her interest in women's issues, like that ADVANCE and FAWC, and basically tutoring other junior faculty how to write grants when they should already know how to do that. She also spends too much time socializing with students when she should be working on her own research.
45. Committee Chair (Terry): One could make the argument that given the underrepresentation of women in this field, women's issues are important. Besides, it was the President who put her on many of these committees, invitations she could hardly refuse.

## ADVANCE <br> PROJECT CREST

46. Member 2 (Chris): Her committee work has not been on the department's most important committees, but I suppose it's been useful for each committee to have a woman.
47. Member 1 (Alex): Actually, I think she has been on more university-level committees than others who come up for tenure.
48. Committee Chair (Terry): Yes, she has done a better job than most in service and has a mix of average and very good scores in teaching, while she has also made significant national impact in terms of her research. It's clear that her record justifies promotion and tenure.
49. Member 1 (Alex): I'm not sure if I completely agree, but I don't have time to talk about it now because I have to teach. Terry, I guess we have to meet again before we come to a decision.
50. Committee Chair (Terry): I think her service is very valuable, like her research and teaching. I see that the majority of us agree that she should be promoted and tenured.
51. Member 2 (Chris): Doesn't it seem like everything is marginal?: mixed teaching scores, ambiguous service, and research that one of the biggest names in the field thinks is imitative and overblown?
52. Member 1 (Alex): I disagree with that summary. Terry, I think our review should reflect that we are not in accord.
53. Committee Chair (Terry): It is always a stronger case if we support the case unanimously. Alex and I are more enthusiastic, but that said 2 of the 3 of us see Manasur's record as appropriate for promotion and tenure. I think our letter should be positive and supportive but it can include Chris' reservation and recognize a split vote.
54. Member 2 (Chris): I think her service record is marginal, like her teaching. And considering the controversy about her research, don't you both agree we have to give more serious thought to her promotion and tenure.

## Observer Instructions

While listening to the meeting, note where in the conversation bias emerged. Take notes below about what happened and why it was a problem. Be prepared to start a discussion after the committee meeting concludes.

Post-Meeting Discussion
"What Biases Emerged?"
As a group, your task is to now develop an "if-then" contingency plan to combat bias you observed in the evaluation of the candidate's dossier. Led by the observer(s), work together to identify specific instances of bias and how you could have intervened. Identify a scribe to focus your group discussion and summarize important discussion points.

## ADVANCE

PROJECT CREST

## Bibliography

Key studies marked yellow
Useful studies marked light blue
"Women, Minorities and Persons with Disabilities in Science and Engineering report released." 2017. NewsRx Health \& Science, 2017/02/19/, 2017, 284. Accessed 2021/10/27/. https://link-galecom.libproxy.uccs.edu/apps/doc/A480899302/HWRC?u=colosprings\&sid=summon\&xid=588ab 868.

Asai, David J. 2020. "Race Matters." Cell 181 (4): 754-757. https://doi.org/https://doi.org/10.1016/j.cell.2020.03.044.
Barber, Paul H., Tyrone B. Hay, Tracy L. Johnson, and Leticia Márquez-Magaña. 2020. Systemic racism in higher education. Science 369 (6510): 1440-1441. Accessed 26 October 2021. https://doi.org/10.1126/science.abd7140.
Berk, Ronald A, Phyllis L Naumann, and Susan E Appling. 2004. "Beyond student ratings: Peer observation of classroom and clinical teaching." International Journal of Nursing Education Scholarship 1 (1).
Biernat, Monica. 2012. "Stereotypes and Shifting Standards: Forming, Communicating, and Translating Person Impressions." In Advances in Experimental Psychology, edited by Patricia Devine and Ashby Plant, 1-60. Waltham, MA: Academic Press.
Biernat, Monica, Diane Kobrynowicz, and Dara L. Weber. 2003. "Stereotypes and Shifting Standards: Some Paradoxical Effects of Cognitive Load." Journal of Applied Social Psychology 33 (10): 2060-2079. https://doi.org/https://doi.org/10.1111/j.1559-1816.2003.tb01875.x.
Biernat, Monica, Melvin Manis, and Thomas E. Nelson. 1991. "Stereotypes and standards of judgment." Journal of Personality and Social Psychology 60 (4): 485-499. https://doi.org/10.1037/00223514.60.4.485.

Biernat, Monica, Monica, MJ Tocci, and Joan C Williams. 2012. "The Language of Performance Evaluations Gender-Based Shifts in Content and Consistency of Judgment." Social Psychological and Personality Science 3 (2): 186-192.
Biernat, Monica, and Theresa K. Vescio. 2002. "She Swings, She Hits, She's Great, She's Benched: Implications of Gender-Based Shifting Standards for Judgment and Behavior." Personality and Social Psychology Bulletin 28 (1): 66-77. https://doi.org/10.1177/0146167202281006.
Boring, Anne, Kellie Ottoboni, and Philip B Stark. 2016. "Student evaluations of teaching are not only unreliable, they are significantly biased against female instructors." Impact of Social Sciences Blog.
Boyle, Paul J, Lucy K Smith, Nicola J Cooper, Kate S Williams, and Henrietta O'Connor. 2015. "Gender balance: Women are funded more fairly in social science." Nature 525 (7568): 181-183.
Britton, Dana M. 2010. "Engendering the University through Policy and Practice: Barriers to Promotion to Full Professor for Women in the Science, Engineering, and Math Disciplines." In GenderChange in Academia: Re-Mapping the Fields of Work, Knowledge, and Politics from a Gender Perspective, edited by Birgit Riegraf, Brigitte Aulenbacher, Edit Kirsch-Auwärter and Ursula Müller, 15-26. Wiesbaden: VS Verlag für Sozialwissenschaften.
Butcher, Charity, and Timothy Kersey. 2015. "When winning is really losing: Teaching awards and women political science faculty." PS: Political Science \& Politics 48 (1): 138-141.

## ADVANCE

PROJECT CREST
Castilla, Emilio J, and Stephen Benard. 2010. "The paradox of meritocracy in organizations." Administrative science quarterly 55 (4): 543-676.
Cech, Erin A, and Mary Blair-Loy. 2014. "Consequences of flexibility stigma among academic scientists and engineers." Work and occupations 41 (1): 86-110.
Centra, John A, and Noreen B Gaubatz. 2000. "Is there gender bias in student evaluations of teaching?" The journal of higher education 71 (1): 17-33.
Chapman, Colin A, Júlio César Bicca-Marques, Sébastien Calvignac-Spencer, Pengfei Fan, Peter J Fashing, Jan Gogarten, Songtao Guo, Claire A Hemingway, Fabian Leendertz, and Baoguo Li. 2019. "Games academics play and their consequences: how authorship, h-index and journal impact factors are shaping the future of academia." Proceedings of the Royal Society B 286 (1916): 20192047.

Chapman, Colin A., Júlio César Bicca-Marques, Sébastien Calvignac-Spencer, Pengfei Fan, Peter J. Fashing, Jan Gogarten, Songtao Guo, Claire A. Hemingway, Fabian Leendertz, Baoguo Li, Ikki Matsuda, Rong Hou, Juan Carlos Serio-Silva, and Nils Chr. Stenseth. 2019. "Games academics play and their consequences: how authorship, h-index and journal impact factors are shaping the future of academia." Biological Sciences 286 (1916). https://doi.org/10.1098/rspb.2019.2047.
Chesler, Mark, Amanda E Lewis, and James E Crowfoot. 2005. Challenging racism in higher education: Promoting justice. Rowman \& Littlefield Publishers.
DiPietro, Michelle, and Ann Faye. 2005. "Online student-ratings-of-instruction (SRI) mechanisms for maximal feedback to instructors." 30th annual meeting of the professional and organizational development network, Milwaukee, WI.
Domingo, Carmen R, Nancy Counts Gerber, Diane Harris, Laura Mamo, Sally G Pasion, R David Rebanal, and Sue V Rosser. 2022. "More service or more advancement: Institutional barriers to academic success for women and women of color faculty at a large public comprehensive minority-serving state university." Journal of Diversity in Higher Education 15 (3): 365.
Dovidio, John F, and Samuel L Gaertner. 2000. "Aversive racism and selection decisions: 1989 and 1999." Psychological science 11 (4): 315-319.

Dzau, Victor J., and Paula A. Johnson. 2018. "Ending Sexual Harassment in Academic Medicine." New England Journal of Medicine 379 (17): 1589-1591. https://doi.org/10.1056/NEJMp1809846.
Erosheva, Elena A., Sheridan Grant, Mei-Ching Chen, Mark D. Lindner, Richard K. Nakamura, and Carole J. Lee. 2020. "NIH peer review: Criterion scores completely account for racial disparities in overall impact scores." Science Advances 6 (23): eaaz4868. https://doi.org/doi:10.1126/sciadv.aaz4868.
Flaherty, Colleen. 2021. "The DEI Pathway to Promotion." [website]. Inside Higher Ed. Inside Higher Ed. Last Modified 14 May. Accessed 26 October, 2021. https://www.insidehighered.com/news/2021/05/14/iupui-creates-path-promotion-and-tenure-based-dei-work.
Foschi, Martha. 1996. "Double standards in the evaluation of men and women." Social Psychology Quarterly: 237-254.
Fox, Charles W, and CE Timothy Paine. 2019. "Gender differences in peer review outcomes and manuscript impact at six journals of ecology and evolution." Ecology and Evolution 9 (6): 35993619.

Fox, Mary Frank. 2015. "Gender and clarity of evaluation among academic scientists in research universities." Science, Technology, \& Human Values 40 (4): 487-515.

## ADVANCE

PROJECT CREST
Fox, Mary Frank, and Carol Colatrella. 2006. "Participation, performance, and advancement of women in academic science and engineering: What is at issue and why." The Journal of Technology Transfer 31: 377-386.
Garnar, Martin Luther. 2021. "Understanding the Experiences of Academic Librarians of Color." ProQuest Dissertations Publishing (Dissertation/Thesis). https://go.exlibris.link/bmlgmszS.
Gibney, Elizabeth. 2017. "Teaching load could put female scientists at career disadvantage." Nature 10.
Ginther, Donna K, Walter T Schaffer, Joshua Schnell, Beth Masimore, Faye Liu, Laurel L Haak, and Raynard Kington. 2011. "Race, ethnicity, and NIH research awards." Science 333 (6045): 10151019.

Glock, Sabine, and Hannah Kleen. 2019. "Shifting standards for female ethnic minority students? Evidence from two experimental studies." Educational Research and Evaluation 25 (5-6): 229247. https://doi.org/10.1080/13803611.2019.1701499.

Goldin, Claudia, and Cecilia Rouse. 2000. "Orchestrating impartiality: The impact of "blind" auditions on female musicians." American economic review 90 (4): 715-741.
Gouldner, Alvin W. 1957. "Cosmopolitans and locals: Toward an analysis of latent social roles. I." Administrative science quarterly: 281-306.
Griffiths, Noola K. 2008. "The effects of concert dress and physical appearance on perceptions of female solo performers." Musicae Scientiae 12 (2): 273-290.
Gutiérrez y Muhs, Gabriella, Yolanda Flores Niemann, Carmen G González, and Angela P Harris. 2012. Presumed incompetent: The intersections of race and class for women in academia. University Press of Colorado.
Hamermesh, Daniel S, and Amy Parker. 2005. "Beauty in the classroom: Instructors' pulchritude and putative pedagogical productivity." Economics of Education Review 24 (4): 369-376.
Hamlin, Kimberly A. 2021. "Why Are There So Few Women Full Professors?: The obstacle to parity is a lack of institutional will." [website]. Chronicle of Higher Education. Chronicle of Higher Education. Last Modified 30 March. Accessed 26 October, 2021. https://www.chronicle.com/article/why-we-need-more-women-full-professors.
Handley, Ian M, Elizabeth R Brown, Corinne A Moss-Racusin, and Jessi L Smith. 2015. "Quality of evidence revealing subtle gender biases in science is in the eye of the beholder." Proceedings of the National Academy of Sciences 112 (43): 13201-13206.
Haynes-Baratz, Michelle C, Meg A Bond, Christopher T Allen, Yun Ling Li, and Tuğba Metinyurt. 2022. "Challenging gendered microaggressions in the academy: A social-ecological analysis of bystander action among faculty." Journal of Diversity in Higher Education 15 (4): 521.
Hechtman, Lisa A, Nathan P Moore, Claire E Schulkey, Andrew C Miklos, Anna Maria Calcagno, Richard Aragon, and Judith H Greenberg. 2018. "NIH funding longevity by gender." Proceedings of the National Academy of Sciences 115 (31): 7943-7948.
Heilman, Madeline E, Aaron S Wallen, Daniella Fuchs, and Melinda M Tamkins. 2004. "Penalties for success: reactions to women who succeed at male gender-typed tasks." Journal of applied psychology 89 (3): 416.
Helmer, Markus, Manuel Schottdorf, Andreas Neef, and Demian Battaglia. 2017. "Gender bias in scholarly peer review." Elife 6: e21718.
Hofstra, Bas, Vivek V. Kulkarni, Sebastian Munoz-Najar Galvez, Bryan He, Dan Jurafsky, and Daniel A. McFarland. 2020. "The Diversity-Innovation Paradox in Science." Proceedings of the National Academy of Sciences 117: 9284-9291.

Holder, Katharina, and Ursula Kessels. 2017. "Gender and ethnic stereotypes in student teachers' judgments: a new look from a shifting standards perspective." Social Psychology of Education 20: 471-490. https://doi.org/10.1007/s11218-017-9384-z.
Holmes, Mary Anne, Pranoti Asher, John Farrington, Rana Fine, Margaret S Leinen, and Phoebe LeBoy. 2011. "Does gender bias influence awards given by societies?" Eos, Transactions American Geophysical Union 92 (47): 421-422.
Holmes, M. A., L. Myles, and B. Schneider. 2020. "Diversity and equality in honours and awards programs - steps towards a fair representation of membership." Adv. Geosci. 53: 41-51. https://doi.org/10.5194/adgeo-53-41-2020. https://adgeo.copernicus.org/articles/53/41/2020/.
Hoppe, Travis A., Aviva Litovitz, Kristine A. Willis, Rebecca A. Meseroll, Matthew J. Perkins, B. Ian Hutchins, Alison F. Davis, Michael S. Lauer, Hannah A. Valantine, James M. Anderson, and George M. Santangelo. 2019. "Topic choice contributes to the lower rate of NIH awards to African-American/black scientists." Science Advances 5 (10): eaaw7238. https://doi.org/doi:10.1126/sciadv.aaw7238.
Johnson, Camille S, Pamela K Smith, and Chunlei Wang. 2017. "Sage on the stage: Women's representation at an academic conference." Personality and Social Psychology Bulletin 43 (4): 493-507.
Johnson, James D, Erik Whitestone, Lee Anderson Jackson, and Leslie Gatto. 1995. "Justice is still not colorblind: Differential racial effects of exposure to inadmissible evidence." Personality and Social Psychology Bulletin 21 (9): 893-898.
Kaatz, Anna, You-Geon Lee, Aaron Potvien, Wairimu Magua, Amarette Filut, Anupama Bhattacharya, Renee Leatherberry, Xiaojin Zhu, and Molly Carnes. 2016. "Analysis of National Institutes of Health R01 Application Critiques, Impact, and Criteria Scores: Does the Sex of the Principal Investigator Make a Difference?" Academic Medicine 91 (8): 1080-1088. https://doi.org/10.1097/ACM.00000000000001272.
Kafka, Alexander C. 2021. "Does Tenure Impede Diversity?" [website]. Chronicale of Higher Education. Chronicale of Higher Education. Last Modified 8 September. Accessed 26 October, 2021. https://www.chronicle.com/article/does-tenure-impede-diversity.

Kim, Lanu, Daniel Scott Smith, Bas Hofstra, and Daniel A. McFarland. 2022. "Gendered knowledge in fields and academic careers." Research Policy 51 (1): 104411. https://doi.org/https://doi.org/10.1016/j.respol.2021.104411.
King, Molly M., Carl T. Bergstrom, Shelley J. Correll, Jennifer Jacquet, and Jevin D. West. 2017. "Men Set Their Own Cites High: Gender and Self-citation across Fields and over Time." Socius 3: 2378023117738903. https://doi.org/10.1177/2378023117738903.

Knobloch-Westerwick, Silvia, Carroll J. Glynn, and Michael Huge. 2013. "The Matilda Effect in Science Communication: An Experiment on Gender Bias in Publication Quality Perceptions and Collaboration Interest." Science Communication 35 (3): 603-625. https://doi.org/10.1177/1075547012472684.
Kogan, Vladimir, Brandon Genetin, Joyce Chen, and Alan Kalish. 2022. "Students' Grade Satisfaction Influences Evaluations of Teaching: Evidence from Individual-level Data and an Experimental Intervention." EdWorkingPaper 22-513. https://doi.org/10.26300/spsf-tc23.
Laursen, S. L., and A. E. Austin. 2014. "Strategic Intervention Brief \#6: Equitable Processes of Tenure and Promotion." StratEGIC Toolkit: Strategies for Effecting Gender Equity and Institutional Change, edited by S. L. In Laursen and A. E. Austin. Boulder, CO, and East Lansing, MI: www.strategictoolkit.org. www.strategictoolkit.org.

## ADVANCE

## PROJECT CREST

Lerback, Jory, and Brooks Hanson. 2017. "Journals invite too few women to referee." Nature 541 (7638): 455-457.

MacNell, Lillian, Adam Driscoll, and Andrea N Hunt. 2015. "What's in a name: Exposing gender bias in student ratings of teaching." Innovative Higher Education 40: 291-303.
Macrae, C Neil, Galen V Bodenhausen, Alan B Milne, and Jolanda Jetten. 1994. "Out of mind but back in sight: Stereotypes on the rebound." Journal of personality and social psychology 67 (5): 808.
Madera, J. M., M. R. Hebl, and R. C. Martin. 2009. "Gender and letters of recommendation for academia: Agentic and communal differences." Journal of Applied Psychology 94 (6): 15911599. https://doi.org/10.1037/a0016539.

Maliniak, Daniel, Ryan Powers, and Barbara F Walter. 2013. "The gender citation gap in international relations." International Organization 67 (4): 889-922.
Mason, Mary Ann, Nicholas H Wolfinger, and Marc Goulden. 2013. Do babies matter?: Gender and family in the ivory tower. Rutgers University Press.
Mathews, Channing J., Michael A. Medina, Josefina Bañales, Bernardette J. Pinetta, Aixa D. Marchand, Abunya C. Agi, Stephanie M. Miller, Adam J. Hoffman, Matthew A. Diemer, and Deborah Rivas-Drake. 2020. "Mapping the Intersections of Adolescents' Ethnic-Racial Identity and Critical Consciousness." Adolescent Research Review 5 (4): 363-379. https://doi.org/10.1007/s40894-019-00122-0.
Matthew, Patricia A. 2014. "@triciamatthew 4 associate professor." Written/Unwritten: Diversity and the Hidden Truths of Tenure (blog). July 6, 2014. https://writtenunwritten.blog/2014/07/06/triciamatthew-4-associate-professor/.
---. 2016. Written/unwritten: Diversity and the hidden truths of tenure. UNC Press Books.
McCluskey, Jill J. 2016. "Diversify or die: How increasing diversity of people and ideas can make organizations more competitive." American Journal of Agricultural Economics 98 (2): 351-359.
Meho, Lokman I. 2021. "The gender gap in highly prestigious international research awards, 20012020." Quantitative Science Studies 2 (3): 976-989.

Mervis, Jeffrey. 2022. "Hughes bets "happy labs" will boost diversity." Science 376 (6596): 908. https://doi.org/10.1126/science.add1588.
Moss-Racusin, Corinne A., John F. Dovidio, Victoria L. Brescoll, Mark J. Graham, and Jo Handelsman. 2012. "Science faculty's subtle gender biases favor male students." Proceedings of the National Academy of Sciences 109 (41): 16474-16479. https://doi.org/doi:10.1073/pnas. 1211286109.
Moss-Racusin, Corinne A., Evava S. Pietri, Jojanneke van der Toorn, and Leslie Ashburn-Nardo. 2021. "Boosting the Sustainable Representation of Women in STEM With Evidence-Based Policy Initiatives." Policy Insights from the Behavioral and Brain Sciences 8 (1): 50-58. https://doi.org/10.1177/2372732220980092.
Moss-Racusin, Corinne A, and Laurie A Rudman. 2010. "Disruptions in women's self-promotion: The backlash avoidance model." Psychology of women quarterly 34 (2): 186-202.
National Academies of Sciences, Engineering, Medicine, Policy, Affairs Global, Engineering Committee on Women in Science, Medicine, Academia Committee on the Impacts of Sexual Harassment in, F. Benya Frazier, E. Widnall Sheila, and A. Johnson Paula. 2018. Sexual Harassment of Women : Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine. Book.A Consensus Study Report of the National Academies of Sciences, Engineering, Medicine. Washington, DC: National Academies Press.
National Science Foundation, Division of Science Resources Statistics. 2004. Women, Minorities, and Persons with Disabilities in Science and Engineering: 2004. NSF 04-317. ERIC Clearinghouse.

## ADVANCE

## PROJECT CREST

Ni, Chaoqun, Elise Smith, Haimiao Yuan, Vincent Larivière, and Cassidy R Sugimoto. 2021. "The gendered nature of authorship." Science advances 7 (36): eabe4639.
Nittrouer, Christine L, Michelle R Hebl, Leslie Ashburn-Nardo, Rachel CE Trump-Steele, David M Lane, and Virginia Valian. 2018. "Gender disparities in colloquium speakers at top universities." Proceedings of the National Academy of Sciences 115 (1): 104-108.
O’Grady, Cathleen. 2021. "Unreliable social science research gets more attention than solid studies." [website]. Science. Scince. Last Modified 21 May. Accessed 26 October, 2021. https://www.science.org/content/article/unreliable-social-science-research-gets-more-attention-solid-studies.
Rodriguez, Josn E., Kendall M. Campbell, and Linda H. Pololi. 2015. "Addressing disparities in academic medicine: what of the minority tax?" BMC Medical Education 15. https://link-galecom.libproxy.uccs.edu/apps/doc/A541444877/HRCA?u=colosprings\&sid=summon\&xid=9526f0 02.

Roediger, Henry L., Michelle L. Meade, and Erik T. Bergman. 2001. "Social contagion of memory." Psychonomic Bulletin \& Review 8 (2): 365-371. https://doi.org/10.3758/BF03196174.
Ross-Hellauer, Tony, Stefan Reichmann, Nicki Lisa Cole, Angela Fessl, Thomas Klebel, and Nancy Pontika. 2022. "Dynamics of cumulative advantage and threats to equity in open science: a scoping review." Royal Society open science 9 (1): 211032.
Rudman, Laurie A, and Peter Glick. 2001. "Prescriptive gender stereotypes and backlash toward agentic women." Journal of social issues 57 (4): 743-762.
Rudman, Laurie A, Corinne A Moss-Racusin, Julie E Phelan, and Sanne Nauts. 2012. "Status incongruity and backlash effects: Defending the gender hierarchy motivates prejudice against female leaders." Journal of Experimental Social Psychology 48 (1): 165-179.
Russ, Travis, Cheri Simonds, and Stephen Hunt. 2002. "Coming out in the classroom... an occupational hazard?: The influence of sexual orientation on teacher credibility and perceived student learning." Communication education 51 (3): 311-324.
Schiebinger, Londa L, Andrea Davies Henderson, and Shannon K Gilmartin. 2008. Dual-career academic couples: What universities need to know. Michelle R. Clayman institute for gender research, Stanford University.
Schmader, Toni, Jessica Whitehead, and Vicki H Wysocki. 2007. "A linguistic comparison of letters of recommendation for male and female chemistry and biochemistry job applicants." Sex roles 57 (7): 509-514.

Schroeder, Julia, Hannah L Dugdale, Reinder Radersma, Martin Hinsch, Deborah M Buehler, Jennifer Saul, Lindsey Porter, András Liker, I De Cauwer, and Paul J Johnson. 2013. "Fewer invited talks by women in evolutionary biology symposia." Journal of Evolutionary Biology 26 (9): 20632069.

Schuster, Carolin, Susanne Narciss, and Jessica Bilz. 2021. "Well done (for someone of your gender)! Experimental evidence of teachers' stereotype-based shifting standards for test grading and elaborated feedback." Social Psychology of Education 24: 809-834. https://doi.org/10.1007/s11218-021-09633-y.
Sege, Robert, Linley Nykiel-Bub, and Sabrina Selk. 2015. "Sex differences in institutional support for junior biomedical researchers." Jama 314 (11): 1175-1177.
Serra-Garcia, M., and U. Gneezy. 2021. "Nonreplicable publications are cited more than replicable ones." Sci Adv 7 (21). https://doi.org/10.1126/sciadv.abd1705.

## ADVANCE

PROJECT CREST
Servick, Kelly. 2018. "'Generous' approach to replication confirms many high-profile social science findings." [website]. Science. Science. Last Modified 27 August. Accessed 26 October, 2021. https://www.science.org/content/article/generous-approach-replication-confirms-many-high-profile-social-science-findings.
Shaw, Ryan D. 2019. "Examining arts education policy development through policy frameworks." Arts Education Policy Review 120 (4): 185-197.
Sheets, Hilarie M. 2016. "Female Artists Are (Finally) Getting Their Turn." The New York Times 29: 284-300.
Skewes, Monica C, Elizabeth A Shanahan, Jessi L Smith, Joy C Honea, Rebecca Belou, Sara Rushing, Kristen Intemann, and Ian M Handley. 2018. "Absent autonomy: Relational competence and gendered paths to faculty self-determination in the promotion and tenure process." Journal of Diversity in Higher Education 11 (3): 366.
Smith, Jessi L., Ian M. Handley, Sara Rushing, Rebecca Belou, Elizabeth A. Shanahan, Monica C. Skewes, Lexie Kambich, Joy Honea, and Kristen Intemann. 2018. "Added benefits: How supporting women faculty in STEM improves everyone's job satisfaction." Journal of Diversity in Higher Education 11 (4): 502-517. https://doi.org/10.1037/dhe0000066.
Smith, Jessi L, and Meghan Huntoon. 2014. "Women's bragging rights: Overcoming modesty norms to facilitate women's self-promotion." Psychology of Women Quarterly 38 (4): 447-459.
South-Paul, Jeannette E., Kendall M. Campbell, Norma Poll-Hunter, and Audrey J. Murrell. 2021. "Mentoring as a Buffer for the Syndemic Impact of Racism and COVID-19 among Diverse Faculty within Academic Medicine." International Journal of Environmental Research and Public Health 18 (9): 4921. https://www.mdpi.com/1660-4601/18/9/4921.
Stone, Pamela, and Lisa Ackerly Hernandez. 2013. "The all-or-nothing workplace: Flexibility stigma and "opting out" among professional-managerial women." Journal of Social Issues 69 (2): 235256.

Teich, Erin G., Jason Z. Kim, Christopher W. Lynn, Samantha C. Simon, Andrei A. Klishin, Karol P. Szymula, Pragya Srivastava, Lee C. Bassett, Perry Zurn, Jordan D. Dworkin, and Dani S. Bassett. 2022. "Citation inequity and gendered citation practices in contemporary physics." Nature Physics 18 (10): 1161-1170. https://doi.org/10.1038/s41567-022-01770-1.
Trejo, JoAnn. 2020. "The burden of service for faculty of color to achieve diversity and inclusion: the minority tax." Molecular Biology of the Cell 31 (25): 2752-2754. https://doi.org/10.1091/mbc.E20-08-0567.
Trix, Frances, and Carolyn Psenka. 2003. "Exploring the color of glass: Letters of recommendation for female and male medical faculty." Discourse \& Society 14 (2): 191-220.
Vásárhelyi, Orsolya, Igor Zakhlebin, Staša Milojević, and Emőke-Ágnes Horvát. 2021. "Gender inequities in the online dissemination of scholars' work." Proceedings of the National Academy of Sciences 118.
Watson, Clare. 2021. "Women less likely to win major research awards." Nature.
Weeks, Matthew, Kelly P. Weeks, and Emily C. Watkins. 2021. "Using the shifting standards model of stereotype-based judgments to examine the impact of race on compensation decisions." Journal of Applied Psychology 51: 176-189. https://doi.org/10.1111/jasp. 12724.
Williams, Joan C, and Rachel Dempsey. 2020. What works for women at work: Four patterns working women need to know. New York University Press.

## ADVANCE <br> PROJECT CREST

Young, Kat, Michael Lovedee-Turner, Jude Brereton, and Helena Daffern. 2018. "The impact of gender on conference authorship in audio engineering: Analysis using a new data collection method." IEEE Transactions on Education 61 (4): 328-335.

