

Clark School Best Practices and Guidelines for Faculty Hiring

Prepared by the Equity Administrator and reviewed by the Dean of the Clark School of Engineering, 2018

*This is a **working document** focusing on faculty searches in Engineering. It is intended to help search committees navigate the search process successfully.*

“As a part of the University of Maryland’s commitment to an increase in our awareness, knowledge, and skills related to diversity and inclusion, the A. James Clark School of Engineering has an innovative vision to create an environment that is not only diverse, but is an example of inclusive excellence for our students, staff, faculty and alumni. As a core value, a diverse educational community is one of our greatest strengths... By living and working in a community that embraces diversity as a joy and privilege, we will further enhance the vitality of the educational experience... It is essential that we are exposed to different perspectives and interact with people from different backgrounds to explore ideas from different cultures in order to succeed in an increasingly diverse workplace and global community. I hope that you contribute to the establishment of the Clark School as a leading example of diversity, equity, and inclusive excellence.”

Diversity + Inclusion = Creativity + Innovation + Academic Excellence + Hope

Darryll Pines, Dean, Clark School

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Sent: Friday, May 18, 2018 12:29 PM

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Cc: Elisabeth Smela; Sheron Yvonne Williams; Maureen L. Meyer

Subject: Regarding Faculty Searches in Units within the Clark School

Dear Chairs,

Please read:



Dear Chairs and Directors:

In keeping with our Fearless Ideas goal to attract great faculty, we're recalibrating our faculty search processes.

* During initial meetings, search committees will work with Chairs/Directors to develop the posting, and screening tools will be reviewed the Equity Administrator.

* There will be several checkpoints at which the Equity Administrator will review the search process in order to facilitate offers being made quickly.

* Reminder: the Equity Administrator must approve the search and the finalists, in writing, before scheduling final interviews with the Chair/Director and Dean.

Specifics will be forthcoming at the time of your next search.

Darryll J. Pines and Elisabeth Smela

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Information and Sources

Guiding Documents

As stated on the cover page, this is a **working document** focusing on faculty searches in Engineering. It is intended to help search committees navigate the search process successfully.

Search committees should consult the UMD policies and guidelines, from which procedural and policy-related material herein was drawn. In the case of a conflict, the UMD policies obviously prevail. However, guided by past experience with searches in the College, these guidelines provide search committees with tools that they may find helpful and additional checkpoints with the Equity Administrator to help them avoid pitfalls, as well as additional information from outside sources.

- [Procedures and Guidelines for Conducting Searches at the University of Maryland](#), 2007
- [Approved Substantive Changes to the University Search and Selection Guidelines](#), 2014 and [Tip Sheet for Approved Substantive Changes to the University Search and Selection Guidelines](#), 2014

These guidelines also incorporate material from these sources.

- [eTerp2 Search Chair Checklist](#), 2015
- UMD ODI [Top 10 Evidence-Based Practices for Inclusive Faculty Hiring](#)

Additional Sources

The [University of Michigan's Handbook for Faculty Searches and Hiring](#) inspired this document and provided much of the conceptual material and format.

Additional material was taken from [University of Washington Best Practices for Faculty Searches](#).

Further Information

The larger context for faculty hiring at the university includes federal and state laws and university values, policies, and commitments.

The larger context in STEM includes historic and persistent under-representation of some groups. Please consider Appendix of the 2016 A. James Clark School of Engineering Diversity Plan.

Our commitment to diversity is explained in these UMD documents.

- [Transforming Maryland: Expectations for Excellence in Diversity and Inclusion](#)
- [A. James Clark School of Engineering Diversity Plan](#), 2016

To achieve the goal of an institution capable of promoting the most advanced and forward-thinking research and scholarship, and developing the most proficient and capable citizenry, we must reflect the tremendous diversity of people, scholarship/research, and interests to be found in this country.

UMD Search and Selection Guidelines

I. INTRODUCTION

Hiring our colleagues is one of the most important things we do as faculty members: it impacts our students, determines our work environment, and influences our reputation. Diversity, academic excellence, and enhanced student learning are closely linked. In an increasingly pluralistic society, the make-up of the faculty is relevant to the educational experience we offer students and to the research we are able to perform. Successful hiring requires an infrastructure to support *processes that are equitable combined with significant breadth and depth of outreach efforts.*

Guiding Principles

Three key factors in a good search are outreach, following a structured process, and compliance. In addition, searches must be mindful of confidentiality, equity, and diversity to ensure fair, reasoned, and inclusive processes.

Diversity and Inclusion

- Diversity – who is present.
- Inclusion – who has a voice.

Both nationally and at the University of Maryland, efforts to recruit a diverse faculty have been inconsistent and change has been slow.

These guidelines are aimed at helping discover and recruit outstanding colleagues, including persons who are underrepresented among the Engineering School faculty. This document outlines practices that have been identified as effective, practical, and fair. (As an example, the University of Michigan has been tracking progress with many of these approaches, and they report good success.) *We emphasize a process that is equitable and that casts the widest possible “net”.*

- Diversity is construed broadly: besides race/ethnicity and gender, it includes religion, national origin, age, disability, gender identity, sexual orientation and any other personal characteristic protected by law, as well as veteran’s status, first in the family to attend college, undergraduate and graduate institutions, previous work experience, socioeconomic status, area of the country, personal appearance, etc.

Consider the following.

- Diverse talents are needed at the leading edge of innovation, and mono-cultures are simply outcompeted.
- A workplace that enables the success of any one group often improves life for everyone.
- Diverse faculty are needed to nurture our students and create an inclusive climate. Good people will leave for better climates if they are not supported. Among other things, good climate requires “critical mass”.
- Students care about having an inclusive learning environment. To attract the best students, we need a faculty that fosters this environment.
- “During the next decade, it is estimated that 71% of new workers in the U.S. will be female, Asian, African-American or Hispanic. ... Every human being is of equal worth and is entitled

to the same employment and educational privileges and opportunities ...” From UMD’s 2018 Faculty training – responding effectively to discrimination & sexual misconduct.

Affirmative Action

Affirmative action is undertaken during the outreach phase of the search to enrich applicant pools so that they are inclusive of all groups, including those who been historically underrepresented. During the screening phase all candidates are evaluated against the same set of objective criteria related to the position.

“Excellence at the university depends on the recruitment and retention of outstanding faculty and staff. Talented individuals with great potential are found among every group. To build an academic community that is preeminent, the university will actively seek and aggressively recruit these outstanding and diverse individuals to our faculty, staff, administrative ranks, and student body.

“Research and experience have shown that achieving a critical mass of colleagues is especially important in recruiting individuals from groups who are not in the mainstream... It will be our goal, at every level, to build the critical mass that signals the University of Maryland is a welcoming home for every individual who aspires to reach his or her highest potential.”

Transforming Maryland

Roles and Responsibilities

Department Chairs (Unit Heads)

- Chairs/Directors initially identify a need and request approval from the Dean to recruit for a faculty position(s) and then work with the Equity Administrator and the Search Committee to document the position posting and the search plan.

Once a search is in progress, they may, in consultation with the Equity Administrator, do the following.

- Review candidate applications.
- Market the position and recommend applicants for the Search Committee to consider.
- Interact in a structured, consistent manner with candidates who have been deemed semi-finalists by the Search Committee, for the purpose of providing information about their vision of the unit/department and responding to the candidates' questions. Document for the Equity Administrator how equity and fairness will be upheld in these interactions.
- Meet with the Search Committee to address questions from the Search Committee or to get updates on the search process.
- Request that the Search Committee reconsider specific candidate(s) for the semi-finalist and/or finalist lists.

Note: The **assistant to the Department Chair** is typically responsible for assisting with scheduling and arrangements for the campus visit.

Search Chairs

The search chair is responsible for making sure that:

- no official business is conducted without a quorum,
- applicants who do not meet the minimum stated qualifications are rejected up front, and
- candidate visits are a positive experience, i.e., lining up the appropriate faculty meetings and ensuring activities put UMD and the department in an attractive light.

Equity Administrator

The Equity Administrator is responsible for:

- approving the search committee
- evaluating the search process for compliance with campus policies and procedures and
- acting as a resource for any questions that may arise.

The Equity Administrator can request any information about the search at any time.

From the Guidelines, *"The monitoring, the uniformity, and the paper trail are all elements essential to conducting searches which will yield the most qualified and diverse pools of candidates."*

Search Coordinator

The search coordinator is an essential member of the committee who:

- places the ads,
- ensures that the minutes are properly kept and filed,
- interfaces with eTerp,
- provides administrative support* as needed, and
- sends template "regrets" letters to candidates who are interviewed but not advancing further.

*Administrative support may also be provided by the Assistant to the Chair or Unit Head.

Search Committee Members

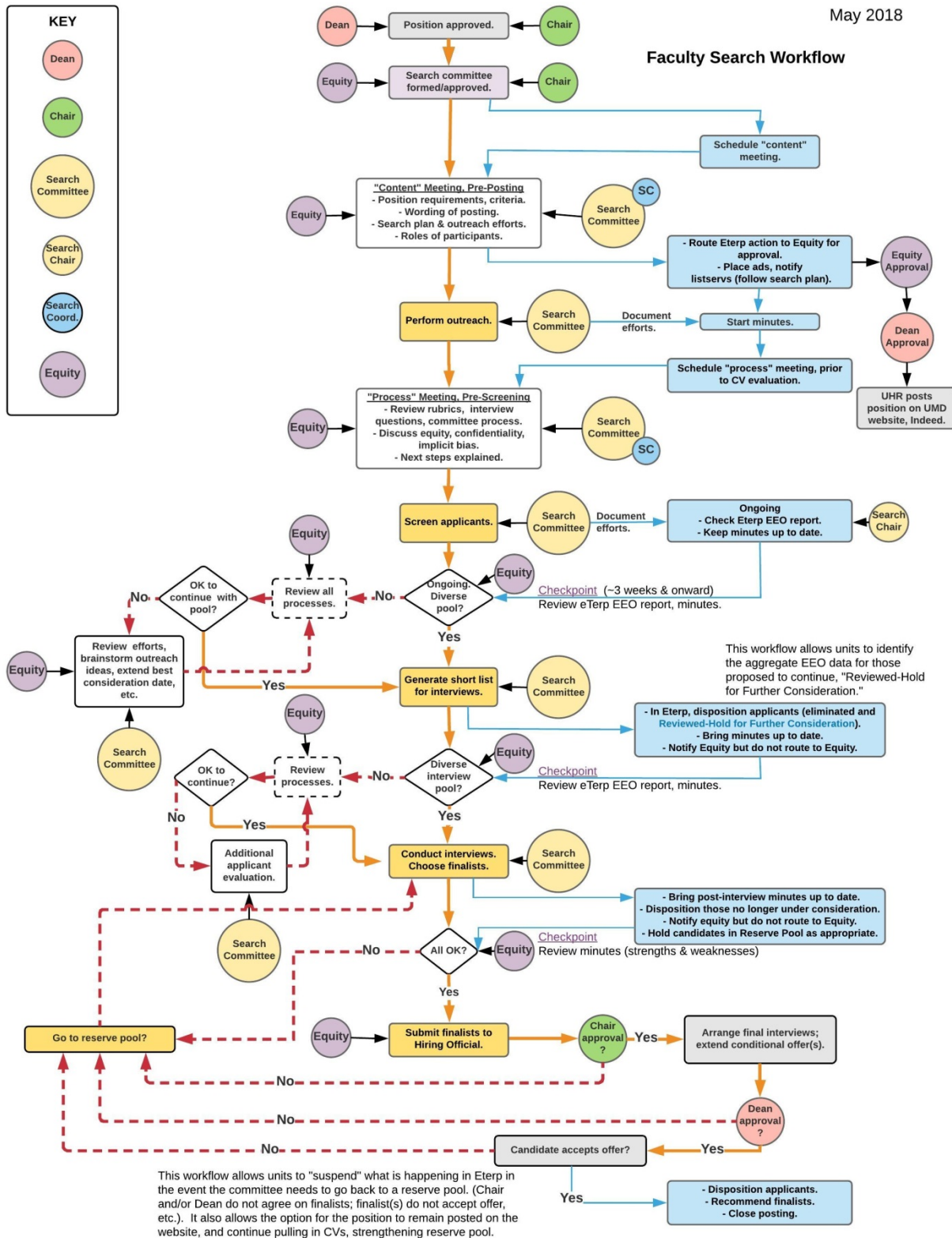
Search committee members are responsible for:

- assisting in the development of the search and selection plan,
- developing methods for assessing candidates, such as rubrics, protocols, and interview questions,
- actively searching for applicants, screening applicants, and developing the finalist list,
- speaking out at the time if equity or diversity best practices are not followed, and
- contacting the Equity Administrator if there are any concerns regarding search processes.

Flowchart Overview of the Search Process

Adapted from p. 6 of the Search and Selection Guidelines and other UMD sources.

May 2018



II. INITIATING THE SEARCH PROCESS

Although it is tempting to post a position as quickly as possible, *the composition of the search committee and the definition of the position have consequences for the quality and the outcome of a search.* The Equity Administrator will confer with Department Chair and committee members to help them think through these issues prior to the posting being finalized.

The UMD Search and Selection Guidelines are meant to ensure that searches conducted at the University of Maryland encourage a diversity of participants from the beginning of the process – the development of the search committee – to the end – the selection of a diverse group of finalists and, ultimately, hires.

Composition of the Committee

- Search committees should include members with a range of perspectives and scholarly expertise.
 - From Substantive Changes, *“Hiring Officials are expected to convene Search Committees that are diverse, particularly with respect to race/ethnicity and gender. In appointing members, Hiring Officials may also consider other forms of diversity. The objective is to assemble a team of individuals reflecting a broad range of individual backgrounds, skills, experiences and attributes relevant to the search and the nature of the position.”*
 - *“Committees with a diverse composition have the benefit of ... access to more varied and diverse networks for outreach and recruitment of candidates.”*
 - *“Diverse search committees send important, positive signals to interviewees about the University’s commitment to diversity and inclusion, often enhancing the interest of candidates from diverse groups as well as the interest of candidates for whom diversity and inclusion are core values.”*
 - *“Hiring Officials may provide a brief statement to the Equity Administrator as to why the individuals selected for the Search Committee contribute to the diversity objective of the specific search.”*
 - It goes without saying that all the committee members should be committed to UMD’s fundamental values of diversity and inclusion.
 - Committee members under-represented groups should, whenever possible, be of the same general rank or status as other members of the committee and have familiarity with the technical areas of the position and with the unit. Students should not be expected to serve as the lone representatives of diversity on campus search committees.
- Balancing committee diversity with other considerations It is well documented that women and minorities are frequently asked to perform substantially more service. The UMD Strategic Plan for Diversity states, *“...department chairs will carefully evaluate campus service assignments ... with a particular focus on women and minority faculty, and will ensure that they have time to successfully complete their teaching and research responsibilities required for promotion and tenure.”* Chairs should keep track of service loads for faculty who are under-represented in engineering, freeing them from other service as appropriate and/or taking this load into account in other ways.

- In order to ensure a diverse committee, it may sometimes be helpful or necessary to include faculty from outside the department on the search.

The “Content” Meeting

The Equity Administrator will charge the committee and discuss committee preparation for next steps, such as the development of screening tools and active recruiting.

- Lack of compliance with any part of the equity charge or evidence of misconduct can result in a failed search.

The chair (hiring official) will discuss the goals for the position.

Before posting, we expect the committee to assist in developing the position description and the search and selection plan. The Equity Administrator can assist.

Developing the Position Description

What are the goals for this position in terms of research, teaching, and service?

- Hiring criteria should be directly related to the requirements of the position and be supported by the hiring official and the committee members (and the Equity Administrator).
- Differentiate *minimum qualifications* (e.g. have earned PhD) from *knowledge, skills, and abilities*, and *preferred qualifications*. Candidates not meeting minimum qualifications cannot be advanced.
- Specify the qualifications for the position in the *widest possible terms*, taking into account the various needs and goals of the department. The posting should be as inclusive as possible without being vague.
 - Make sure the posting is clear, accurate, *and welcoming*.
 - Too rigidly or narrowly defined requirements may unnecessarily exclude potentially successful candidates from serious consideration. Narrowly defined subfields may attract too few candidates to constitute a diverse pool.
 - Requirements should be evaluated to ensure that they are related to the current and future needs of the unit.

Absent extraordinary circumstances, **once the position has been posted, the search committee must adhere to the selection criteria detailed in the posting.** For this reason it is important that the position posting be drafted carefully and effectively.

Guidelines for Specific Language in the Posting

- Define qualifications as broadly as possible.
 - “We will consider applicants knowledgeable in the general area of xxx. There are several areas of interest, including [several named]. In general, we give higher priority to the overall originality and promise of the candidate’s work rather than to the sub-area of specialization.” (U. Michigan)
- Qualifiers or adjectives may cause potential applicants to assume they are unlikely to be considered.
 - Avoid modifiers like “exceptional”, “outstanding”, “competitive”.
- Proactive language in the job description itself, to supplement the University boilerplate paragraph, indicates a department’s commitment to diversity.
 - “The College is especially interested in qualified candidates who can contribute, through their research, teaching, and/or service, to the diversity and excellence of the academic community.” (U. Michigan)
 - “The [school/department] is interested in candidates who have demonstrated commitment to excellence by providing leadership in teaching, research, or service toward building an equitable and diverse scholarly environment.” (many schools)
 - “We welcome nominations of, and applications from, anyone who would bring additional dimensions to the [school/department]’s research and teaching mission.” (U. Virginia)
 - “The [school/department] seeks to recruit and retain a diverse faculty to maintain the excellence of the University and to offer our students richly varied disciplines, perspectives, and ways of knowing and learning.” (many schools)
 - “The chosen candidate will have overlapping commitments to academic achievement and teaching excellence, as well as equity, diversity and inclusion.” (UCLA)
- To obtain information about candidates’ potential contributions to institution-building, it is OK to ask candidates to address, in their application materials, such things as how they will add intellectual diversity to the department, to describe experiences using different teaching methods, and to note diversity and equity-related efforts or skills that will contribute to the department (regardless of candidate demographic characteristics).

Posting the Position

Prior to advertising the vacancy, the position announcement must be approved in eTerp by the Equity Administrator.

The Search and Selection Plan

The Search and Selection Plan in the posting is legally binding. The committee is obliged to carry out the outreach efforts outlined in the Plan and to keep records documenting these efforts.

The plan will address advertising, specific actions to encourage diverse candidates, and procedures for assessing candidates equitably and against multiple criteria.

- Define the quorum.
- Specify advertising venues.
- Specify the responsibilities of the search committee members for actively searching for candidates for the position.
 - Utilize professional networks and contacts: calls, emails, social media.
 - Send the posting link to professional associations, departments at HBCUs, directories of recent PhD recipients, and list-servs asking for applications and nominations.
 - Recruit at conferences and meetings.

Any non-standard processes should be spelled out in the search plan.

- If faculty votes will be taken, when they will occur (e.g. after each interview?) and how will they be used to determine finalists (advisory to the committee? placement on the finalist list for the Department Chair?).
- If letters of reference are requested by the committee, rather than the Department Chair, when will that occur and how will the information be evaluated and used?

Myth: Ensuring that the University of Maryland recruits a diverse faculty is the responsibility of Equity Administrators.

Reality: Responsibility for recruiting rests on everyone. Since hiring is generally a “bottom up” process, with the members of the search committee defining the pool of candidates and assessing their qualifications, diversity goals will never be achieved without the commitment and involvement of these faculty.

UMD Search and Selection Guidelines

III. COMMITTEE ACTIVITIES AT THE START OF THE SEARCH

Good preparation at the beginning of the search averts unnecessary delays and unsuccessful outcomes.

Search Committee Preparation

- During the first meeting of the committee, review the documentation provided during the charge meeting. Note questions to ask in the second meeting with Equity.
- Create a timeline and schedule for the search.
- Establish the manner in which the committee will conduct business (in-person meetings, email, etc.)
 - How will the committee make decisions? Committee decisions will generally be by secret ballot vote. This will help to ensure that one or two individuals do not dominate the search direction and outcome.
 - Who will be the point of contact for applicant inquiries?
 - What information will the committee share with applicants? (While the search is in progress, do not communicate with candidates on their standing.)
- Methodologies/Time Management If the committee expects that a large volume of applicants will make it infeasible for all the committee members to review each application during initial screening, decide how many committee members will review each application. This number should be at least three. Determine the number of interview stages (e.g. first by phone, then on-campus).
- Set up means of confidential communication and document-sharing.
- Review practices that will mitigate evaluation biases. The University of Michigan's STRIDE website is a helpful resource. Take at a minimum the following steps to understand the potential role that evaluation bias can play in a search process.
 - View the following online videos. [Are you biased? I am](#) by Kristen Pressner (8:48) **OR** 3 UCLA Implicit Bias Videos, [Lesson 1: Schemas](#) (3:12), [Lesson 2: Attitudes and Stereotypes](#) (4:13) and [Lesson 6: Countermeasures](#) (5:23) **OR** [We all have implicit biases](#) by Dushaw Hockett (12:00; no solutions proposed) **OR** The [Surprising Solution to Workplace Diversity](#) by Arwa Mahdawi¹ (15:27). **OR** read [Madera et al.](#) "Gender and letters of recommendation for academia: agent and communal differences," J. Appl. Psychol., 94 (6), 1591-1599 (2009).
 - Verify for the committee that you have taken one of these steps, or an equivalent one, to learn more about implicit bias than you knew previously.
- Determine what would constitute a conflict of interest and how the committee will handle recusals resulting from that.

¹ Humorous approach. Disliked by ¼ of video raters.

Prepare the Screening Tools

In an equitable search, all candidates are treated in the same manner. Ensure consistency of evaluations, interviews, and reference checks by developing standard criteria and questions. **Rubrics must be developed before the committee begins screening candidates.** However, if the committee finds that the tools are not working, the tools may be changed in consultation with the Equity Administrator.

- Rubrics are tools for maintaining consistency.
- Screening scores will serve as a basis for discussion, to allow the identification of the most relevant applications. They should not be used as the sole basis for eliminating candidates. The committee should discuss all the applications that individual committee members have determined to have merit.
- Candidates will not be assessed in terms of a single criterion. In your rubric², use those pre-determined criteria from the position description that can be obtained from a CV or personal statement. Note that some information can only be gleaned from an interview and cannot be assessed in initial screening.
 - What evidence will be considered relevant to each criterion? What will be the relative importance of the criteria? Different criteria will produce different top candidate lists. Obtain reasonable consensus.
 - Consider including criteria unrelated to the specific discipline if they are nonetheless important to the ability to succeed in the department, such as collegiality, an unusual combination of skills and perspectives, or involvement in diversity and equity efforts.
 - The criteria should not inadvertently screen out well-qualified applicants from minority-serving institutions or applicants with non-traditional career patterns (e.g., an engineer who has worked at a national research lab, an individual whose career was interrupted due to family leave or illness, a first-generation scholar who began his or her career at an institution that was not research-intensive, someone with an atypical undergraduate degree).
- Decide on the scales to employ (e.g. 1-5, deficient-excellent,...).
- Prepare your interview questions and interview structure. The campus [Search and Selection Guidelines](#), pp. 14-15, include a list of prohibited question topics.

² A "rubric" is a guide listing specific criteria for grading or scoring.

Dealing with a Large Number of Applicants

A faculty search may net over a hundred CVs, in which case the committee should consider a 2-step evaluation: develop an intermediate list from which to select the short list.

- A first rapid screen will identify the top 30 or so candidates based on a holistic view of the CV and personal statement using an abbreviated rubric.
 - Are there diverse candidates on the list? (You may ask the Equity Administrator to run a manual screen in eTerp to check.) If not, intensify the outreach and re-examine the rubric before moving on to a short list.
 - To mitigate the temptation to select only candidates from well-known research groups, create several separate short lists with rankings based on other criteria, such as evidence for teaching, institutional stewardship, mentoring aptitude, or collaboration. Consider the qualified top candidates across these criteria for 1st-level interviews.
- The short-list interview pool will then be identified by an in-depth look at the packages of the applicants on the intermediate list.

(Non-Generic) Sample Assessment Criteria for Screening: Level 1

*The committee should devise criteria that are consistent with the job posting and with norms and expectations for a faculty member, and that are relevant to the search and department. These search-specific sample criteria are for **illustration only**, and will differ for your search.*

Example 1

1. Meets Minimum Qualifications

0 = no (eliminated)
1 = yes

2. Before Best Consideration Date and All Required Documents Included

0 = no (committee did not consider)
1 = yes

3. Research Field

0 = inappropriate
1 = appropriate
2 = targeted area

4. Research Productivity

0 = low 2 = high
1 = medium 3 = exceptional

5. Research Impact

0 = small number of 1st-quartile journals
1 = good number of 1st-quartile journals
2 = almost all 1st-quartile journals
3 = exceptional journals

6. Teaching & Mentoring

0 = typical
1 = exceptional

7. Leadership and Service

0 = typical
1 = exceptional

8. Promise

0 = typical research statement
1 = excellent research statement
2 = indication of unusual promise in research statement

9. Other

0 = typical recognitions, experiences
1 = unusual recognitions, work experience, diversity efforts, etc.

Example 2

Rating system: 1 to 4

4 – Excellent
3 – Good
2 – Average
1 – Weak

(An explanation of the columns and ratings needs to be attached.

E.g. what does “research fit” mean? What does a “3” for research productivity mean?)

Last Name	Init.	Research Fit	Research Productivity	Research Impact	Soft Skills, Service	Teaching, Mentoring
Baker	A					
Baz	B					
Brown	C					
Hernandez	D					
Hill	E					
Jackson	F					
Lewis	G					
Park	H					
Sung	I					
Taylor	I					

Excel spreadsheets for these examples are available.

Last Name	Gates		Hurdles							Summary	
	Meets Min Quals	Best Date & Docs	Field	Productivity	Impact	Teach, Mentor	Lead, Serve	Promise	Other	Total	Flag
Codes	0 = no (eliminated) 1 = yes	0 = no (eliminated) 1 = yes	0 = inappropriate 1 = appropriate 2 = perfect area	0 = low 1 = medium 2 = high 3 = exceptional	0 = small 1 = good 2 = very good 3 = exceptional	0 = typical 1 = exceptional	0 = typical 1 = exceptional	0 = typical 1 = excellent 2 = unu. promising	0 = typical 1 = exceptional		
Baker	0									0	
Baz	1	0								0	
Brown	1	1								0	
Hernandez	1	1	1	1	2	0	0	2	0	6	1
Hill	1	1	1	3	2	0	0	0	0	6	1
Jackson	1	1	2	2	2	0	0	1	0	7	1
Lewis	1	1	1	2	2	0	0	1	0	6	
Park	1	1	1	0	0	1	0	0	0	2	1
Sung	1	1	1	1	2	0	0	0	1	5	1

(Non-Generic) Sample Assessment Criteria for Screening: Level 2

*The committee should devise criteria that are consistent with the job posting and with norms and expectations for a faculty member, and that are relevant to the search and department. These search-specific sample criteria are for **illustration only**, and will differ for your search.*

The best use of scoring is to identify candidates to discuss, rather than to simply total and consider those above a cutoff. For example, if you get someone who scores a 0 on “1. Research Field” but is an NAE member and so scores 4 on “14. Recognitions”, you would likely want to discuss this candidate. You may even want to assign a special number (for example a score of 5) for such exceptional aspects of the record to enable you to flag those candidates. **Regardless of your procedure it needs to be fair, consistent, and transparent, so that it is clear why candidates were/weren’t chosen to advance further in your search.**

Fit

1. Research Field (67%)

This is a fairly open search in three general areas. Therefore, the committee considered the ability of the candidate to complement existing department expertise and to form collaborations.

- 0 = significant overlap with existing areas, unlikely to enhance the strength of the department
- 1 = some redundancy, but will add some new strengths
- 2 = good complement to current areas, will strengthen the department

2. Teaching Areas (33%)

- 0 = able to teach only electives in field of specialization
- 1 = able to teach some required undergraduate courses
- 2 = able to teach a range of courses

Research

3. Productivity (20%)

A highly competitive candidate has a sustained record of first author papers, further strengthened by collaborative papers on which the candidate has co-authorship. While the absolute number of papers is field-dependent, the committee expects to see a continuous record of first author papers for a candidate to be competitive, and for interdisciplinary fields also a record of collaborative papers in which the candidate may not be first author. Co-first authorship is considered to be equivalent to sole first authorship. Conference papers in this field are not considered to be as significant as journal articles, so they will be counted as 0.33. Communications (3-4 pages) will be counted as 0.5 of a full paper. Books and patents are also considered. The guidelines for the scores are suggestive: 4 first-author publications may be given a 2, for example, and 8 publications from several years ago with one current might also receive a 2. It is also understood that candidates who have spent a longer time as e.g. a postdoc should have commensurately more publications. The committee also understands that an unusually large number of papers/year should invite scrutiny. Thus, committee members are expected to apply reasonable judgment.

- 0 = 2 or fewer publications
- 1 = 3-4 publications, 1-2 as first author
- 2 = 5-6 publications, >3 as 1st author, regularly over time (1-2/year)
- 3 = 7-10 publications > 4 as 1st author, appearing regularly, ~3/year
- 4 = 11-15, ~4+/year
- 5 = >15, ~4+/year

4. Impact (30%)

The committee considers the impact of the candidate’s work to be more important than productivity. Journal impact factor is one measure of importance, but the committee also recognizes the importance of publishing papers in journals that reach the target audience. The number of citations and the h-index are even more significant, but the committee recognizes that these numbers will typically be low at early career stages and that these numbers are field-dependent. The committee also recognizes that reputation of the candidate’s mentor and the current popularity of the specific research area may unduly inflate this measure. Competitive candidates will have published papers in high quality journals within the candidate’s field as well as in broad readership journals, and they will have papers that are regularly cited. Again, these guidelines are suggestive and committee members are expected to apply reasonable judgment in weighting the various contributions.

- 0 = journals that are not peer reviewed; obscure journals
- 1 = only specialized journals, impact factor < 1.5 (lowest 2 quartiles), < 10 citations, h <= 1
- 2 = mix of journals from 2nd-4th quartile, < 100 citations, h <= 3
- 3 = journals in 3rd – 4th quartile, 100-200 citations, h <= 5
- 4 = journals in top quartile, 300-500 citations, h <= 7
- 5 = articles in Science, Nature, PNAS, > 500 citations, h >= 8

5. Funding (15%)

For a successful career in this field, the candidate must secure enough funding to sustain their research program.

- 0 = has not yet secured fellowships or grants, has not yet demonstrated experience in proposal writing, has not yet identified credible future funding sources
- 1 = has secured a fellowship or, at minimum, documented significant experience in writing proposals to organizations such as the NIH; has identified credible future funding sources
- 2 = has secured external (non-fellowship) funding for current work
- 3 = has secured funding for a future independent lab (e.g. K-award or foundation transition grant)

6. Research Statement (25%)

The most important aspects of the research statement are the vision and innovation of the candidate's proposed work. Also important are the organization, clarity, logic, and justification for the work.

- 0 = poorly organized proposal that lacks clearly articulated research aims
- 1 = clear, justified directions for several projects; clear understanding of requirements to set up a lab
- 2 = further includes funding and staffing plans, a convincing rationale for the premise of the research program, both for the field and for our department
- 3 = evidence of unusual promise

7. Publication Quality (10%)

To mitigate a simple "bean-counting" approach to candidate publication evaluation, committee members will evaluate the publications of the top ~20 candidates (prior to interviews). At least 3 committee members will read a recent first-author publication by each candidate.

- 1 = solid, important work
- 2 = also compelling, interesting, and/or innovative
- 3 = ground-breaking

8. Pedigree (0%)

The committee did not positively weigh the candidate's advisors or the schools at which the candidate trained.

Teaching & Mentoring

9. Teaching Statement (50%)

- 0 = poorly organized, lacking clearly articulated teaching and mentoring plans and philosophy
- 1 = clear, justified approaches; explicitly proposed department courses to teach or new courses to create, identified areas for teaching and mentoring a range of student learning styles and backgrounds
- 2 = further includes creative and detailed plans for specific teaching approaches and tools and for mentoring or role-modeling students who are under-represented in engineering

10. Teaching Experience (50%)

- 0 = little or no teaching experience
- 1 = teaching experience, such as TA and guest lectures; mentoring of newer students in the lab
- 2 = more substantial teaching experience, such as teaching or co-teaching a class, acquisition of a teaching certification, experience mentoring under-represented students; impactful training of mentees, supervision of graduate students

Institutional Stewardship

11. Leadership and Service (50%)

- 0 = no evidence of service or leadership roles
- 1 = roles in student government, departmental or college service
- 2 = roles in national student professional societies, campus-level service
- 3 = leadership roles in national or international organizations

12. Diversity & Inclusion (50%)

The committee considers other contributions to intellectual diversity and the ability of the department to meet the needs of diverse students to be important.

- 0 = meets expectations of basic faculty capabilities in this area
- 1 = specific demonstrations of cultural competency, role modeling, efforts to enhance diversity; prior experience in industry, start-ups, government labs, or other atypical career path
- 2 = involvement in national organizations (e.g. NSBE); specific plans for improving inclusiveness and climate, diversifying the curriculum to meet multiple or different abilities and interests, enhancing services for under-served populations; leadership roles in the private or government sectors

Overall

13. Letters of Recommendation (50%)

The committee considers letters of reference to provide valuable context to the candidate's CV. Nevertheless, the committee recognized that non-stellar letters may reflect a lack of knowledge about the candidate or implicit bias.

- 0 = negative information, weak endorsement from more than one reference
- 1 = strong endorsement
- 2 = consistent very strong endorsements

14. Recognitions (50%)

Recognition is one indication of future success, although the committee recognizes that implicit biases can be compounded by putting undue emphasis on prior evaluations of the same record by others.

- 0 = no documented record of recognition or awards for research, teaching, or service
- 1 = travel or poster awards, departmental TA awards, invitations to speak at other universities
- 2 = best paper or thesis awards, college or campus recognitions, invited talks at conferences
- 3 = young investigator award or significant recognition from a professional society, keynote addresses
- 4 = very significant national or international recognition(s), such as NAE membership

An Excel spreadsheet is available for this example.

Since it may be difficult for committees to implement this detailed example, they may consider incorporating elements of it.

Last Name	Fit		Research				Teaching, Mentoring			Instit. Stewardship			Overall		Flag				
	Res. Field	Teach. Area	Score	Productivity	Impact	Funding	Res. Stmt.	Pub. Qual.	Score	Teach Stmt.	Teach Exp.	Score	Lead. Serv.	Div. Incl.		Score	Letters	Teach Exp.	Score
Weightling	0.67	0.33	100%	0.2	0.3	0.15	0.25	0.1	70%	0.5	0.5	80%	0.5	0.5	80%	0.5	0.5	80%	
Codes	0 = overlap 1 = OK 2 = good	0 = no UG 1 = some UG 2 = many	100%	0 = <2 1 = 3-4, 1-2 1 st 2 = 5-6, 3 1 st , 1-2/yr 3 = 7-10, >4 1 st , ~3/yr 4 = 11-15, ~4/yr 5 = >15, ~4-7/yr	0 = poor journals 1 = spec. jour., <500 h<5 2 = misc jour., <400 h<3 3 = top 20, <200 h<5 4 = top 10, <500 h<7 5 = top jour., <500 h<8	0 = no 1 = some 2 = funded	0 = disorg, unclear 1 = clear, just 2 = + fund, rationale 3 = unusual promise	0 = solid 1 = + innovative 2 = + groundbreak	13%	0 = disorg, unclear 1 = clear, just 2 = + good plans	0 = little exp. 1 = some exp. 2 = subst. exp.	50%	0 = none 1 = local 2 = small natl. 3 = national	0 = typical 1 = some 2 = substantial	50%	0 = weak, neg. 1 = strong 2 = very strong	0 = none 1 = usual 2 = inv. talk 3 = keynote 4 = NAE	25%	80%
Baker	1	1	50%	0	0	1	0	1	13%	1	1	50%	0	2	1	0	0	25%	
Baz	0	1	17%	3	3	1	1	1	55%	1	1	42%	1	1	1	1	1	36%	
Brown	2	2	100%	5	1	2	2	0	66%	0	0	0%	0	0	0	2	2	50%	
Hernandez	0	0	0%	3	5	1	2	2	85%	1	1	50%	2	0	2	3	3	88%	
Hill	2	1	84%	3	2	0	0	1	29%	2	2	100%	2	2	2	2	2	50%	
Jackson	1	2	67%	2	2	2	0	2	45%	0	0	0%	0	0	0	2	2	50%	
Lewis	1	1	50%	2	4	0	1	2	55%	0	0	0%	0	0	0	2	2	50%	
Park	1	0	34%	1	1	1	1	1	35%	1	1	50%	1	1	1	1	1	38%	
Sung	1	1	50%	1	5	1	2	1	72%	2	2	100%	3	2	2	3	3	88%	

Last Name	Initial	PhD	Rank	Field	All Ranks					Assoc. Full		Notes	
					Research (1-3)	Collab. (1-3)	Teach (1-3)	Service (1-3)	Div., Incl. (1-3)	Commun. (1-3)	Funding (1-3)		Leader (1-3)
Weighting													
1 Baker	A	Y	C	R	2	2	2	1	1	2	2	2	62%
2 Baz	B	Y	A	C	2	1	1	1	1	1	1	1	50%
3 Brown	C	Y	A	O	1	2	2	1	1	2	1	1	43%
4 Hernandez	D	Y	A	O	3	2	2	2	2	2	2	2	83%
5 Hill	E	Y	A	R	3	2	1	1	1	2	1	1	73%
6 Jackson	F	Y	A	E	2	2	2	1	1	2	1	1	60%
7 Lewis	G	Y	F	C	2	3	1	1	1	3	0	1	50%
8 Park	H	Y	A	E	1	2	1	1	1	2	1	1	40%
9 Sung	I	Y	A	C	2	2	1	2	2	2	2	2	63%

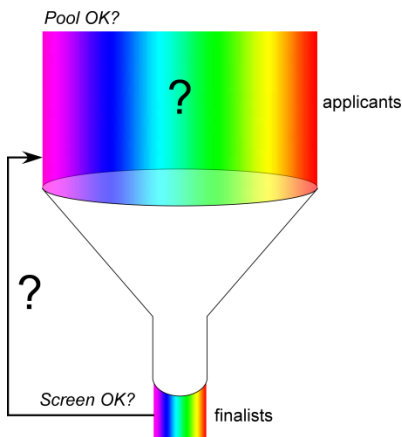
The “Process” Meeting

The Equity Administrator will review your proposed approaches and tools for evaluating applicants at the process meeting, which will take place before candidate evaluation begins.

- UMD’s approach emphasizes the **processes** applied to ensure diversity and inclusion *in advance* of the outcomes. Thus, the work of the committee requires a high degree of transparency.

Also covered at this meeting will be: Equity checkpoints, expectations for documentation, confidentiality, interacting with candidates, use of eTerp, examination of pools, and use of the internet and other information sources.

- Lack of compliance with any part of the equity charge or evidence of misconduct can result in a failed search.



Group Decision-Making

The literature on group decision-making was reviewed in 2015. Some of the main points are summarized here.

- *Effective groups have both identity and functional diversity. However, diversity may lead to conflict and the inability to make a decision. Thus, group discussions must be managed appropriately and potential for miscommunication minimized. A **no-interruption rule can be helpful, as can the allocation of speaking time.***
- *The group must agree on the goal or discussion will be fruitless, yielding solutions to different problems.*
- *Many of the problems of individual decision-making can be mitigated if individuals join with others to make decisions in a group, but only if their judgements are uncorrelated. Otherwise, “groupthink”, caused by members being too similar, can lead to poor decisions.*
- *Views can be swayed by the status of the speaker and by the desire to conform to the views of others. Asking a group member to play devil’s advocate can be helpful.*
- *People are good at detecting others’ biases.*
- *Some group members may be free-riders.*
- *Discussion is valuable, but it takes time. There is a trade-off between speed and accuracy. The group should not move too quickly, giving a bad decision, nor should it dither and lose opportunities.*

From D. Bang and C. D. Frith, "Making better decisions in groups," R. Soc. Open Sci., 4 (8) (2017).

Implicit Bias

Awareness of the possibility of bias is critical to countering bias.

“Biases are the reality of our cognitive system. It is the cost we pay for efficiency. We can think of biases as priors in the Bayesian framework. These priors have been passed on to us partly by nature and partly by culture. They often stand us in good stead. Biases can help us make decisions in novel situations where our learned habits cannot guide us. They avoid dithering, which can be fatal. But, biases ... can also lead us to get stuck on local maxima. ... Why should we wish to change our biases? The reason is simple: if we surrendered to our biases wholesale, there would only ever be business as usual, and we would not improve our models of the world and find better solutions to the many problems that we face.”³

There is extensive literature on bias, going back decades; there are additional references in the reading list.

- A well-known 2007 study discussed the effects of bias on recommendation letters, such as the use of fewer “standout” adjectives.⁴ (You may want to try the [gender bias calculator](#).) A 2009 study showed that women were described as less agentic, and that this negatively impacts hiring decisions⁵. In another bias study, from 2012, faculty from research-intensive universities rated application materials of students randomly assigned male or female names for a laboratory manager position. They rated the males as more competent and offered higher starting salaries and more mentoring, regardless of the faculty member’s gender.⁶ Similarly, a 2014 study found that instructors in an online class operating under two different gender identities received higher ratings under the male identity.⁷ Other studies have examined race, with similar outcomes. However, another study showed that when faculty members in STEM ranked CVs, they preferred those with female names, possibly because they have internalized the goal of increasing women’s representation.⁸
- Bias baked into the system can also affect searches. A 2014 study showed that new assistant professors in biology often came as postdocs from prominent labs, but that elite male (but not female) faculty train significantly fewer women than other

male faculty.⁹ “Irrespective of the cause of the gender disparities in elite laboratories, its consequences significantly shape the academic ecosystem. Our data show that these laboratories function as **gateways** to the professoriate.” Thus, if a search committee highly ranks candidates on the basis of pedigree during their screening, a large number of talented people will be eliminated.

- A willingness to acknowledge the existence of implicit bias on the part of those in the majority is required to change business as usual. However, a 2015 study showed that there is a relative reluctance among male faculty in STEM to accept evidence of gender biases in STEM.¹⁰
- If under-represented faculty are among the decision-makers, then bias can be reduced. For example, there are disparities in the gender of colloquium speakers¹¹, but having women among conference organizers increases the number of female speakers.¹²
- Although the above examples focus on gender, there is further literature (see for example the [Appendix](#)) showing similar results for other under-represented groups.

Obviously, do not remark upon non-job-relevant characteristics of the candidates or their recommenders.

Implicit bias studies have shown a correlation of $r = 0.2$ between implicit bias test results and discriminatory behavior. In fact, measures of implicit bias were a better predictor than measures of explicit bias. (This value compares to $r = 0.1$ for the correlations between smoking and lung cancer and between consuming lead and reduced childhood IQ.)

UCLA Implicit Bias, Lesson 3: Real World Consequences

³ D. Bang and C. D. Frith, "Making better decisions in groups," *R. Soc. Open Sci.*, 4 (8) (2017).

⁴ T. Schmader, J. Whitehead, and V. H. Wysocki, "A linguistic comparison of letters of recommendation for male and female chemistry and biochemistry job applicants," *Sex Roles*, 57 (7-8), 509-514 (2007).

⁵ J. M. Madera, M. R. Hebl, and R. C. Martin, "Gender and letters of recommendation for academia: agentic and communal differences," *J. Appl. Psychol.*, 94 (6), 1591-1599 (2009).

⁶ C. A. Moss-Racusin, J. F. Dovidio, V. L. Brescoll, M. J. Graham, and J. Handelsman, "Science faculty's subtle gender biases favor male students," *Proc. Nat. Acad. Sci.*, 109 (41), 16474-16479 (2012).

⁷ L. MacNell, A. Driscoll, and A. N. Hunt, "What's in a name: exposing gender bias in student ratings of teaching," *Innov. High. Educ.*, 40, 291-303 (2015).

⁸ W. M. Williams and S. J. Ceci, "National hiring experiments reveal 2:1 faculty preference for women on STEM tenure track," *Proc. Nat. Acad. Sci.*, 112 (17), 5360-5365 (2015).

⁹ J. M. Sheltzer and J. C. Smith, "Elite male faculty in the life sciences employ fewer women," *Proc. Nat. Acad. Sci.*, 111 (28), 10107-10112 (2014).

¹⁰ I. M. Handley, E. R. Brown, C. A. Moss-Racusin, and J. L. Smith, "Quality of evidence revealing subtle gender biases in science is in the eye of the beholder," *Proc. Nat. Acad. Sci.*, 112 (43), 13201-13206 (2015).

¹¹ C. L. Nitttrouer, M. R. Hebl, L. Ashburn-Nardo, R. C. E. Trump-Steele, D. M. Lane, and V. Valian, "Gender disparities in colloquium speakers at top universities," *Proc. Nat. Acad. Sci.*, 115 (1), 104-108 (2018).

¹² A. Casadevall and J. Handelsman, "The presence of female conveners correlates with a Higher proportion of female speakers at scientific symposia," *mBio*, 5 (1) (2014).

IV. RECRUITING

“Creating a large pool of qualified candidates is [the single most important step](#) in conducting a successful search. Search committee members must take an active role in identifying and recruiting candidates and leave no stone unturned in seeking out excellent candidates.” (U. Michigan)

Conduct Active Recruiting

Active outreach has been found to be the most effective way to attract candidates.

- Identify list-servs, email groups, etc. that can help you identify and reach candidates.
- Invite those you meet at professional conferences to apply.
- Ask colleagues at other institutions to nominate students, postdocs, and professional-track faculty. Send thank you messages upon receipt of nominations and immediately encourage the nominees to apply; include the link to apply as well as the position description.

Broaden the Applicant Pool

Affirmative action is a subset of diversity and refers to intentionality in obtaining a diverse applicant pool. Search committee members are responsible for outreach, and diversity cannot be achieved without their commitment.

- Send the job announcement to faculty at a wide range of institutions and ask them to reach out to potential candidates.
- Individuals who have excelled at research and teaching in departments less highly ranked than UMD's may thrive here.
- Keep the search open and intensify efforts if the initial pool of applicants does not include female and under-represented minority candidates.
 - We are interested in the broadest spectrum of candidates underrepresented in Engineering, and eTerp collects certain demographic data through the application process. If women and under-represented minority candidates are missing, that is a signal that something may be wrong with the process.

Equity Check-In

The Equity Administrator will consult the search chair regarding the diversity of the applicant pool several weeks into the search to determine whether additional efforts are needed to reach a broad array of applicants.

Ongoing Outreach

The department should consider developing long-term strategies for recruiting that go beyond any single search by generating a pool, rather than merely tapping it. This requires a long time horizon.

- Scouting for faculty should be ongoing, outside of any particular search. Identify and build relationships with potential job applicants so that the department can attract diverse pools of applicants for future searches.
- Use conferences and meetings to extend your network. Attend presentations by advanced graduate students and postdocs and host a reception at a major conference.
- Invite potential future applicants to give seminars in the department, before they are ready for an active search.

Avoid Having Active Recruitment Backfire

Women and under-represented minority faculty candidates, like all candidates, wish to be evaluated for academic positions on the basis of their scholarly credentials. They will not appreciate indications, subtle or overt, that they are being valued for personal characteristics. Candidates who are underrepresented in engineering already realize that their gender or race may be a factor in your interest. It is important that contacts with women and under-represented minority candidates for faculty positions focus on their scholarship, qualifications, and potential academic role in the department.

U. Michigan

Notes for Search Coordinators

Instructions for requesting and creating faculty positions are given in [Appendix A](#).

Best Consideration Date

Best consideration dates are generally 30 days to 90 days from the posting dates and are different from closing dates. The posting will remain open until you identify finalists and send them to Equity in eTerp or until you ask the eTerp helpdesk to close it. Once closed, the same search/posting cannot be re-opened at a later time.

The committee is not obligated to review any resumes received after the best consideration date, but if they do look at any one applicant who came in after that date, they need to review all of those who came within that timeframe.

Keeping Minutes

To prevent delays late in the process, the Equity Administrator will be asking to see the minutes throughout the search, so they should be kept up to date continuously. (Holding off on minutes until the conclusion of a search lends itself to gaps and insufficient information for review.) There should be one set of minutes that incorporates, in summary format, salient committee member input, on an ongoing basis. Guidelines for minutes are given in Section VI, Minutes, and an example is given on p. 27.

Generating eTerp Reports

You will only be able to see aggregate demographics at various stages of the candidate evaluation process, and only after candidates have been dispositioned in eTerp.

The Equity Administrator can create a manual report based on lists of names (but will not share information about individuals). Secure methods of communication need to be used when communicating about candidates.

Dispositioning Candidates

UHR runs EEO reports from eTerp for the entire campus, by college/unit, so your department's initial pool composition and down-selection processes should be correctly represented in eTerp, showing the make-up of the narrowed-down pools, candidates who were contacted but withdrew, etc. The dispositions support that there was consistent candidate evaluation and follow-up.

- Leave candidates under review until they are ready to be dispositioned.
- If candidates are incorrectly dispositioned, the eTerp helpdesk can help re-disposition.

Does Not Meet Minimum Qualifications Usually the minimum qualification for a faculty posting is holding a PhD at the time of the appointment. Use this disposition only for those candidates who do not meet min. quals., usually a tiny number.

Meets Min Quals, Not Advanced Further These are the candidates who meet the required minimum qualification(s) but were not chosen to be advanced to any short list, and whom the committee does not wish to keep in reserve.

Reviewed - Hold for Further Consideration Use this bin for candidates the committee wishes to hold in reserve, in case the interview or finalist pool needs to be expanded. You may also use this to review aggregate demographics when running the Departmental EEO Report in eTerp.

Screening Interview, Not Advanced Further Use this designation for candidates placed on a short list after initial screening but who are not invited for an on-campus interview. Typically these candidates are interviewed by video conference or receive some other kind of follow-up.

Formal Interview, Not Advanced Further Use this to designate candidates who interviewed on campus, but who were not designated as finalists.

Finalist Use this to designate candidates whose names were forwarded to the Chair as deemed eligible for hire by the search committee.

V. CONDUCT A FAIR SELECTION PROCESS

Ensure Equity

All candidates should be treated the same way and, when interviewing, have substantially the same experience, including arrangements for dinners, schedule format, and other activities. Apply fair and consistent practices throughout the search and selection process.

The committee determines whether to review resumes received after the best consideration date. If it looks at one application that came in after that date, it needs to review all of those that came within that timeframe.

Use eTerp

The search coordinator will follow eTerp guidelines for tracking every candidate's progress (e.g., failed to meet minimum qualifications, interviewed, etc.). (See p. 17.)

If candidates' progress is tracked via real-time dispositioning in eTerp, the eTerp EEO report can alert you if processes need to be reviewed to ensure implicit bias or other issues related to evaluation against criteria could be occurring.

Maintain Confidentiality

- Names of candidates must not be communicated beyond the search committee and department chair, even after the search is over. How individual search committee members voted on candidates should be kept confidential. Do not communicate with candidates on their standing. At the appropriate time, candidates should receive any official status notifications through eTerp or through the Search Coordinator.
- Provide a secure location for file storage and communication to ensure confidentiality throughout the search. Do not leave paper documents on the main office printer, do not have confidential conversations in public areas.
- Do not discuss candidates by email.
- References not on the candidate's list should not be contacted without first obtaining approval from the candidate, or at minimum asking the candidate if there are people who should not be contacted. Do not call a friend or acquaintance to informally inquire about a candidate.

Review Applications with Objective Criteria

- Use evidence to arrive at your evaluations/ratings.
- **Evaluate your potential future colleagues holistically.** Even though successful candidates must be strong in research, it is not acceptable to screen down to a relatively small number of

candidates based solely on research performance, and only then consider other factors.

- See [Example Assessment Criteria for Screening: Level 1](#).
- Excellence and impact depend on the research field, and the committee will need to determine what is "good".
- Use the rubric to focus attention on the agreed-upon criteria, as well as to document the process.
- From the 2007 Guidelines, "... CVs should be reviewed ... against a pre-determined set of objective criteria related to the position description and job duties."
- When evaluating candidate qualifications, do not speculate about race, gender, years since PhD, whether an applicant is from an under-represented group, or other personal characteristics.
 - Do take into account whether the applicant has reached out to under-represented groups or made contributions that helped efforts toward diversity and inclusion or meeting the needs of under-served students.
- Do consider non-academic experience, service, leadership, and other factors that could contribute to intellectual diversity.
 - Do not penalize candidates for career breaks for parenting, other care-giving, health issues, and the like.
- Seriously consider candidates from lesser-known institutions. Considering only candidates from elite universities is incompatible with pool-broadening goals.
- Avoid internet searches on candidates: the information will be inconsistent, and it is difficult to disregard non-job-related information once it enters the review process.
 - Before doing internet searches, justify the necessity with the Equity Administrator.
 - If internet searches are used because the information sought is essential to the position, the process must be applied to all candidates at the same stage of the search, the information verified, and the candidates given an opportunity to respond to this information.
 - Internet searches may not be used to check on diversity or for reference checks.
- Consider the quality of applicants' research and research plans in addition to where and how much they have published.
 - Consider signs of potential as well as accomplishment.
- From the [2007 Guidelines](#): Do not automatically devalue candidates with lukewarm letters of recommendation. Women and persons of color have historically had greater difficulty attracting mentors in both graduate school and professional settings.

The following are examples of unacceptable criteria used to support candidate evaluation decisions.

- “Good/poor fit.” It is too unclear and can mask bias.
- *Speculations*, for example about salary or resource requirements or job requirements for the partner in a dual-career couple.
- Criteria that are unrelated to the position (i.e. based on the posted job description and standard expectations for faculty).

Committee members must raise concerns immediately during the meeting or afterward with the Equity Administrator if they believe that there is any bias or unfairness in the process or in the consideration of candidates. Such considerations or comments cannot be allowed to affect decisions.

Start-Up Package Cost

If the start-up package has an upper limit, *check with your Chair and the Equity Administrator* about questions you may ask candidates about this.

Some UMD Resources

[UMD Family Friendly Policies](#)

[Black Faculty Staff Association](#) at UMD

[ADVANCE](#) for women and URM faculty

[LGBT Staff & Faculty Association](#)

[Dual career information](#)

UMD [Strategic Plan for Diversity](#)

[Engineering Diversity Plan](#)

Interviews

Equity Check-In

The Equity Administrator will review your minutes and selected interview pool prior to the committee inviting candidates to campus (see chart p. 5). This is critical to avoid potential problems down the road.

- In eTerp or on a secure shared site, identify interview candidates and submit preliminary minutes. **Interviewing occurs after the Equity Administrator has reviewed this information.**
 - Share preliminary minutes with the Equity Administrator during check-ins, especially if the search is operating on a rolling basis in which applicants are kept active while groups of candidates are interviewed.
- It is the policy of the University of Maryland that women *and* under-represented minority candidates be included on the list of interviewed candidates. The outreach and processes described in this manual should make this a reality in most if not all cases. However, if for some reason they are not, the committee chair must document in writing why this has occurred and confer with the Equity Administrator to determine whether the process should move forward or whether additional outreach and advertising is necessary, resulting in more candidates being invited to campus. The Equity Administrator will assess whether appropriate and sufficient actions were taken to attract a range of applicants and if the screening process was equitable.
 - If the Equity Administrator determines that multi-pronged outreach strategies were used and a reasonable process was followed, then equity requirements will have been satisfied.
- There should be a natural break between the qualifications of those brought to campus for interviews and those who are not.
- All candidates meeting the qualifications for interviews should be brought in. Budgetary issues should not be a consideration. The investment in a new faculty member far surpasses this amount, so if you need additional funds talk to your department chair.

Pre-Interview Preparation

The goals of the interview process include not only obtaining a more thorough opportunity for evaluating candidates' credentials, but also selling the candidates on the merits of the position and the University.

- It is good practice to ask interviewees to submit one of their publications in advance. This allows committee members to assess the quality of the applicant's work, in addition to attending the seminar and talking with the applicant. Each assessment method provides different kinds of information.

Interview Planning

This is your chance to show that your department is part of an excellent and welcoming university. A good experience will reflect well on the department and the University, whereas a poor experience could have a negative impact for quite some time through word of mouth.

- *Prepare invitations and information packages in advance so that the committee can quickly send them when it decides whom to interview. Include travel arrangements, the itinerary, the host's contact information, background on the department and University, and directions.*
- *Send all candidates general information on family-friendly policies, benefits, and dual career services, links to information about employment possibilities for partners, information about benefits, and links to various support networks on campus.*
- *Provide those who will meet the candidate the position description and the candidate's CV and publication in advance. Be explicit about confidentiality expectations. Also, provide instructions regarding providing structured feedback.*
- *Remind interviewers that the candidate should do most of the talking. Also remind faculty that the campus visit is an opportunity for the department to give a good impression and show that it is a good place to work. Finally, remind faculty that meals and other interactions are also part of the interview process, and conversations should not touch on inappropriate topics.*
- *Faculty should be prepared to respond to questions about our policies and procedures for evaluation and promotion, mentoring resources for junior faculty, or family-friendly policies.*

Tips from the University of Michigan's handbook.

Interview Process

- Every candidate should have substantially the same interview experience. It cannot be identical, but nobody should be disadvantaged.
 - If one candidate meets the Chair, they all should. If one meets the Dean or Associate Dean, they all should.
 - You may ask follow-up questions, but do not become so distracted by follow-ups that candidates are not given the chance to answer substantially all of the questions. Cut off overly long answers.
 - If, after offering everyone the same experience, a candidate requests a lesser-quality interview (e.g. video instead of on-site), you may grant them this. (Document in the minutes the candidate made the request.)
- **Consider conducting structured interviews, rather than the usual individual meetings with faculty.** To reduce bias, it is best for the faculty to meet candidates in small groups that ask the same set of questions. (Research by Mikki Hebl, Rice University, an expert in the area of diversity issues.)
- If the candidate meets with graduate students, arrange for structured feedback from them also.
- Intervene if a candidate is being interrupted unusually frequently or is getting more aggressive questioning than usual by asking the audience to hold remaining questions until the end.
- Ask all interviewees if there are any accommodations needed for the interview.
 - The committee will need to provide reasonable accommodations for persons with disabilities.
 - See [Appendix B](#) for further information.

Feedback from the Faculty

Faculty who meet with the candidate should provide specific feedback about the candidate's performance and potential. Provide a rating sheet so that comparable information is gathered on all candidates.

- Feedback should be specific, providing the basis for the judgments.

The example Faculty Candidate Feedback form included here provides a rubric for department faculty who are not on the search committee to give feedback on the candidates. The search committee should modify this template for their particular search.

- Other committees have implemented the feedback form as a survey at <https://umdsurvey.umd.edu/>.
- Do not include unsupported global evaluations by faculty or others in your deliberations.

Example Faculty Feedback on Candidate

(based on UCLA form)

Candidate's Name:

Please indicate which of the following are true for you (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Read candidate's CV
<input type="checkbox"/> Read candidate's publication(s)
<input type="checkbox"/> Attended candidate's seminar | <input type="checkbox"/> Met with candidate
<input type="checkbox"/> Attended lunch or dinner with candidate
<input type="checkbox"/> Other (please explain): |
|---|---|

Please provide your thoughts and observations on the candidate's scholarship and seminar.

Please provide your thoughts and observations on the candidate's teaching and mentoring ability.

Please provide your thoughts on the candidate's potential to contribute to the university and the profession.

Please rate the candidate on the potential or evidence for each of the following.

	excellent	good	neutral	weak	unable to judge
Scholarly impact					
Obtaining funding sufficient to support the proposed research efforts					
Collaboration					
Fit with department's hiring priorities					
Teach and mentor undergraduate students					
Attract and mentor graduate students					
Positive contributions to department's climate and outreach to diverse groups					
On-campus and professional service					

Other specific feedback for the committee?

VI. MINUTES

“In the interest of averting any suspicions of inequity in its conduct, the search committee should maintain accurate minutes and records which should be available for review and scrutiny by the Equity Administrator. However, the best way to avoid any perceptions of inequity is to conduct committee business consistently and above-board with all members of the committee having transparent access to all information and decision-making.” ([UMD’s Search & Selection Guidelines 2007](#), Chapter 7)

Overview

Keep your discussions and notes factual and professional.

- The minutes are not the same as a diary, but instead a distilled record concerning what mattered. Minutes should be relatively brief.
- Before submitting final minutes, the entire committee should approve them (e.g. by secret ballot, email concurrence of all,...).
- In the case of a complaint about a search, the minutes will serve as critical evidence that can be used in court. Be aware that this document may become public, and the potential consequences of that.

Equity will review minutes at several touchpoints in the search, as illustrated in the flowchart (p. 5).

- “Departments are not allowed to formally offer a position until all relevant paperwork is completed and approved.” (Chapter 6 of the Guidelines)
- The Equity Administrator may ask you to add missing information to be able to approve the search, in order for offers to be made.
- The Equity Administrator must fail the search if good practice was not followed.

What to Include

Example templates are included below.

- Summarize how the committee conducted business.
 - In-person meetings, shared documents, email, etc.
 - How decisions were made about who was advanced (e.g. screening tools used, votes taken, ability to reconsider candidates, etc.).
 - How candidates were treated consistently.
- Specify communications and outreach efforts.
- Provide the factors that were considered in screening and advancing candidates.
 - This information is usually largely contained in the submitted spreadsheets or scoring templates. The rubrics must be consistent with the posting.
 - It must be clear why some CVs were chosen and others were not, why some interviewees were selected and others not.
- Attach the assessment tools.
 - Candidate assessment approach.
 - Scoring templates.
 - Interview questions.
- Summarize candidate strengths and weaknesses based on interviews (see next section); this can be in the form of a spreadsheet.

Strengths & Weaknesses

Summaries of pertinent strengths and weaknesses are required for every candidate who was interviewed. These should be linked to the position. If you have a two-tier interview process (e.g. video and then on-campus), there will be two sections. These notes should be brief.

- Provide the differentiating factors, which must be job related: research, teaching, service; suitability for the position; vision, preparation, collegiality, professionalism; evidence for likely success and funding; quality of the seminar or written statements; prior experience; and the like.
 - You should not attempt to address all of these. Stick to the things that mattered in the decisions.
 - Do not comment on the thesis supervisor: you are judging the candidate, not the pedigree.
- Our commitment to diversity is supported by including consideration of ability to enhance services to meet the needs of under-served populations, to be a role model or mentor, and to bring new perspectives.

Examples: Strengths and Weaknesses

Good - Differentiating Factors

- *Work is pioneering and well cited.*
- *Reference letters characterized candidate as creative and an excellent instructor.*
- *Many opportunities for collaborations in the department and across the college.*
- *Field: areas of research and teaching are important to our department.*
- *Funding: well-positioned to take advantage of the latest funding priorities.*
- *Background will limit ability to teach UG core courses.*
- *Was rude during the on-campus interview.*
- *Candidate said that this was a practice interview.*
- *Did not articulate how research program would be funded in rapidly saturating field.*
- *Letters said candidate was not technically strong.*

Don't Include – Not Reasons to Advance / Not Advance

- *Seemed friendly.*
- *Not a strong self-promoter.*
- *Letters characterized as hard working.*
- *Has a strong pedigree.*

Don't Include – No Understandable Information

- *Faculty feedback was mostly positive.*
- *Overall a good candidate.*

Don't Include – Factors for Chair, not Strength or Weakness

- *Lab space might be an issue.*
- *Needs appointment at an Associate level.*
- *Many schools probably competing for candidate, may be too hard to get.*

Further examples are on subsequent pages.

Finalists

There is no set number of finalists, but typically committees identify 3-5 potential hires. The number depends on where there is a natural break between groups of similarly-qualified candidates.

- The search committee does not make the actual hiring selection(s); that is the role of the hiring official.
- Search committees forward the names of candidates whom they would be happy to see hired.
- Quality should not be sacrificed under any circumstances. Do not select as a finalist someone who would not make an excellent hire.
- It is not the committee's job to try to weight salary, resources, dual-career, or other potential candidate requirements.

Equity Check-In

If there are no under-represented minority or women candidates in the pool of finalists, a memorandum documenting why this has occurred must be submitted by the Search Chair to the Equity Administrator.

- In eTerp, identify finalists and submit final minutes. Offers cannot be made until Equity has reviewed this information.
 - Minutes will be periodically submitted to Equity for rolling searches for multiple candidates in which decisions on applicants are being made as interviews continue.

Offers

"Departments are not allowed to offer a position until all relevant paperwork is completed and approved." (UMD Search and Selection Guidelines, p. 16) Equity must sign off on your search process first.

Bypassing Equity Administrator review puts the University in a legally untenable position.

Minutes Framework

Attach the following in eTep with your recommended finalists: 1) final search minutes, 2) rubrics used to evaluate applicants (without names and evaluations), 3) interview questions.

TITLE, POSITION #. Search Minutes
Submitted by: NAME of Search Chair

ADVERTISING AND OUTREACH

- Record of ads placed, who was contacted, social media postings, etc.
 - *Must be consistent with Search and Selection Plan.*

CV REVIEW

- Best consideration date was date. *If applicable:* Did not consider applications received after the best consideration date.
- Received XX total applications.
- *If applicable:* Requested position be closed on date.
- Considered all applications received before date position was closed OR other date if different.
- The initial applicant pool was diverse, based on EEO Report. (*Determined during Equity Administrator check-in.*) OR The initial applicant pool was not diverse, based on EEO Report; consulted with Equity Administrator. Took the following actions to broaden the applicant pool.
 - *Specify actions. If applicable.*
- How, when committee did business, made decisions. How confidentiality was maintained.
- Process for evaluating candidates: specify methodology for consistently reviewing CVs; processes for down-selection to interview pool. *If applicable:* How applications were handled if they arrived after evaluation was already underway.

INTERVIEW ACTIVITY

- The interview pool was diverse, based on EEO Report. (*Determined during Equity Administrator check-in.*) OR The interview pool was not diverse, based on EEO Report; consulted with Equity Administrator. Took the following actions.
 - *Specify actions. If applicable.*
- *Can be done in spreadsheet; see example.* Type of interview conducted (video, phone, on campus). Names and dates of candidates invited for those interviews:
 - Name, date of interview
 - Name, date of interview
 - etc.
- Names of those who withdrew and withdrawal dates.
 - Name, date of withdrawal *If applicable.*
- *Can be done in spreadsheet; see example.* For all those interviewed, summarize the differentiating Strengths & Weaknesses – factual only.
 - *Make clear why candidates were chosen, or not chosen, to move forward to the finalist list (bullets ok).*
- Attach interview questions.

FINAL STATUS - Date XX, 20XX

- The interview pool was diverse, based on EEO Report. (*Determined during Equity Administrator check-in.*) OR The interview pool was not diverse, based on EEO Report; consulted with Equity Administrator. Took the following actions.
 - *Specify actions. If applicable.*
- The finalists are:
 - Name
 - Name
 - etc.
- If diversity is lacking in the finalists, the minutes will specify the ways the committee attempted to attract a diverse pool. Equity will have been reviewing minutes throughout the search to ensure that a consistent, sound process was followed.

Example Minutes 1 – Short Version with Table

The example Excel spreadsheet can be shared with you.

Fall 2018-Spring 2019

Assistant Professor

Department of Device Engineering

Position Number: 123456

Hiring Official: C. Rivera

Search Chair: G. Octaviasdottir

Committee Members: J. Smith, A. Sanchez, G. Washington, M. Rodriguez, H. Lee

Advertising

The position was advertised in the venues specified in the posting; no additional advertising venues were used. The position was posted on the department website. Outreach consisted of contacting department chairs at 19 peer institutions.

Equity Efforts

The position was advertised on the listserv [xx](#) and [other things specified](#).

Committee Business

The committee discussed candidates only at in-person meetings, with decisions about who to invite being made by a show of hands. Confidentiality of the screening spreadsheet and minutes was maintained by keeping them on a secured dropbox.

CV Screening Method

The committee agreed not to screen applications received after the best consideration date.

Each CV was screened by 4 committee members who assigned scores as shown in the **attached spreadsheet**. The description of the meanings of the scores (rubric) is also **attached**. Candidates who received a score 6 or higher were discussed, as were those with a high rating from any one committee member. The committee voted on candidates (simple majority needed for a “yes”) to advance to the next step, which was to hold Skype interviews during which candidates were asked a set of standard questions (**document with questions attached**) prepared by the committee.

The initial interview pool was diverse, based on the EEO Report.

Initial Interviews by Skype

Interviews were conducted by Skype from Jan 18-28. They lasted 30 minutes each. These interviews were conducted by a varying subset of at least 3 committee members and recorded; the remaining committee members viewed the recordings. Candidates were discussed at subsequent meetings, and the committee voted on who should be invited for campus interviews. Interviewers, interview dates, and strengths and weaknesses are summarized in the **attached spreadsheet**. Four candidates were invited to campus.

The four candidates identified for invitations to interview on campus were diverse in terms of ethnicity but not gender. Therefore, the committee requested that the Equity Administrator review their processes prior to scheduling the interviews. After reviewing, the Equity Administrator cleared the search to proceed.

On Campus Interviews

On-campus interviews took place in February-March and lasted two days. Each candidate gave a research presentation at the regular department colloquium, held on Fridays. The seminars were advertised to faculty and staff via email and were attended by the majority of the faculty. The schedule included individual meetings with 3 faculty members whose research was most closely aligned with the candidate's, as well as with a group of 5 faculty and a group of 5 graduate students. The committee met as a group with the candidate to discuss funding and teaching. Finally, candidates met with the Chair. Structured feedback from the faculty and students was obtained via a webform (**attached**).

Finalists

Strengths and weaknesses and the list of finalists are given in the **attached spreadsheet**. The committee gave the Chair this list of three finalists.

- Sung
- Taylor
- Hernandez

Last Name	First	Skype Date	WebEx Interviewers	Strengths	Weaknesses	Invite for campus interview?	Campus Interview Date	Strengths	Weaknesses	Status
Baker	A	01/18/19	GO, JS, AS, HL	Good productivity and impact. Received NSF fellowship.	None found.	Yes	02/01/19	Research area would benefit the department and research is very strong.	Talk was not engaging, and faculty were disappointed with technical rigor of responses in individual interviews.	Formal interview, not advanced further
Baz	B	01/18/19	GO, JS, AS, HL	Solid and creative research plan. Good mentorship - runs K-12 outreach program. Passion for teaching.	Only a few publications so far. No experience with applying for funding, and candidate could not identify funding sources	Yes	02/24/19	Excellent seminar: clear and exciting, answered questions very well, especially from students.	Ability to fund research program is still unclear.	Finalist
Brown	C	1/20/2019	GO, GW, MR, HL	Strong publication record as a professional track research scientist	No history of teaching or mentoring.	Hold				Screening interview, not advanced further
Hernandez	D	1/20/2019	GO, GW, MR, HL	Unique research area that is complementary to the department's current strengths; many collaborations possible.	None found.	Yes	2/15/2019	Integration of multiple fields; strong communicator.	Too many areas identified for research in the first few years - efforts could be too widespread.	Finalist
Hill	E	1/20/2019	GO, GW, MR, HL	Emerging research area with much potential for impact and funding. - Has received a number of awards and	During interview was arrogant and dismissive; would not want as a colleague.	No				Screening interview, not advanced further
Jackson	F	1/22/2019	GO, AS, MR	Currently working in a start-up company - would bring industry perspective to teaching, funding, outreach.	Research plans not well developed.	No				Screening interview, not advanced further
Lewis	G	1/28/2019	GO, JS, AS, GW	Goals and rationale for research clearly thought through. Already has a couple of high-citation papers.	Background in hard science would limit the number of undergraduate courses that could be taught.	Hold				Screening interview, not advanced further
Paik	H	1/28/2019	GO, JS, AS, GW	No noteworthy strengths identified.	Rationale for future plans was not clear.	No				Screening interview, not advanced further
Sung	I	1/28/2019	GO, JS, AS, GW	Thoughtful and creative responses to questions. Unique research area and interesting approach presented.	Not clear who would fund the proposed work, and candidate could not identify funding sources.	Yes	03/14/19	Strong technical mastery. Excellent performance during seminar - well prepared and laid out. Could become a field leader.	None found.	Finalist

Example Minutes 2 – Results in Text Form

This format is discouraged for rolling searches or other multiple hires, due to their complexity.

Fall 2018-Spring 2019

Assistant Professor

Department of Device Engineering

Position Number: 123456

Hiring Official: C. Rivera

Committee Members: J. Smith, G. Octaviasdottir (Search Chair), A. Sanchez, G. Washington, M. Rodriguez, H. Lee

Advertising and Outreach

Position posted on jobs@umd, with a best consideration date of November 2, and automatically advertised on Indeed online job site. Position was also advertised in the following places.

- Academic Careers On-Line
- Academic Keys
- Chronicle of Higher Education website
- Hispanic Outlook
- Natl. Org. for the Professional Advancement of Black Chemists & Chemical Eng.
- IMDiversity.com
- National Society of Black Engineers – Online
- Society of Hispanic Engineers – Online
- Society of Women Engineers – Online
- Department website and social media (FB, Twitter)

Committee members contacted a total of 28 individuals in their professional networks via email or phone encouraging applications. One committee member (JS) distributed flyers at a conference (MRS17). Department heads at the following universities were emailed the ad, encouraging applicants.

MIT, Caltech, Wisconsin, Pittsburg, Berkeley, Michigan, Stanford, Cornell, Harvard, Princeton, JHU, UVa, CMU, GaTech, Purdue, Spelman, Howard, Iowa State, Hampton U., Morehouse, Xavier U., Florida A&M, Tuskegee, NC A&T State, Claflin, Morgan State, Bowie, U. Chicago, Yale, Columbia, U. Penn.

The following were also contacted.

NRL, NIST, ARL

Announcement forwarded to the UM Black Faculty and Staff Association, the Asian Faculty and Staff Association, and the President's Commission on Women's Issues.

Applications

200 applications were received before the best consideration date (11/2/2018).

eTep showed the candidate pool was diverse (based on race/ethnicity and gender). (Equity Administrator consulted.)

190 applications met the minimum qualifications (PhD degree and 2 years of postdoc experience).

Procedures

Committee voted to consider applications received after this date.

190 CVs were divided according to the attached schedule; 4 members viewed each.

Screening

Committee members independently screened applications using the attached Level 1 rubric (6 criteria). Candidates deemed not in one of the three areas of interest (question 2) by 3 or 4 evaluators were not considered further. Candidates with the top 10 highest total scores were discussed, as well as those with the highest 5 scores in each of the 6 different categories, and those with a champion on the committee.

By consensus based on our discussion, the committee chose 33 of these for in-depth screening; the decision was approved by a secret ballot vote of 5 to 1.

In-Depth Screening

Committee members independently scored the 33 applicants using the attached Level 2 rubric. Each package was reviewed by every committee member.

Scores were compiled and rank ordered. Those with total scores above 10 and those who received a 5 from at least two committee members were discussed, a total of 14 candidates.

On the basis of the discussions, 4 of the candidates were ruled out (unanimous vote), resulting in a list of 10 for Skype interviews.

11/24, Equity Check-In

The Equity Administrator approved the minutes to date. The interview pool is still diverse.

Video Interviews

Ten applicants were interviewed for 30 minutes each via Skype using our standard list of 10 questions (attached). Each call had a quorum (4 members) of committee members. Answers to each interview question were independently scored by each participating committee member on a scale of poor (0) to excellent (5).

Skype interviews.

Date	Candidate	Committee members present
12/8	Lewis	JS, GO, AS, GP
12/8	Hill	JS, GO, AS, GP, MR
12/9	Sung	JS, AS, GP, MR, HL
12/10	Jackson	JS, AS, GP, MR, HL
12/10	Taylor	JS, GO, AS, GP, HL
12/10	Baz	JS, GO, AS, GP, HL
12/11	Baker	JS, GO, GP, MR, HL
12/11	Hernandez	JS, GO, GP, MR, HL
12/11	Park	JS, GO, GP, MR, HL
12/12	Brown	JS, GO, AS, GP, MR

Chair Candidates

The committee received a request from the Department Chair on 11/30 to review CVs from 5 additional candidates. Level 1 screening was performed (JS, AS, MR, HL), and 2 had high enough scores to proceed to Level 2 screening. Level 2 screening was completed for those two (by all committee members). The scores did not qualify the candidates to proceed further.

Interview Decisions

Scores on the Skype interviews were totaled and divided by the number of committee members present to provide a ranking.

Four of the candidates scored 25 or below, one was at 29, and the other five 32 or above.

The committee agreed (secret ballot vote) that the scores were a good basis for selecting 5 applicants for a campus interview: Sung, Taylor, Baz, Brown, and Hernandez.

Video Interviews, Strengths and Weaknesses

Candidate	Strengths	Weaknesses
Lewis	Research area strongly in line with department needs. Identified funding agencies; prior NIH fellowship. Best Paper award from IEEE.	One-dimensional candidate; poor answers to non-research related questions.
Hill	Enthusiastic and engaged. Strong mentoring experiences. Active in ASME.	Could not clearly articulate future research directions. Unclear idea of areas where the work would have an impact. Buzz-wordy.
Sung	Extremely productive as graduate student; presented innovative research directions. Won college best TA award. Leadership role in EWB.	Concern: no postdoc experience (less experience than the other candidates). Demonstrated some naiveté regarding funding.
Jackson	Excellent explanations of the field, complementary research areas for the department. Postdoctoral funding success.	Displayed impatience with some questions, used gendered language, dismissive manner. Off-putting. Narrow research focus.
Taylor	Extremely productive in two research groups. Prior teaching experience in mechatronics. Active NSBE chapter president – compelling vision for student engagement.	Unclear about obtaining funding for proposed work.
Baz	Compelling research ideas. Prior undergraduate mentoring for many years. Key contributor to ARL workshops.	Unfocused research plans, too many ideas.
Baker	Stellar research record on paper (Nature, PNAS).	Did not do a good job of explaining prior or future research. Role in publications not clear.
Hernandez	Prior industry experience that is highly relevant. Understands NIH funding. Perseverance to succeed in unusual path in academia.	Has not fully thought out required lab facilities.
Park	Strong vision for future directions. Work is highly cited already, and is giving invited conference talks.	No prior TA or mentoring experience at all; no leadership or service, either.
Brown	Aware of contemporary issues. Demonstrated strong collaborations with two other groups.	Difficulty in clearly explaining the research – became flustered.

Invitations to Campus

Letters of recommendation were requested by the search chair for the 5 campus interview candidates. *(Note that departments vary in their practice of when letters are requested and by whom.)*

Invitations for campus interviews were issued by the search chair via email, and one representative publication requested.

Draft, 8-14-18

12/9, Withdrawal

One candidate (Brown) withdrew. The committee decided to replace Brown with Park.

Campus Interviews

On-campus interviews were conducted. Interviews were scheduled over 1.5 days and included:

- 1-hour seminar, scheduled for 11am Tuesdays
- Meeting with the committee as a group to discuss teaching and service
- Meeting with 8 faculty members
- Meeting with students
- Meeting with the Department Chair
- Meeting with the Dean or the Associate Dean for Research

Feedback was collected from the department faculty using the attached form.

Campus Interviews, Strengths and Weaknesses

Sung

- + Enthusiastic and effective communicator across an array of topics. Seminar was very well received: area, expertise, engagement.
- + Overwhelmingly positive feedback from faculty on technical fit, ability to obtain funding, knowledgeable, and personability.
- + Thinks carefully before responding.
- + Novel technology, promising field of research.
- + Outstanding sample publication.
- No experience with grant-writing.
- Questionable teaching fit because formal training is in another discipline.

Taylor

- + Exceptional seminar – informative and interesting. Explained complex physics clearly. Also, fielded questions well.
- + Faculty member feedback: impressed by the productivity of the candidate and the high number of quality journal papers.
- + Has made significant fundamental contributions.
- + Research approach would be an important new direction and capability for our department.
- + Requested meeting with department graduate students.
- + Did due diligence in looking up the courses that are offered here.
- No prior experience with grant-writing. Will require strong mentoring.

Baz

- + Seminar lacked depth (somewhat superficial treatment of topic), although enthusiastic and inspiring.
- + Strong positive feedback from some faculty regarding the technical expertise and likelihood of being a good colleague.
- Faculty members expressed some concern over diffuse research focus.
- Unaware of other imaging techniques. Did not demonstrate flexibility in scientific thinking.
- Postdoctoral experience at the same university and with the same adviser as for PhD – concerns about future independence.
- Did not demonstrate ability to obtain, or careful consideration of obtaining, funding.
- Not clear if able to develop independent research program, rather than relying on collaboration.

Park

- + Faculty in that research area were highly impressed during individual interactions. Clearly very knowledgeable.
- + Enthusiastic and motivated.
- + Could significantly advance the reputation of our department.
- + Unusually strong letters of recommendation
- Seminar was difficult to understand due to high technical level and lack of English fluency. Not engaging.
- Candidate showed little interest in the department or in faculty outside the candidate's research area; candidate may not be a "good citizen".
- May not be well enough connected to people in industry, as required for the proposed research area.
- Opposed vigorous mentorship of junior faculty (a hallmark of our success).
- Did not clearly convey actual contribution to the research, more of an overview of what the lab did.
- Students did not feel a positive connection.

Hernandez

- + Enlightening seminar. Faculty members impressed with presentation skills and insights. Imaginative.
- + Understands strengths and weaknesses of research approach. Technically very knowledgeable. Good grasp of bigger picture.
- + Will complement the department and surrounding research community; numerous collaborative opportunities identified.
- + The students who met the candidate were impressed by the rapport that was established.
- Light on details of operating plan.

1/30, Equity Check-In

Equity Administrator approves minutes to date.

Finalist Selection

The committee discussed the feedback and their own evaluations and decided to recommend 3 of the candidates as finalists: Sung, Taylor, and Hernandez.

1/30, Equity Check-In

Equity Administrator approved finalist list (eTerp).

*Examples of what **not** to use in Strengths and Weaknesses.*

Comment	Problem with Comment
We need to get her. OR Was ranked among the strongest candidates.	Why? Not a strength. Instead, provide details of the individual's strengths that led to this assessment.
The seminar was not impressive.	Why not? What exactly was the problem?
Should be hired at a more senior rank.	Is applying for this position, so consider if qualified for this position. Not a strength or weakness – information for the Dept. Chair.
Distinguished adviser known to members of the search committee.	Not hiring the advisor.
Excellent pedigree.	Not a direct reflection of the candidate's strengths and weaknesses. <i>See the box below.</i>
10 years since PhD.	How is that relevant? Would need to explain why good/bad.
Looking to move to the area for family reasons.	Irrelevant. Not a strength or weakness.
Gap in education or work history.	How is that relevant? Would need to explain the actual problem.
Had a great smile.	Needed for job? Strengths and weaknesses need to be linked to the position responsibilities.
Candidate's personal situation may negatively impact attendance or reliability.	The committee may not use any personal juggling (children, ill parent, etc.) that may be required by the candidate when considering qualifications. It will be the candidate's responsibility, if taking the position, to fulfill their duties. The committee is prohibited from speculations of this nature.

“An insistence on considering only candidates with degrees or prior work experience at large, mainstream or elite universities is incompatible with affirmative action goals ... While assessing the merit of credentials from lesser known institutions may require more work, to NOT do so is to penalize individuals for a lack of access over which they had no control. It becomes, in essence, penalizing the victims of past discrimination.”

[Procedures and Guidelines for Conducting Searches at the University of Maryland](#), 2007

Example Interview Questions

The search committee will devise its own list of relevant questions.

1. What are the main areas of research you plan to pursue as a faculty member?
2. How will you differentiate your research from that of your advisor(s)?
3. How do your plans complement or enhance the research currently undertaken in the department?
4. Which sources of funding would you pursue?
5. Which undergraduate courses would you teach in the department? What electives would you like to develop?
6. Please describe your prior research and mentoring experiences. We are interested in how you would teach large undergraduate courses with a range of learning styles, and how you would mentor diverse students in your research group and classes.
7. Please describe your most significant leadership or service experience. Describe how it had an impact or helped others to grow or succeed.
8. Do you have any questions for us?

Overall Interview Evaluation

- Excellent
- Very Good
- Average
- Below Average
- Poor

Recommendation for Campus Interview

- Recommend
- Consider
- Do Not Consider

VII. CLOSING AND EVALUATING THE SEARCH

Disposition the candidates in eTerp. Assess the effectiveness of the hiring process: learn from things that went well and from challenges or problems that arose.

If No Offers Are Accepted

If candidates were recommended as finalists and that list was approved by the Equity Administrator, but then either no offers were made by the Hiring Official or offers were made to candidates but not accepted, then the Equity Administrator needs to agree to close the search without a hire (this is a "cancelled" search, different from a "failed" search). The Hiring Official writes an explanation, and the Equity Administrator reviews the filled-in spreadsheets and minutes.

Evaluation

After the search, evaluate how it went.

- If under-represented candidates were interviewed and/or hired, what practices, outreach strategies, or advertising sources led to that outcome? Keep a record of for future reference and for sharing with others in the College.
- If the applicant pool was not as large, qualified, or diverse as expected, re-examine the job description, committee outreach efforts, and candidate interactions with the department. What do you think should be done differently next time?
- If a candidate declined an offer, was an explanation given? What could the department do, within its control, to make itself more attractive?

Share your insights with departmental leaders and the Equity Administrator so that they can be acted upon in future searches.

VIII. APPENDIX A: REQUESTING AND CREATING NEW FACULTY POSITIONS

Request a New Faculty Position

February 2014 | **faculty**

Log in at <http://ejobs.umd.edu/hr> using your Directory ID and Password and verify you are in the Position Management Module and your user Role is Creator.

- ▶ Click **Position** select **Faculty**
- ▶ Select **Create New Position**
- ▶ Click **New Faculty Position**
- ▶ Enter the **Functional Title**, select the correct **Department** and click **Start Action**.
- ▶ Select the **Position Title** and click **Next**
- ▶ Complete the **Position Description** then click **Next**
- ▶ Review the **Action Summary** tab for missing information
- ▶ Move your action forward by selecting **Take Action on Action** and selecting the next user role.

Last updated: April 10, 2014

Bookmark the **permalink** [<https://uhr.umd.edu/eterp/faculty/request-a-new-faculty-position/>] .

Creating a Faculty Posting

March 2014 | **faculty**

Log in at <http://ejobs.umd.edu/hr> using your Directory ID and Password and verify you are in Applicant Tracking and your user Role is Creator.

- ▶ Click **Create New Faculty Posting** from the shortcuts menu
- ▶ Click **Create from Position**
- ▶ Search for the **Position** to be posted. (Search by entering the position number)
- ▶ Click the **Title** to access the position information
- ▶ Click **Create Posting from this Position**
- ▶ Select the **Application Type**: UMD Profile if using the On Line Reference Feature or UMD Profile No References Accepted if not using the On Line Reference Feature then select **Create New Posting**
- ▶ Complete the **Position Information** tab and click **Next**
- ▶ Complete **Search and Selection** tab and click **Next**
- ▶ Complete the **Temporary Faculty Appointment** tab if applicable, if not click **Next**
- ▶ Complete the **Search Committee** tab by entering all committee members. When done click **Next**
- ▶ Select which **Applicant Documents** will be required or optional and click **Next**
- ▶ Complete the **On Line Reference** tab and click **Next**
- ▶ Attach any **Supplemental Documents** if applicable, click **Next**
- ▶ Review the **Summary** page for accuracy
- ▶ **Click Take Action on Posting and** forward to the Search Chair/Designee

Last updated: April 10, 2014

Bookmark the **permalink** [<https://uhr.umd.edu/eterp/faculty/creating-a-faculty-posting/>] .

IX. APPENDIX B: ACCOMMODATIONS FOR DISABILITY

The School of Engineering is committed to creating and maintaining a welcoming and inclusive educational, working, and living environment for people of all abilities.

The University's ADA Coordinator, listed below, is responsible for campus-wide compliance with Title II of the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973.

Dr. Jo Ann Hutchinson, Director, Disability Support Service (DSS)
0106 Shoemaker Building Phone: 301.314.7682, Fax: 301.405.0813

Accommodation Request Procedures for Third Parties

1. Accommodation Request

Third party individuals (visitors, volunteers, applicants for admission or employment, vendors, and contractors) with a disability, who are visiting the University, and seek an accommodation to facilitate their visit or access to University programs, must contact the DSS.

a. Timeliness

Third parties are expected to provide reasonable notice in order for the University to facilitate the provision of a requested accommodation in a timely manner.

b. Documentation

Depending on the nature of the disability and accommodation request, third parties may be subject to the same supporting documentation requirements as students, faculty, and staff.

2. Accommodation Implementation

It is the responsibility of the host department or unit on campus to implement reasonable accommodations, as communicated by the DSS, to third parties.

The University's full policy can be found here.

https://www.president.umd.edu/sites/president.umd.edu/files/documents/policies/VI-1.00D_3.pdf

X. APPENDIX C: TOP 10 EVIDENCE-BASED PRACTICES FOR INCLUSIVE HIRING



TOP 10 EVIDENCE-BASED PRACTICES FOR INCLUSIVE FACULTY HIRING

This document was created as a guide for faculty search committee members participating in the Inclusive Hiring Pilot Program during the 2016-2017 year. **The practices included in the Pilot Program are indicated with (**).**

These practices are based on research literature and the work of the universities in the Big 10 Academic Alliance and other American Association of Universities (AAU) peer institutions. They build on and strengthen the existing hiring guidance in the Procedures and Guidelines for Conducting Searches at the University of Maryland and the Approved Substantive Changes to the University Search and Selection Guidelines.

All colleges participating in the Pilot Program have agreed to follow the best practices indicated with a (**), among others, for faculty searches conducted in the 2016-2017 academic year.

BEGINNING THE SEARCH

****1) Intentionally design faculty job descriptions to attract a wide array of applicants.**

- Broadly define the position qualifications and carefully consider qualifications that are required versus preferred (e.g. “Candidates should possess an advanced degree in a related field”).¹
- Encourage candidates to note diversity related skills or experiences that contribute to the department, college, and university mission.²
- Note the opportunities for interdisciplinary scholarship and research; Include information about research centers and building new programs.³
- Use gender-neutral wording to describe the position; Avoid modifiers with gender-associated qualities (e.g. dominant, competitive, individualized).⁴

- Describe teaching responsibilities and other duties outside of research; Ask candidates to note experience with using different teaching methods and teaching/mentoring diverse students.⁵
- Include a departmental commitment to diversity in the position description, for example: *The Department of _____ is committed to increasing the diversity of the campus community. Candidates who have experience working with a diverse range of faculty, staff, and students, and who can contribute to the climate of inclusivity are encouraged to identify their experiences in these areas.*⁶

****2) Actively market the position to increase the size and diversity of the candidate pool.**

- Traditional modes of faculty outreach often yield candidates whose skills, qualities, and attributes replicate the committee’s composition.⁷ In addition to traditional sources, seek marketing outlets and networks (journals, websites, job boards, associations) that include and target women and underrepresented groups.

[Link](#) to online PDF.

****3) Use current data regarding the diversity of the candidate pool to inform committee’s recruitment and hiring strategy.**

- Review a search-specific datacard for each position. Each datacard includes demographic information about UMD faculty (institution and department level); peer institution faculty (department level); candidate pool information from previous departmental searches (2011-2016), and recent Ph.D. graduates and postdoctoral fellows; Use data to inform search plan.

****4) Recruit candidates from diverse backgrounds.**

- Surprisingly few candidates from underrepresented groups are actively sought after for faculty positions.⁸ Identify candidates by using directories that list Ph.D. graduates and postdoctoral fellows from underrepresented groups; Assign committee members to send individualized recruitment messages to the candidates identified.

****5) Recognize the role of implicit bias in the hiring process.**

- Developing bias literacy and creating concrete action plans for recruitment and evaluation of candidates can reduce bias in the hiring process.⁹ Committee members will participate in an implicit bias workshop presented by the Office of Diversity & Inclusion and the ADVANCE Program for Inclusive Excellence.

****6) Require diversity among the candidates invited to the interview round of the search process.**

- Maximizing diversity on the short list and in the finalist pool increases likelihood of hiring a candidate from an underrepresented group.¹⁰ Research indicates that female faculty are hired more frequently when at least two women are on the short list.¹¹

EVALUATING CANDIDATES

****7) Develop consensus around inclusive job criteria and ensure that these criteria are used to assess the credentials of each candidate.**

- Develop well-defined job criteria based on the requirements of the position prior to the application review process.¹²
- Create standardized rubrics and/or checklists to evaluate all applicants.¹³

Please rate the applicant on each of the following

	excellent	good	neutral	fair	poor
Evidence of/potential for research productivity					
Evidence of/potential for attracting outside funding					
Evidence of/potential for scholarly impact / tenurability					
Evidence of/potential for interdisciplinary work					
Evidence of/potential for teaching/mentoring undergraduate and graduate students					
Evidence of/potential to compliment and contribute to department's expertise and course offerings					
Demonstrated ability/potential to contribute to the diversity mission of the department/university					

- Carefully evaluate application materials with bias literature in mind. For example, recommendation letters written for female applicants tend to be shorter and contain more qualifiers than those written for men, even when both candidates are equally qualified.¹⁴

8) Facilitate a structured interview process.

- Create a structured, formal interview protocol that will be uniformly used with all candidates.¹⁵
- Facilitate campus visits that highlight UMD's commitment to diversity. Women, LGBTQ individuals, and underrepresented minorities may be particularly attuned to the diversity climate when visiting campus.¹⁶
- Have candidates, regardless of race, gender, or sexual orientation, meet with a broad array of diverse students and faculty.
- Give candidates comprehensive information regarding accommodations for disabilities, partner and family-related policies, and the unique strengths and assets of your department and the university on our inclusive, supportive academic community.

SECURING THE FINAL HIRE

9) Make a final offer with a competitive compensation and benefits package.

- Women and underrepresented minority faculty face barriers in negotiating for salary (contributing to the pay gap) and negative negotiation experiences lead to higher job dissatisfaction.¹⁷ Institutions can enhance the negotiation process by making clear what aspects of the job offer are negotiable.¹⁸

10) Provide dual-career assistance for candidates with partners.

- Dual-career assistance programs can attract women and underrepresented faculty by providing support for their partners during the job transition.¹⁹ Information regarding dual-hire policies should be provided to candidates during the on-campus interview as well as during the offer stage.

XI. APPENDIX D: ACTIVE RECRUITING RESOURCES, FROM UNIV. MICHIGAN

This text is taken directly from the [University of Michigan's Handbook for Faculty Searches and Hiring](#). Some of this information is obsolete. We have not vetted these listings or links.

The [CIC Directory](#) compiles listings of women and minority PhD recipients, accessible with a U-M account. apps.cic.net/CICDirectory

The [Minority and Women Doctoral Directory](#) "is a registry which maintains up-to-date information on employment candidates who have recently received, or are soon to receive, a Doctoral or Master's degree in their respective field from one of approximately two hundred major research universities in the United States. The current edition of the directory lists approximately 4,500 Black, Hispanic, American Indian, Asian American, and women graduate students in nearly 80 fields in the sciences, engineering, the social sciences and the humanities." Directories are available for purchase from info@mwdd.com

[National Science Foundation Survey of Earned Doctorates](#) is published yearly. While it does not list individual doctorate recipients, it is a good resource for determining how big the pool of new women and minority scholars will be in various fields. nsf.gov/statistics/srvydoctorates

[Ford Foundation Fellows](#) is an on-line directory of minority PhDs in all fields, administered by the National Research Council (NRC). The directory contains information on Ford Foundation Postdoctoral fellowship recipients awarded since 1980 and Ford Foundation Predoctoral and Dissertation fellowship recipients awarded since 1986. This database does not include Ford Fellows whose fellowships were administered by an institution or agency other than the NRC. nrc58.nas.edu/FordFellowDirect/Main/Directory.aspx

[Mellon Mays Undergraduate Fellowship Program](#) provides an on-line list of minority PhDs and their dissertation, book and article titles in all fields upon request. mmuf.org

The [Faculty for The Future Project](#) is administered by [WEPAN](#) (The Women in Engineering Program and Advocates Network), and offers a free forum for students to post resumes and search for positions and for employers to post positions and search for candidates. The website focuses on linking women and underrepresented minority candidates from engineering, science, and business with faculty and research positions at universities. enr.psu.edu/fff

[IMDiversity.com](#) is dedicated to providing career and self-development information to all minorities, specifically African Americans, Asian Americans, Hispanic Americans, Native Americans and women. It maintains a large database of available jobs, candidate resumes and information on workplace diversity. imdiversity.com

[Nemnet](#) is a national minority recruitment firm committed to helping schools and organizations in the identification and recruitment of minority candidates. Since 1994 it has worked with over 200 schools, colleges and universities and organizations. It posts academic jobs on its website and gathers vitas from students and professionals of color. nemnet.com

[HBCU Connect.com Career Center](#) is a job posting and recruitment site specifically for students and alumni of historically black colleges and universities. jobs.hbcuconnect.com

[Society of Women Engineers](#) maintains an online career fair. swe.org

[Association for Women in Science](#) maintains a job listings page. awis.org

[American Indian Science & Engineering Society](#) maintains a job listings page (and a resume database available to Career Fair exhibitors). aises.org

[American Indian Graduate Center](#) hosts a professional organization, fellowship and post-doctoral listings, and a magazine in which job postings can be advertised. aigcs.org

[National Society of Black Engineers](#) seeks increase the number of minority students studying engineering at both the undergraduate and graduate levels. It encourages members to seek advanced degrees in engineering or related fi and to obtain professional engineering registrations. nsbe.org

[Society of Hispanic Professional Engineers](#) is a leading social-technical organization whose primary function is to enhance and achieve the potential of Hispanics in engineering, math and science. shpe.org

[American Physical Society Education and Outreach](#) department maintains a roster of women and minorities in physics. It contains the names and qualifications of over 3100 women and 900 minority physicists. The Roster serves as the mailing list for The Gazette, the newsletter of the APS.

[Committee on the Status of Women in Physics](#) (CSWP), and is widely used by prospective employers to identify women and minority physicists for job openings. aps.org/programs/roster/index.cfm

[Recruitment Sources page at Rutgers](#) lists several resources that can be helpful in recruiting women and minority candidates. uhr.rutgers.edu/uhr-units-offices/consulting-staffing-compensation/hiring-toolkit/hiring-and-recruitment-resources

[Faculty Diversity Office page at Case Western Reserve University](#) provides links to many specific professional organizations and diversity resources for faculty searches. case.edu/diversity/faculty/resources.html

The CIC Doctoral Directory is a listing of doctoral degree recipients who are members of groups underrepresented in higher education and who are alumni of the universities of the Committee on Institutional Cooperation. The Directory is designed to increase the visibility of doctoral alumni who bring diverse perspectives and experiences to higher education. The Directory will be promoted among hiring committees at CIC member universities, and the searchable, online database will be freely available to the public.

[cic.net/Home/Students/DoctoralDirectory/ Introduction.aspx](http://cic.net/Home/Students/DoctoralDirectory/Introduction.aspx)

XII. APPENDIX E: READING LIST, FROM THE UNIVERSITY OF MICHIGAN

General analysis of the nature of the problem

Aronson, J., Lustina, M. J., Good, C., Keough, K., Steele, C. M., & Brown, J. (1999). When white men can't do math: Necessary and sufficient factors in stereotype threat. *Journal of Experimental Social Psychology*, 35(1), 29-46.

Research on "stereotype threat" (Aronson, Quinn, & Spencer, 1998; Steele, 1997; Steele & Aronson, 1995) suggests that the social stigma of intellectual inferiority borne by certain cultural minorities can undermine the standardized test performance and school outcomes of members of these groups. This research tested two assumptions about the necessary conditions for stereotype threat to impair intellectual test performance. First, we tested the hypothesis that to interfere with performance, stereotype threat requires neither a history of stigmatization nor internalized feelings of intellectual inferiority, but can arise and become disruptive as a result of situational pressures alone. Two experiments tested this notion with participants for whom no stereotype of low ability exists in the domain we tested and who, in fact, were selected for high ability in that domain (math-proficient white males). In Study 1 we induced stereotype threat by invoking a comparison with a minority group stereotyped to excel at math (Asians). As predicted, these stereotype-threatened white males performed worse on a difficult math test than a nonstereotype-threatened control group. Study 2 replicated this effect and further tested the assumption that those that have been attributed to genetically rooted sex differences.

Berdahl, J. L., & Min, J.-A. (2012). Prescriptive stereotypes and workplace consequences for East Asians in North America. *Cultural Diversity and Ethnic Minority Psychology*, 18(2), 141-152.

We pursue the idea that racial stereotypes are not only descriptive, reflecting beliefs about how racial groups actually differ, but are prescriptive as well, reflecting beliefs about how racial groups should differ. Drawing on an analysis of the historic and current status of East Asians in North America, we study descriptive and prescriptive stereotypes of East Asians along the dimensions of competence, warmth, and dominance and examine workplace consequences of violating these stereotypes. Study 1 shows that East Asians are descriptively stereotyped as more competent, less warm, and less dominant than Whites. Study 2 shows that only the descriptive stereotype of East Asians as less dominant than Whites is also a prescriptive stereotype. Study 3 reveals that people dislike a dominant East Asian coworker compared to a nondominant East Asian or a dominant or a nondominant White coworker. Study 4 shows that East Asians who are dominant or warm are racially harassed at work more than nondominant East Asians and than dominant and nondominant employees of other racial identities. Implications for research and theory are discussed.

Dovidio, J. F., & Gaertner, S. L. (1998). On the nature of contemporary prejudice: The causes, consequences, and challenges of aversive racism. In J. Eberhardt & S. T. Fiske (Eds.), *Confronting racism: The problem and the response*. Newbury Park: Sage.

This chapter examines one factor that contributes to the current frustrations of black Americans: the operation of a subtle form of racism among individuals that is less overt but just as insidious as old-fashioned racism.

Ely, R. J., & Thomas, D., A. . (2001). Cultural diversity at work: The effects of diversity perspectives on work group processes and outcomes. *Administrative Science Quarterly*, 46(2), 229-273.

This paper develops theory about the conditions under which cultural diversity enhances or detracts from work group functioning. From qualitative research in three culturally diverse organizations, we identified three different perspectives on workforce diversity: the integration-and-learning perspective, the access-and-legitimacy perspective, and the discrimination-and-fairness perspective. The perspective on diversity a work group held influenced how people expressed and managed tensions related to diversity, whether those who had been traditionally underrepresented in the organization felt respected and valued by their colleagues, and how people interpreted the meaning of their racial identity at work. These, in turn, had implications for how well the work group and its members functioned. All three perspectives on diversity had been successful in motivating managers to diversify their staffs, but only the integration-and-learning perspective provided the rationale and guidance needed to achieve sustained benefits from diversity. By identifying the conditions that intervene between the demographic composition of a work group and its functioning, our research helps to explain mixed results on the relationship between cultural diversity and work group outcomes.

Fiske, S. T. (2002). What we know about bias and intergroup conflict, the problem of the century. *Current Directions in Psychological Science*, 11(4), 123-128.

Discusses what psychologists, after years of study, now know about intergroup bias and conflict. It is stated that most people reveal unconscious, subtle biases, which are relatively automatic, cool, indirect, ambiguous, and ambivalent. Subtle biases underlie ordinary discrimination: comfort with one's own in-group, plus exclusion and avoidance of out-groups. Such biases result from internal conflict between cultural ideals and cultural biases. On the other hand, a small minority of people, extremists, do harbor blatant biases that are more conscious, hot, direct, and unambiguous. Blatant biases underlie aggression, including hate crimes. Such biases result from perceived intergroup conflict over economics and values, in a world perceived to be hierarchical and dangerous. Reduction of both subtle and blatant bias results from education, economic opportunity, and constructive intergroup contact. (PsycINFO Database Record (c) 2005 APA, all rights reserved)

Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology*, 82(6), 878-902.

This article presents results of research proceeding from the theoretical assumption that status is associated with high ratings of competence, while competition is related to low ratings of warmth. Included in the article are ratings of various ethnic and gender groups as a function of

ratings of competence and warmth. These illustrate the average content of the stereotypes held about these groups in terms of the dimensions of competence and warmth, which are often key elements of evaluation.

Kahneman, D. (2011). *Thinking, fast and slow*. Macmillan, 2011.

Renowned psychologist and winner of the Nobel Prize in Economics, Kahneman explains the two systems that drive the way we think. System 1 is fast, intuitive, and emotional; System 2 is slower, more deliberative, and more logical. The impact of overconfidence on corporate strategies, the difficulties of predicting what will make us happy in the future, the profound effect of cognitive biases on everything from playing the stock market to planning our next vacation—each of these can be understood only by knowing how the two systems shape our judgments and decisions.

Kang, S. K., DeCelles, K. A., Tilcsik, A., & Jun, S. (2016). Whiteness Résumés: Race and Self- Presentation in the Labor Market. *Administrative Science Quarterly*, 61(3), 469-502.

Using interviews, a laboratory experiment, and a resume audit study, we examine racial minorities' attempts to avoid anticipated discrimination in labor markets by concealing or downplaying racial cues in job applications, a practice known as "resume whitening." Interviews with racial minority university students reveal that while some minority job seekers reject this practice, others view it as essential and use a variety of whitening techniques. Building on the qualitative findings, we conduct a lab study to examine how racial minority job seekers change their resumes in response to different job postings. Results show that when targeting an employer that presents itself as valuing diversity, minority job applicants engage in relatively little resume whitening and thus submit more racially transparent resumes. Yet our audit study of how employers respond to whitened and unwhitened resumes shows that organizational diversity statements are not actually associated with reduced discrimination against unwhitened resumes. Taken together, these findings suggest a paradox: minorities may be particularly likely to experience disadvantage when they apply to ostensibly pro-diversity employers. These findings illuminate the role of racial concealment and transparency in modern labor markets and point to an important interplay between the self-presentation of employers and the self- presentation of job seekers in shaping economic inequality.

Katznelson, I. (2006). When Affirmative Action Was White. *Poverty and Race Research Action Council* 15(2).

This article proposes that many federal programs can be best understood as "affirmative action for whites" both because in some cases substantial numbers of other groups were excluded from benefiting from them, or because the primary beneficiaries were whites. It states the rationale for contemporary affirmative action as "corrective action" for these exclusionary policies and programs.

Klein, J. K., D. A. Harrison. (2007). On the diversity of diversity: Tidy logic, messier realities. *Academy of Management Perspectives* 21, 26–33.

This article briefly reviews the arguments presented in Scott Page's article "Making the Difference: Applying a Logic of Diversity" before plumbing the assumptions that underlie his case. It challenges several of these assumptions suggesting that the nature and effects of diversity in organizations are more complex and less predictable than he suggests. It then outlines an alternative conceptualization of the nature and effects of diversity in organizations, and concludes by proposing a set of practical suggestions that may indeed allow organizations to realize the benefits of diversity that Page calls for.

Merton, R. K. (1948). The Self-Fulfilling Prophecy. *Antioch Review*, 8, 193-210.

The self-fulfilling prophecy is, in the beginning, a false definition of the situation evoking a new behaviour which makes the original false conception come true. This specious validity of the self-fulfilling prophecy perpetuates a reign of error. For the prophet will cite the actual course of events as proof that he was right from the very beginning.

Oreopoulos, P. (2011). Why do skilled immigrants struggle in the Labor market. A field experiment with thirteen thousand resumes. *American Economic Journal: Economic Policy*, 3(4), 148-171.

Thousands of randomly manipulated resumes were sent in response to online job postings in Toronto to investigate why immigrants, allowed in based on skill, struggle in the labor market. The study finds substantial discrimination across a variety of occupations towards applicants with foreign experience or those with Indian, Pakistani, Chinese, and Greek names compared with English names. Listing language fluency, multinational firm experience, education from highly selective schools, or active extracurricular activities had no diminishing effect. Recruiters justify this behavior based on language skill concerns but fail to fully account for offsetting features when listed.

Padilla, R. V., & Chávez, R. C. (1995). Introduction *The Leaning Ivory Tower: Latino Professors in American Universities* (pp. 1-16): State University of New York Press.

This book includes 12 contributions from Latino and Latina professors and academics with experience in universities throughout the United States. The introduction provides an overview.

Page, S. E. (2007). Making the difference: Applying a logic of diversity. *Academy of Management Perspectives* 21, 6–20.

This article explains why corporate spending of billions of dollars on diversity training, education, and outreach makes good business sense and why organizations with diverse employees often perform best. This is done by describing a logic of diversity that relies on simple frameworks. Within these frameworks, it is demonstrated how collections of individuals with diverse tools can outperform collections of high "ability" individuals at problem solving and predictive tasks. In problem solving, these benefits come not through portfolio effects but from superadditivity: Combinations of tools can be more powerful than the tools themselves. In predictive tasks, diversity in predictive models reduces collective error.

Page shows that diversity matters just as much as highly accurate models when making collective predictions. This logic of diversity provides a foundation on which to construct practices that leverage differences to improve performance.

Rosette, A. S., G. J. Leonardelli, et al. (2008). "The White standard: Racial bias in leader categorization." *Journal of Applied Psychology* 93(4): 758-776.

In 4 experiments, the authors investigated whether race is perceived to be part of the business leader prototype and, if so, whether it could explain differences in evaluations of White and non-White leaders. The first 2 studies revealed that "being White" is perceived to be an attribute of the business leader prototype, where participants assumed that business leaders more than nonleaders were White, and this inference occurred regardless of base rates about the organization's racial composition (Study 1), the racial composition of organizational roles, the business industry, and the types of racial minority groups in the organization (Study 2). The final 2 studies revealed that a leader categorization explanation could best account for differences in White and non-White leader evaluations, where White targets were evaluated as more effective leaders (Study 3) and as having more leadership potential (Study 4), but only when the leader had recently been given credit for organizational success, consistent with the prediction that leader prototypes are more likely to be used when they confirm and reinforce individualized information about a leader's performance. The results demonstrate a connection between leader race and leadership categorization.

Sackett, P. R., DuBois, C. L. Z., & Noe, A. W. (1991). Tokenism in performance evaluation: the effects of work group representation on male-female and white-black differences in performance ratings. *Journal of Applied Psychology*, 76(2), 263-267.

Male-female differences in performance ratings were examined in 486 work groups across a wide variety of jobs and organizations. As suggested by the sex stereotyping literature, women received lower ratings when the proportion of women in the group was small, even after male-female cognitive ability, psychomotor ability, education, and experience differences were controlled. Replication of the analyses with racial differences (White-Black) in 814 work groups demonstrated that group composition had little effect on performance ratings. The effects of group composition on stereotyping behaviors do not appear to generalize to all minority contexts

Sagaria, M. A. D. (2002). An exploratory model of filtering in administrative searches: Toward counterhegemonic discourses. *The Journal of Higher Education*, 73(6): 677-710.

This paper describes administrator search processes at a predominantly white university in order to explore whether searches may be a cause for the limited success in diversifying administrative groups.

Shih, M., Pittinsky, T. L., & Ambady, N. (1999). Stereotype susceptibility: Identity salience and shifts in quantitative performance. *Psychological science*, 10(1), 80-83.

Recent studies have documented that performance in a domain is hindered when individuals feel that a sociocultural group to which they belong is negatively stereotyped in that domain. We report that implicit activation of a social identity can facilitate as well as impede performance on a quantitative task. When a particular social identity was made salient at an implicit level, performance was altered in the direction predicted by the stereotype associated with the identity. Common cultural stereotypes hold that Asians have superior quantitative skills compared with other ethnic groups and that women have inferior quantitative skills compared with men. We found that Asian-American women performed better on a mathematics test when their ethnic identity was activated, but worse when their gender identity was activated, compared with a control group who had neither identity activated. Cross-cultural investigation indicated that it was the stereotype, and not the identity per se, that influenced performance.

Spencer, S. J., Steele, C. M., & Quinn, D. M. (1999). Stereotype threat and women's math performance. *Journal of Experimental Social Psychology*, 35, 4-28.

When women perform math, unlike men, they risk being judged by the negative stereotype that women have weaker math ability. We call this predicament stereotype threat and hypothesize that the apprehension it causes may disrupt women's math performance. In Study 1 we demonstrated that the pattern observed in the literature that women underperform on difficult (but not easy) math tests was observed among a highly selected sample of men and women. In Study 2 we demonstrated that this difference in performance could be eliminated when we lowered stereotype threat by describing the test as not producing gender differences. However, when the test was described as producing gender differences and stereotype threat was high, women performed substantially worse than equally qualified men did. A third experiment replicated this finding with a less highly selected population and explored the mediation of the effect. The implication that stereotype threat may underlie gender differences in advanced math performance, even those that have been attributed to genetically rooted sex differences, is discussed.

Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality & Social Psychology*, 69(5), 797-811.

Stereotype threat is being at risk of confirming, as self-characteristic, a negative stereotype about one's group. Studies 1 and 2 varied the stereotype vulnerability of Black participants taking a difficult verbal test by varying whether or not their performance was ostensibly diagnostic of ability, and thus, whether or not they were at risk of fulfilling the racial stereotype about their intellectual ability. Reflecting the pressure of this vulnerability, Blacks underperformed in relation to Whites in the ability-diagnostic condition but not in the nondiagnostic condition (with Scholastic Aptitude Tests controlled). Study 3 validated that ability-diagnosticity cognitively activated the racial stereotype in these participants and motivated them not to conform to it, or to be judged by it. Study 4 showed that mere salience of the stereotype could impair Blacks' performance even when the test was not ability diagnostic. The role of stereotype vulnerability in the standardized test performance of ability-stigmatized groups is discussed.

Stone, J., Lynch, C. I., Sjomeling, M., & Darley, J. M. (1999). Stereotype threat effects on black and white athletic performance. *Journal of Personality and Social Psychology*, 77, 1213-1227.

Two experiments showed that framing an athletic task as diagnostic of negative racial stereotypes about Black or White athletes can impede their performance in sports. In Experiment 1, Black participants performed significantly worse than did control participants when performance on a golf task was framed as diagnostic of "sports intelligence." In comparison, White participants performed worse than did control participants when the golf task was framed as diagnostic of "natural athletic ability." Experiment 2 observed the effect of stereotype threat on the athletic performance of White participants for whom performance in sports represented a significant measure of their self-worth. The implications of the findings for the theory of stereotype threat (C. M. Steele, 1997) and for participation in sports are discussed.

Sy, T., L. M. Shore, et al. (2010). Leadership perceptions as a function of race-occupation fit: The case of Asian Americans. *Journal of Applied Psychology* 95(5): 902-919.

On the basis of the connectionist model of leadership, we examined perceptions of leadership as a function of the contextual factors of race (Asian American, Caucasian American) and occupation (engineering, sales) in 3 experiments (1 student sample and 2 industry samples). Race and occupation exhibited differential effects for within- and between-race comparisons. With regard to within-race comparisons, leadership perceptions of Asian Americans were higher when race-occupation was a good fit (engineer position) than when race-occupation was a poor fit (sales position) for the two industry samples. With regard to between-race comparisons, leadership perceptions of Asian Americans were low relative to those of Caucasian Americans. Additionally, when race-occupation was a good fit for Asian Americans, such individuals were evaluated higher on perceptions of technical competence than were Caucasian Americans, whereas they were evaluated lower when race-occupation was a poor fit. Furthermore, our results demonstrated that race affects leadership perceptions through the activation of prototypic leadership attributes (i.e., implicit leadership theories). Implications for the findings are discussed in terms of the connectionist model of leadership and leadership opportunities for Asian Americans.

Steele, C. (2010). *Whistling Vivaldi: And other clues to how stereotypes affect us (issues of our time)*. New York: WW Norton & Company.

Through dramatic personal stories, Claude Steele shares the experiments and studies that show, again and again, that exposing subjects to stereotypes—merely reminding a group of female math majors about to take a math test, for example, that women are considered naturally inferior to men at math—impairs their performance in the area affected by the stereotype. Steele's conclusions shed new light on a host of American social phenomena, from the racial and gender gaps in standardized test scores to the belief in the superior athletic prowess of black men. Steele explicates the dilemmas that arise in every American's life around issues of identity, from the white student whose grades drop steadily in his African American Studies class to the female engineering students deciding whether or not to attend predominantly male professional conferences. Whistling Vivaldi offers insight into how we form our senses of identity and ultimately lays out a plan for mitigating the negative effects of "stereotype threat" and reshaping American identities.

Steele, C. (1997). A threat in the air: How stereotypes shape the intellectual identities and performance of women and African-Americans. *American Psychologist*, 52, 613-629.

This paper reviews empirical data to show that negative stereotypes about academic abilities of women and African Americans can hamper their achievement on standardized tests. A 'stereotype threat' is a situational threat in which members of these groups can fear being judged or treated stereotypically; for those who identify with the domain to which the stereotype is relevant, this predicament can be self-threatening and impair academic performance. Practices and policies that can reduce stereotype threats are discussed.

Temm, T. B. (2008). If you meet the expectations of women, you exceed the expectations of men: How Volvo designed a car for women customers and made world headlines. In L. Schiebinger (Ed.), *Gendered Innovation in Science and Engineering* (pp. 131-149). Stanford, CA: Stanford University Press.

This article describes how a concept car designed by women was rated highly by men.

Valian, V. (1998). Chapter 1: Gender schemas at work; Chapter 7: Evaluating women and men. *Why So Slow? The Advancement of Women*. Cambridge, Mass.: MIT Press.

This book attempts to uncover the invisible barriers that prevent women from achieving the same professional success as men. Valian's arguments are based on statistical laboratory and field studies and center around gender schemas – our implicit hypotheses about sex differences. Though gender schemas are not entirely inaccurate, Valian argues that schemas alter our ability to evaluate men and women without bias. In general, the schema of a woman is incompatible with the schema of a successful professional. The consequence is that professional women are often underrated, while their male counterparts are overrated. Because of these imbalances, however slight, women accumulate advantage at a slower rate than men.

Tutorials for Change: Gender Schemas and Science Careers (Valian, V. Hunter College of the City University of New York). hunter.cuny.edu/gendertutorial

This Web link provides four tutorials, designed as slides with voice-over narration. The narration will start automatically with each slide. You may stop the narration by clicking on "stop narration".

Yoder, J. (2002). "2001 Division 35 Presidential Address: Context Matters: Understanding Tokenism Processes and Their Impact on Women's Work." *Psychology of Women Quarterly*, 26.

Research on tokenism processes is reviewed and coalesces around gender constructs. Reducing negative tokenism outcomes, most notably unfavorable social atmosphere and disrupted collegiality, can be done effectively only by taking gender status and stereotyping into consideration. These findings have applied implications for women's full inclusion in male-dominated occupations.

What does the problem look like in science?

Carrell, S. E., Page, M. E., & West, J. E. (2009). Sex and science: How professor gender perpetuates the gender gap (No. w14959). National Bureau of Economic Research.

Why aren't there more women in science? Female college students are currently 37 percent less likely than males to obtain a bachelor's degree in science, technology, engineering, and math (STEM), and comprise only 25 percent of the STEM workforce. This paper begins to shed light on this issue by exploiting a unique dataset of college students who have been randomly assigned to professors over a wide variety of mandatory standardized courses. We focus on the role of professor gender. Our results suggest that while professor gender has little impact on male students, it has a powerful effect on female students' performance in math and science classes, their likelihood of taking future math and science courses, and their likelihood of graduating with a STEM degree. The estimates are largest for female students with very strong math skills, who are arguably the students who are most suited to careers in science. Indeed, the gender gap in course grades and STEM majors is eradicated when high performing female students' introductory math and science classes are taught by female professors. In contrast, the gender of humanities professors has only minimal impact on student outcomes. We believe that these results are indicative of important environmental influences at work.

Casadevall, A., & Handelsman, J. (2014). The Presence of Female Conveners Correlates with a Higher Proportion of Female Speakers at Scientific Symposia. *mBio*, 5(1).

We investigated the hypothesis that the gender of conveners at scientific meetings influenced the gender distribution of invited speakers. Analysis of 460 symposia involving 1,845 speakers in two large meetings sponsored by the American Society for Microbiology revealed that having at least one woman member of the convening team correlated with a significantly higher proportion of invited female speakers and reduced the likelihood of an all-male symposium roster. Our results suggest that inclusion of more women as conveners may increase the proportion of women among invited speakers at scientific meetings.

Etzkowitz, H., C. Kemelgor, and B. Uzzi. (2000). "The 'Kula Ring' of scientific success." *Athena unbound: The advancement of women in science and technology*. Cambridge: Cambridge University Press.

This chapter and book explore the ways in which the lack of critical mass for women in science disadvantages them when it comes to the kinds of networking that promotes collaboration and general flow of information needed to foster the best possible research.

Gannon, F., Quirk, S., & Guest, S. (2001). Are women treated fairly in the EMBO postdoctoral fellowship scheme? *European Molecular Biology Organization Reports* 2, 8, 655–657.

This article presents the findings from an analysis of the European Molecular Biology Organization Long Term Fellowship granting scheme in order to determine if gender bias exists in the program. When the success rate is calculated for the spring and autumn session for the years 1996–2001, the female applicants were, on average, 20% less successful than the males.

Georgi, Howard. (2000). "Is There an Unconscious Discrimination Against Women in Science?" *APS News Online*. College Park, Maryland: American Physical Society.

This is an examination of the ways in which norms about what good scientists should be like are not neutral but masculine and work to disadvantage women.

Ginther, D. K., Schaffer, W. T., Schnell, J., Masimore, B., Liu, F., Haak, L. L., & Kington, R. (2011). Race, ethnicity, and NIH research awards. *Science* 333: 1015-1019.

We investigated the association between a U.S. National Institutes of Health (NIH) R01 applicant's self-identified race or ethnicity and the probability of receiving an award by using data from the NIH IMPAC II grant database, the Thomson Reuters Web of Science, and other sources. Although proposals with strong priority scores were equally likely to be funded regardless of race, we find that Asians are 4 percentage points and black or African-American applicants are 13 percentage points less likely to receive NIH investigator-initiated research funding compared with whites. After controlling for the applicant's educational background, country of origin, training, previous research awards, publication record, and employer characteristics, we find that black applicants remain 10 percentage points less likely than whites to be awarded NIH research funding. Our results suggest some leverage points for policy intervention.

Hale, G. B. and T. Regev (2011). Gender ratios at top PhD programs in economics, Federal Reserve Bank of San Francisco. 2011–19.

Analyzing university faculty and graduate student data for the top-ten U.S. economics departments between 1987 and 2007, we find that there are persistent differences in gender composition for both faculty and graduate students across institutions and that the share of female faculty and the share of women in the entering PhD class are positively correlated. We find, using instrumental variables analysis, robust evidence that

this correlation is driven by the causal effect of the female faculty share on the gender composition of the entering PhD class. This result provides an explanation for persistent underrepresentation of women in economics, as well as for persistent segregation of women across academic fields.

Hopkins, N., Bailyn, L., Gibson, L., & Hammonds, E. (2002). The Status of Women Faculty at MIT: Overview of Reports from the Schools of Architecture and Planning; Engineering; Humanities, Arts, and Social Sciences; and the Sloan School of Management. The MIT Faculty Newsletter, XIV(4).

The overview of MIT's more recent study of all of its schools.

Kulis, S., Chong, Y., & Shaw, H. (1999). Discriminatory organizational contexts and black scientists on postsecondary faculties. Review in Higher Education, 40(2), 115–148.

This article examines the role of various kinds of institutional discrimination in producing the underrepresentation of black faculty.

Lincoln, A. E., S. Pincus, et al. (2012). “The Matilda Effect in science: Awards and prizes in the US, 1990s and 2000s.” Social Studies of Science 42(2): 307–320.

Science is stratified, with an unequal distribution of research facilities and rewards among scientists. Awards and prizes, which are critical for shaping scientific career trajectories, play a role in this stratification when they differentially enhance the status of scientists who already have large reputations: the ‘Matthew Effect’. Contrary to the Mertonian norm of universalism – the expectation that the personal attributes of scientists do not affect evaluations of their scientific claims and contributions—in practice, a great deal of evidence suggests that the scientific efforts and achievements of women do not receive the same recognition as do those of men: the ‘Matilda Effect’. Awards in science, technology, engineering and medical (STEM) fields are not immune to these biases. We outline the research on gender bias in evaluations of research and analyze data from 13 STEM disciplinary societies. While women’s receipt of professional awards and prizes has increased in the past two decades, men continue to win a higher proportion of awards for scholarly research than expected based on their representation in the nomination pool. The results support the powerful twin influences of implicit bias and committee chairs as contributing factors. The analysis sheds light on the relationship of external social factors to women’s science careers and helps to explain why women are severely underrepresented as winners of science awards. The ghettoization of women’s accomplishments into a category of ‘women-only’ awards also is discussed.

Long, J. Scott, ed. (2001). Executive Summary. From Scarcity to Visibility: Gender Differences in the Careers of Doctoral Scientists and Engineers (pp.1–8). Washington, D.C.: National Academy Press.

This excerpt provides an overview of differences in the science careers of men and women.

Massachusetts Institute of Technology. (1999). A Study on the Status of Women Faculty in Science at MIT. The MIT Faculty Newsletter, XI(4).

This is the original MIT report that has spurred so many other studies.

Merton, R. K. (1968). The Matthew effect in science. Science, 159(3810), 56-63.

This account of the Matthew effect is another small exercise in the psychosociological analysis of the workings of science as a social institution. The initial problem is transformed by a shift in theoretical perspective. As originally identified, the Matthew effect was construed in terms of enhancement of the position of already eminent scientists who are given disproportionate credit in cases of collaboration or of independent multiple discoveries. Its significance was thus confined to its implications for the reward system of science. By shifting the angle of vision, we note other possible kinds of consequences, this time for the communication system of science. The Matthew effect may serve to heighten the visibility of contributions to science by scientists of acknowledged standing and to reduce the visibility of contributions by authors who are less well known. We examine the psychosocial conditions and mechanisms underlying this effect and find a correlation between the redundancy function of multiple discoveries and the focalizing function of eminent men of science—a function which is reinforced by the great value these men place upon finding basic problems and by their self-assurance. This self-assurance, which is partly inherent, partly the result of experiences and associations in creative scientific environments, and partly a result of later social validation of their position, encourages them to search out risky but important problems and to highlight the results of their inquiry. A macrosocial version of the Matthew principle is apparently involved in those processes of social selection that currently lead to the concentration of scientific resources and talent (50).

Mervis, J. (2005). A Glass Ceiling for Asian Scientists? Science, 310, 606–607.

This article documents the low rate of Asian and Asian American scientists at higher and leadership levels even in fields where they are relatively numerous at lower ranks.

Moss-Racusin, C. A., J. F. Dovidio, et al. (2012). Science faculty’s subtle gender biases favor male students. Proceedings of the National Academy of Sciences.

Despite efforts to recruit and retain more women, a stark gender disparity persists within academic science. Abundant research has demonstrated gender bias in many demographic groups, but has yet to experimentally investigate whether science faculty exhibit a bias against female students that could contribute to the gender disparity in academic science. In a randomized double-blind study (n = 127), science faculty from research-intensive universities rated the application materials of a student— who was randomly assigned either a male or female name— for a laboratory manager position. Faculty participants rated the male applicant as significantly more competent and hireable than the (identical) female applicant. These participants also selected a higher starting salary and offered more career mentoring to the male applicant. The gender of the faculty participants did not affect responses, such that female and male faculty were equally likely to exhibit bias against the female student.

Mediation analyses indicated that the female student was less likely to be hired because she was viewed as less competent. We also assessed faculty participants' preexisting subtle bias against women using a standard instrument and found that preexisting subtle bias against women played a moderating role, such that subtle bias against women was associated with less support for the female student, but was unrelated to reactions to the male student. These results suggest that interventions addressing faculty gender bias might advance the goal of increasing the participation of women in science.

Nelson, D. J., & Rogers, D. C. (2003). A national analysis of diversity in science and engineering faculties at research universities, from users.nber.org/~sewep/ events/2005.01.14/Bios+Links/Krieger-rec4-Nelson+Rogers_Report.pdf, 1–36.

This report looks at the representation of women and minorities in the 'top 50' departments of science and engineering disciplines in research universities, as ranked by the National Science Foundation according to research funds expended. The report is based on survey data obtained from these departments and covers the years 1993 to 2002. The analysis examines degree attainment (BS and PhD) and representation on the faculty in the corresponding disciplines. The data demonstrate that while the representation of women attaining a PhD in science and engineering has significantly increased in this period, the corresponding faculties remain overwhelmingly dominated by white men.

Wenneras, C. & Wold, A. (1997). Nepotism and sexism in peer-review. *Nature*, 387, 341–343.

This study assessed gender differences in ratings applications of postdoctoral fellowships from the Swedish Medical Research Council, as well as predictors of those ratings. Overall, female applicants were rated lower than male applicants, and therefore the rate of awards to females was lower than that to males. Using objective criteria of scientific productivity, the researchers found that in fact female applicants had to be 2.5 times more productive than their male counterparts in order to receive the same "competence" ratings from reviewers. Parallel findings were reported for U.S. funding agencies in a 1994 GAO report on Peer Review: Reforms Needed to Ensure Fairness in Federal Agency Grant Selection. Related issues have been raised in the recent (2004) GAO report Gender Issues: Women's Participation in the Sciences has Increased, But Agencies Need to Do More to Ensure Compliance with Title IX.

How does evaluation bias actually operate?

Bertrand, M., & Mullainathan, S. (2003). Are Emily and Greg More Employable than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination. *American Economic Review*, 94(1), 991–1013.

Empirical study demonstrating impact of implicit discrimination by race, and not attributable to class.

Bertrand, M., Chugh, D., & Mullainathan, D. (2005). Implicit discrimination. *American Economic Review*, 95(2), 94–98.

Reflective discussion of how and where implicit discrimination operates. Includes useful review of the literature, and fairly extended discussion of research needed.

Biernat, M. & Kobrynowicz, D. (1997). Gender- and race-based standards of competence: Lower minimum standards but higher ability standards for devalued groups. *Journal of Personality and Social Psychology*, 72 (3), 544–557.

Stereotypes may influence judgment via assimilation, such that individual group members are evaluated consistently with stereotypes, or via contrast, such that targets are displaced from the overall group expectation. Two models of judgment—the shifting standards model and status characteristics theory—provide some insight into predicting and interpreting these apparently contradictory effects. In two studies involving a simulated applicant-evaluation setting, we predicted and found that participants set lower minimum-competency standards, but higher ability standards, for female than for male and for Black than for White applicants. Thus, although it may be easier for low- than high-status group members to meet (low) standards, these same people must work harder to prove that their performance is ability-based.

Caffrey, M. (1997, May 12). Blind auditions help women. *Princeton Weekly Bulletin*. Based on Goldin, C. & Rouse, C. (2000). Orchestrating impartiality: The impact of "blind" auditions on female musicians. *American Economic Review*, 90, 715–741.

A change in the audition procedures of symphony orchestras—adoption of "blind" auditions with a "screen" to conceal the candidate's identity from the jury—provides a test for gender bias in hiring and advancement. Using data from actual auditions for 8 orchestras over the period when screens were introduced, the authors found that auditions with screens substantially increased the probability that women were advanced (within the orchestra) and that women were hired. These results parallel those found in many studies of the impact of blind review of journal article submissions.

Cole, J. R., & Singer, B. (1991). A theory of limited differences: Explaining the productivity puzzle in science. In H. Zuckerman, J. R. Cole, and J. T. Bruer, (Eds.), *The outer circle: Women in the scientific community*. (277–310). New York: W. W. Norton and Company.

This chapter proposes "a theory of limited differences" where even if the life events to which people are exposed have small short-term effects, over the life course these events have large cumulative effects. The authors suggest that the small disparities at every stage of a woman scientist's career combine to create a subtle yet virtually unassailable barrier to success.

Gopnik, A. (2011). What John Tierney Gets Wrong About Women Scientists. *Slate*. Retrieved from slate.com/articles/double_x/doublex/2011/02/what_john_tierney_gets_wrong_about_women_scientists.html

Heilman, M. E. (1980). The impact of situational factors on personnel decisions concerning women: varying the sex composition of the applicant pool. *Organizational Behavior and Human Performance*, 26, 386-395.

One hundred male and female MBA students evaluated a woman applicant for a managerial position when the proportion of women in the applicant pool was varied. Results indicated that personnel decisions of both males and females were significantly more unfavorable when women represented 25% or less of the total pool. Additional findings suggest that this effect was mediated by the degree to which sex stereotypes predominated in forming impressions of applicants. The results were interpreted as supportive of the thesis that situational factors can function to reduce the adverse effects of sex stereotypes in employment settings.

Heilman, M. E., Wallen, A. S., Fuchs, D., & Tamkins, M. M. (2004). Penalties for Success: Reactions to Women Who Succeed at Male Gender-Typed Tasks. *Journal of Applied Psychology*, 89(3), 416–427.

This study investigated reactions of subjects to a woman's success in a male gender-typed job. The results showed that when women were acknowledged to have been successful, they were less liked and more personally derogated than equivalently successful men. The data also showed that being disliked can affect career outcome, both for performance evaluation and reward allocation.

Latu, I. M., Mast, M. S., Lammers, J., & Bombari, D. (2013). Successful female leaders empower women's behavior in leadership tasks. *Journal of experimental social psychology*, 49(3), 444-448.

Women are less likely than men to be associated with leadership, and the awareness of this stereotype may undermine women's performance in leadership tasks. One way to circumvent this stereotype threat is to expose women to highly successful female role models. Although such exposures are known to decrease women's leadership aspirations and self-evaluations, it is currently unknown what the effects of role models are on actual behavior during a challenging leadership task. We investigated whether highly successful female role models empower women's behavior in a leadership task. In a virtual reality environment, 149 male and female students gave a public speech, while being subtly exposed to either a picture of Hillary Clinton, Angela Merkel, Bill Clinton, or no picture. We recorded the length of speeches as an objective measure of empowered behavior in a stressful leadership task. Perceived speech quality was also coded by independent raters. Women spoke less than men when a Bill Clinton picture or no picture was presented. This gender difference disappeared when a picture of Hillary Clinton or Angela Merkel was presented, with women showing a significant increase when exposed to a female role model compared to a male role model or no role models. Longer speaking times also translated into higher perceived speech quality for female participants. Empowered behavior also mediated the effects of female role models on women's self-evaluated performance. In sum, subtle exposures to highly successful female leaders inspired women's behavior and self-evaluations in stressful leadership tasks.

Martell, R. F. (1996). What Mediates Gender Bias in Work Behavior Ratings? *Sex Roles* 35(3/4): 153–169.

Shows that more effective work behaviors are retrospectively attributed to a fictitious male police officer than a fictitious female one—even though they are rated equivalently at first. Evidence in the study shows that this results from overvaluing male officers' performance rather than from derogating females'.

Mickelson, R. A. and M. L. Oliver (1991). Making the short list: black faculty candidates and the recruitment process. *The Racial Crisis in American Higher Education*. C. Kerr, State University of New York Press.

This is an examination of issues involved in recruitment of racial minorities to faculty positions, especially issues associated with the prestige of training institutions.

Nosek, B.A., Banaji, M.R., & Greenwald, A.G. (2002). Harvesting implicit group attitudes and beliefs from a demonstration website. *Group Dynamics: Theory, Research and Practice*, 6, 101–115.

This article demonstrates widely shared schemas, particularly "implicit" or unconscious ones, about race, age and gender.

Porter, N., & Geis, F. L. (1981). Women and nonverbal leadership cues: When seeing is not believing. In C. Mayo & N. Henley (Eds.), *Gender and nonverbal behavior* (pp. 39–61). New York: Springer Verlag.

When study participants were asked to identify the leader of the group, they reliably picked the person sitting at the head of the table whether the group was all-male, all-female, or mixed-sex with a male occupying the head; however, when the pictured group was mixed-sex and a woman was at the head of the table, both male and female observers chose a male sitting on the side of the table as the leader half of the time.

Shaw, A. and D. Stanton (2012). Leaks in the pipeline: separating demographic inertia from ongoing gender differences in academia. *Proceedings of the Royal Society B: Biological Sciences* 279(1743): 3736–3741.

Identification of the causes underlying the underrepresentation of women and minorities in academia is a source of ongoing concern and controversy. This is a critical issue in ensuring the openness and diversity of academia; yet differences in personal experiences and interpretations have mired it in controversy. We construct a simple model of the academic career that can be used to identify general trends, and separate the demographic effects of historical differences from ongoing biological or cultural gender differences. We apply the model to data on academics collected by the National Science Foundation (USA) over the past three decades, across all of science and engineering, and within six disciplines (agricultural and biological sciences, engineering, mathematics and computer sciences, physical sciences, psychology, and social sciences). We show that the hiring and retention of women in academia have been affected by both demographic inertia and gender differences, but that the relative influence of gender differences appears to be dwindling for most disciplines and career transitions. Our model enables us to identify the

two key non-structural bottlenecks restricting female participation in academia: choice of undergraduate major and application to faculty positions. These transitions are those in greatest need of detailed study and policy development.

Sommers, S. (2006). On Racial Diversity and Group Decision Making: Identifying Multiple Effects of Racial Composition on Jury Deliberations. *Journal of Personality and Social Psychology* 90 (4), 597–612.

This research examines the multiple effects of racial diversity on group decision making. Participants deliberated on the trial of a Black defendant as members of racially homogeneous or heterogeneous mock juries. Half of the groups were exposed to pretrial jury selection questions about racism and half were not. Deliberation analyses supported the prediction that diverse groups would exchange a wider range of information than all-White groups. This finding was not wholly attributable to the performance of Black participants, as Whites cited more case facts, made fewer errors, and were more amenable to discussion of racism when in diverse versus all-White groups. Even before discussion, Whites in diverse groups were more lenient toward the Black defendant, demonstrating that the effects of diversity do not occur solely through information exchange. The influence of jury selection questions extended previous findings that blatant racial issues at trial increase leniency toward a Black defendant.

Steinpreis, R.E., Anders, K.A. & Ritzke, D. (1999). The impact of gender on the review of the curricula vitae of job applicants and tenure candidates: A national empirical study. *Sex Roles*, 41, 7/8, 509–528.

The authors of this study submitted the same c.v. for consideration by academic psychologists, sometimes with a man's name at the top, sometimes with a woman's. In one comparison, applicants for an entry-level faculty position were evaluated. Both men and women were more likely to hire the "male" candidate than the "female" candidate, and rated his qualifications as higher, despite identical credentials. In contrast, men and women were equally likely to recommend tenure for the "male" and "female" candidates (and rated their qualifications equally), though there were signs that they were more tentative in their conclusions about the (identical) "female" candidates for tenure.

Thompson, M., & Sekaquaptewa, D. (2002). When being different is detrimental: Solo status and the performance of women and racial minorities. *Analyses of Social Issues and Public Policy (ASAP)*, 2(1), 183–203.

This article spells out how the absence of "critical mass" can lead to negative performance outcomes for women and minorities. It addresses the impact on both the actor and the perceiver (evaluator).

Trix, F. & Psenka, C. (2003). Exploring the color of glass: letters of recommendation for female and male medical faculty. *Discourse & Society* 14(2): 191–220.

This study compares over 300 letters of recommendation for successful candidates for medical school faculty positions. Letters written for female applicants differed systematically from those written for male applicants in terms of length, in the percentages lacking basic features, in the percentages with "doubt raising" language, and in the frequency of mention of status terms. In addition, the most common possessive phrases for female and male applicants ("her teaching" and "his research") reinforce gender schemas that emphasize women's roles as teachers and students and men's as researchers and professionals.

Strategies for reducing the impact of bias on judgments

Bauer, C.C. & Baltes, B.B. (2002). Reducing the effects of gender stereotypes on performance evaluations. *Sex Roles*, 9/10, 465–476.

This study is one of many showing (1) that people vary in the degree to which they hold certain stereotypes and schemas; (2) that having those schemas influences their evaluations of other people; and (3) that it is possible to reduce the impact of commonly held stereotypes or schemas by relatively simple means. In this study college students with particularly negative stereotypes about women as college professors were more likely to rate accounts of specific incidents of college classroom teaching behavior negatively, if they were described as performed by a female. In the second phase of the study students' reliance on their stereotypes was successfully reduced by providing them with time and instructions to recall the specific teaching behaviors of the instructors in detail. Thus, focusing attention on specific evidence of an individual's performance eliminated the previously demonstrated effect of gender schemas on performance ratings.

Bensimon, E.M., Ward, K., & Sanders, K. (2000). *Creating mentoring relationships and fostering collegiality*. 113–137. Bolton, MA: Anker Publishing.

This section describes the department chairs' role in developing new faculty into teachers and scholars.

Chesler, M. A. (1996). Protecting the investment: Understanding and responding to resistance. *The Diversity Factor* 4(3), 2–10.

This article discusses common barriers to successful implementation of diversity-related cultural change efforts, including both those that are intentional and unintentional. It also outlines strategies for addressing or dealing with these various forms of resistance.

Dovidio, J. F., & Gaertner, S. L. (2000). Aversive racism and selection decisions: 1989 and 1999. *Psychological Science*, 11(4), 315–319.

Investigated differences over a 10-year period in Whites' self-reported racial prejudice and their bias in selection decisions involving Black and White candidates for employment in a sample of 194 undergraduates. The authors examined the hypothesis, derived from the aversive-racism framework, that although overt expressions of prejudice may decline significantly across time, subtle manifestations of bias may persist. Consistent with this hypothesis, self-reported prejudice was lower in 1998–1999 than it was in 1988–1989, and at both time periods, White participants did not discriminate against Black relative to White candidates when the candidates' qualifications were clearly strong or weak, but

they did discriminate when the appropriate decision was more ambiguous. Theoretical and practical implications are considered. (PsycINFO Database Record (c) 2005 APA, all rights reserved)

Preston, A. E. (2004). *Leaving science: Occupational exit from scientific careers*. New York: Russell Sage Foundation.

Based on data from a large national survey of nearly 1,700 people who received university degrees in the natural sciences or engineering and a subsequent in-depth follow-up survey, this book provides a comprehensive portrait of the career trajectories of men and women who have earned science degrees, and addresses the growing number of professionals leaving scientific careers. Preston presents a gendered analysis of the six factors contributing to occupational exit and the consequences of leaving science.

Smith, D. (2000). How to diversify the faculty. *Academe*, 86(5). Washington, D.C.: AAUP.

This essay enumerates hiring strategies that may disadvantage minority candidates or that might level the playing field.

Turner, C.S.V. (2002). *Diversifying the faculty: A guidebook for search committees*. Washington, D.C.: AACU.

Informed by the growing research literature on racial and ethnic diversity in the faculty, this guidebook offers specific recommendations to faculty search committees with the primary goal of helping structure and execute successful searches for faculty of color.

Dual career and work-family issues

Boushey, H. (2005). *Are Women Opting Out? Debunking the Myth*. Center for Economic and Policy Research. Washington, DC, Center for Economic and Policy Research. Additional readings on opting out: Coontz, S. (2007). *Motherhood Stalls When Women Can't Work*. The Hartford Courant; Hirshman, L. (2007). *Off to Work She Should Go*. The New York Times.

This analysis of the Current Population Survey's Outgoing Rotation Group data, a Bureau of Labor Statistics nationally representative survey, shows that the child penalty on labor force participation for prime-age women, aged 25 to 44, averaged -14.4 percentage points over the period from 1984 to 2004. This means that labor force participation by women in this age group with children at home averaged 14.4 percentage points less than for women without children at home. The penalty was 20.7 percentage points in 1984 and has fallen consistently over the last two decades, down to 8.2 percentage points in 2004.

Correll, S., Benard, S., & Paik, I. (2007). Getting a Job: Is There a Motherhood Penalty? *American Journal of Sociology* 112(5), 1297–1338.

Survey research finds that mothers suffer a substantial wage penalty, although the causal mechanism producing it remains elusive. The authors employed a laboratory experiment to evaluate the hypothesis that status-based discrimination plays an important role and an audit study of actual employers to assess its real-world implications. In both studies, participants evaluated application materials for a pair of same-gender equally qualified job candidates who differed on parental status. The laboratory experiment found that mothers were penalized on a host of measures, including perceived competence and recommended starting salary. Men were not penalized for, and sometimes benefited from, being a parent. The audit study showed that actual employers discriminate against mothers, but not against fathers.

Goldin, C. (2006, March 15). *Working It Out*. The New York Times. Retrieved from <http://www.nytimes.com/2006/03/15/opinion/15goldin.html>.

Op ed piece to counter the news and opinion articles that women, especially graduates of top-tier universities and professional schools, are "opting out" in record numbers and choosing home and family over careers.

Kerber, L. K. (2005, March 18). *We Must Make the Academic Workplace More Humane and Equitable*. The Chronicle of Higher Education. Retrieved from chronicle.com/article/We-Must-Make-the-Academic/28101.

Reflection by an academic historian both on the history of the academic workplace, and the ways in which it is currently an environment that is both inhumane and particularly difficult for women faculty.

McNeil, L. E., & Sher, M. (1999). The dual-career- couple problem. *Physics Today*, 52(7), 32–37.

Women in science tend to have partners who are also scientists. The same is not true for men. Thus many more women confront the "two-body problem" when searching for jobs. McNeil and Sher give a data overview for women in physics and suggest remedies to help institutions place dual-career couples.

Radcliffe Public Policy Center (2000). *Life's work: Generational attitudes toward work and life integration*.

Reports on the results of a national survey of Americans' attitudes about work and family, economic security, workplace technology, and career development. The majority of young men report that a job schedule that allows for family time is more important than money, power or prestige.

Wolf-Wendel, L. E., Twombly, S. B., & Rice, S. (2000). Dual-career couples: Keeping them together. *The Journal of Higher Education* (Columbus, Ohio), 71(3), 291–321.

This article addresses academic couples who face finding two positions that will permit both partners to live in the same geographic region, to address their professional goals, and to meet the day-to-day needs of running a household which, in many cases, includes caring for children or elderly parents.

Lesbian, gay, bisexual, and transgendered issues

Gay & Lesbian Alliance Against Defamation. (May 2007). Glossary of Terms. GLAAD Media Reference Guide (9th ed.). Retrieved from glaad.org/reference/lgb

GLAAD's Media Reference Guide offers reporters the language tools they can use to tell stories regarding the lesbian, gay, bisexual and transgendered culture and people in a way that brings out journalistic excellence, while portraying the story participants with dignity, accuracy and fairness.

Russ, T. L., Simonds, C. J., & Hunt, S. K. (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), 14.

This study examined the influence of instructor sexual orientation on perceptions of teacher credibility. The purpose was to determine if college students perceive gay teachers as less credible than straight teachers. In addition, the researchers sought to explore the role of teacher credibility in terms of perceived student learning. In order to examine these variables, a male confederate presented a lecture on cultural influences to 154 undergraduate students enrolled in eight separate introductory communication classes. In each class, the confederate was careful to keep his delivery and immediacy cues (e.g. vocal expressiveness, movement, and eye contact) natural and consistent. The confederate's sexual orientation, however, was systematically manipulated. Findings indicate that students perceive a gay teacher as significantly less credible than a straight teacher. This study also found that students of a gay teacher perceive that they learn considerably less than students of a straight teacher. To help explain the complex reasons behind students' biased evaluations, the authors have included an in-depth qualitative analysis of participants' responses.

Tilcsik, A. (2011). "Pride and Prejudice: Employment Discrimination against Openly Gay Men in the United States." *American Journal of Sociology* 117(2): 586–626.

This article presents the first large-scale audit study of discrimination against openly gay men in the United States. Pairs of fictitious résumés were sent in response to 1,769 job postings in seven states. One résumé in each pair was randomly assigned experience in a gay campus organization, and the other résumé was assigned a control organization. Two main findings have emerged. First, in some but not all states, there was significant discrimination against the fictitious applicants who appeared to be gay. This geographic variation in the level of discrimination appears to reflect regional differences in attitudes and antidiscrimination laws. Second, employers who emphasized the importance of stereotypically male heterosexual traits were particularly likely to discriminate against openly gay men. Beyond these particular findings, this study advances the audit literature more generally by covering multiple regions and by highlighting how audit techniques may be used to identify stereotypes that affect employment decisions in real labor markets.

Weichselbaumer, D. (2003). Sexual orientation discrimination in hiring. *Labour Economics*, 10, 629-642.

Little research has been done to examine discrimination against gays and lesbians in the labor market. Wage regressions have documented lower incomes for gays but repeatedly showed higher incomes for lesbians. The results concerning lesbian women are striking but can be reconciled with the existence of labor market discrimination, however. Problems like sample selection and unobserved heterogeneity—in particular, lesbians' violation of stereotypical female gender roles—might be responsible for their higher earnings. To investigate whether discrimination against lesbians actually does exist, a labor market experiment is conducted. Job applications of candidates, who are equivalent in their human capital but differ in their sexual orientation, are sent out in response to job advertisements. Furthermore, to test whether increased masculinity affects labor market outcomes, the applicants differ in their perceived gender identity. While results show a strong negative effect for lesbian orientation, gender identity does not have a significant overall impact on hiring chances.

Winfeld, L. (2005). Meaningful education and policy about gender identity Straight talk about gays in the workplace: creating an inclusive, productive environment for everyone in your organization (pp. 77–92). New York: Harrington Park Press.

Straight Talk About Gays in the Workplace is filled with stories and interviews of real people working at real companies. These tales illustrate the frustrations of being gay in an indifferent or hostile company and the energizing effects of working for an inclusive one. The book shows how to create a harassment-free, inclusive workplace that recognizes the rights and answers the concerns of all employees; design and deliver sexual-orientation education for all employees; develop an AIDS/HIV educational program that can save lives; and implement domestic partner benefits programs (with detailed information on costs, tax issues, how to overcome objections, and why these benefits are so important to gay employees).

Yoshino, Kenji. (2006, January 15). The pressure to cover. *The New York Times*. Retrieved from <http://nytimes.com/2006/01/15/magazine/15gays.html>

In this article Yoshino discusses the underlying discriminatory practice of forcing minorities to assimilate into the mainstream culture by covering mutable cultural traits. A wide range of minorities is explored to illustrate how prone to injustice the American melting pot can be when faced with diversity.