



Handbook for Faculty Searches and Hiring



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ADVANCE Handbook for Faculty Searches and Hiring

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For more information or additional copies of this resource, please contact the ADVANCE Program at (734) 647-9359, or advanceprogram@umich.edu, or visit the ADVANCE Program's Web site at <http://sitemaker.umich.edu/advance>.

I. Introduction

Efforts to recruit, retain, and promote diverse faculty in science and engineering have produced slow and uneven results. This has been the case both nationally and at the University of Michigan. Since the summer of 2002, under the auspices of the UM NSF ADVANCE grant, the Strategies and Tactics for Recruiting to Improve Diversity and Excellence (STRIDE) Committee has given presentations to search committees and other interested faculty and administrators aimed at helping with the recruiting and retention of women and other minorities under-represented among the faculty (e.g., racial and ethnic minorities, sexual minorities, people with disabilities). This handbook is designed to integrate and summarize the recruitment and hiring practices that have been identified nationally and by the STRIDE committee as effective, practical, and fair.

The STRIDE committee is composed of a diverse group of senior faculty who are able to advise individuals and departments on hiring practices aimed at increasing both the diversity and excellence of the faculty through presentations, detailed and targeted advice, or focused discussions as needed. Several times a year STRIDE offers a workshop for search committee members and other faculty entitled “Workshop on Faculty Recruitment for Diversity and Excellence.” The PPT of the presentation is accessible at the following URL: <http://sitemaker.umich.edu/advance/stride>.

After several years of experience with the STRIDE committee’s activities, ADVANCE is able to report real progress in the recruitment of women in each of the three colleges that employ the largest number of scientists and engineers at the University (College of Engineering, LSA Natural Sciences, and Medical School Basic Sciences). As a proportion of science and engineering tenure-track hires, 13% (N=9) of all new hires were women in AY2001 and AY2002 (the “pre-ADVANCE” years), as compared with 31% (N=71) in AY2003–AY2008 (a statistically significant increase).

While many factors no doubt contributed to departments’ willingness and ability to hire more women, STRIDE is the intervention that most directly provided tools and ideas to aid in recruitment.

Moreover, some particular departments have reported especially rapid progress. For example, before the ADVANCE Program, the UM Chemistry Department’s average representation of women in their applicant pool (1998-99 to 2002–03) was 10%. After the ADVANCE Program and the Department’s adoption of “open searches,” the average representation of women in the applicant pool rose to 18%. In the Department of Astronomy, the number of women on the tenure track increased from 0 in AY2001 to 5—or 33%—in AY2006. Both departments—which participated actively in ADVANCE programs and employed recommended hiring practices—have become nationally recognized for the outstanding quality and diversity of their faculty hiring during this period.

The larger context for faculty hiring activities includes both national and federal mandates, state legal constraints, and university commitments. As President Coleman stated in her remarks to the community after the 2006 passage of Proposal 2, “The University of Michigan embraces, promotes, wants, and believes in diversity.” As was stated by Laurita Thomas, Associate Vice President for Human Resources, in a letter to the UM community:

The passage of Proposal 2 does not change our commitment, nor does it alter our employment practices or the protections and requirements of various federal and state laws including the Civil Rights Act of 1964, Title IX of the Education Amendments, the Americans with Disabilities Act, and Michigan’s Elliott-Larsen Civil Rights Act, which prohibit a wide array of discrimination extending far beyond issues of race and gender.

We are encouraged to continue to work diligently to recruit and retain the best faculty and staff by creating a community that seeks, welcomes and defends diversity. We will do so in compliance with state and federal laws, and federal law requires that we continue to take affirmative steps (known as affirmative action) in our employment process in order to adhere to the equal employment

opportunity and affirmative action provisions of Executive Order 11246 regarding race, gender, color, religion and national origin required of all federal contractors. Proposal 2 specifically states that it does not prohibit actions that are required to establish or maintain eligibility for any federal program, if ineligibility would result in a loss of federal funds to the state. Specifically, this means that:

- The University's nondiscrimination policy remains in full force and effect (see SPG 201.35 <http://spg.umich.edu/pdf/201.35.pdf>).
- A host of federal and state civil rights laws, including those discussed above, continue to be in effect and applicable to the University.
- The University must continue to adhere to all the requirements of Executive Order 11246.
- As it relates to the employment process, Executive Order 11246 requires all federal contractors, such as U-M, to take affirmative steps to ensure its employment process is fair and equitable and offers equal opportunity in hiring and employment. The types of affirmative steps required include a focus on recruiting and outreach, such as casting the widest net possible when conducting an employment search.
- Executive Order 11246 also requires that federal contractors not discriminate against job applicants or employees.
- The University's standard statement in employment ads, "A Non-Discriminatory/Affirmative Action Employer" or similar language such as "Affirmative Action/Equal Opportunity Employer" is required by Executive Order 11246 and must continue to be used.

Further information regarding the University's nondiscrimination statement, diversity, or affirmative action can be obtained from the Office of Institutional Equity.

<http://www.hr.umich.edu/oie>

II. Initiating the Search Process

The composition of the search committee and its charge are factors likely to have consequences for the outcome of the search. It is important that issues of composition and charge be addressed deliberately and early. STRIDE committee members are happy to meet with department chairs or other decision-makers to help think through issues associated with the composition of, and charge to, the search committee.

Composition of the Committee

- Search committees should include members with different perspectives and expertise, and with a demonstrated commitment to diversity.
- Search committees should include women and underrepresented minorities whenever possible.
- It is often helpful to appoint some search committee members from outside the department. Note, however, that women and minorities are often asked to do significantly more service than majority males, so it is important to keep track of their service load, free them from less significant service tasks, and/or compensate them in other ways.

Initial Discussions of the Search Committee's Charge should:

- Verify that its charge includes particular focus on equitable search practices, and the goal of identifying outstanding women and underrepresented minority candidates for the position.
- Articulate the fact that diversity and excellence are fully compatible goals and can and should be pursued simultaneously.
- Identify selection criteria and develop the position description prior to beginning the search.

It may be helpful for the committee to view the videotaped lecture by Professor Virginia Valian, of CUNY, summarizing this research, and discuss it as a group. The lecture may be viewed at the following URL: <http://mitworld.mit.edu/video/80>

Also examine Professor Valian's interactive tutorial, which can be accessed at the following URL: <http://www.hunter.cuny.edu/gendertutorial/tutorials.htm>

- Establish plans for actively recruiting women and underrepresented minorities prior to beginning the search.
- Review practices that will mitigate the kinds of evaluation biases that social science research has identified that result in unfair evaluations for women and minority candidates.
- Include discussion of how the plans to represent the school's or department's commitment to and strategies for hiring and advancing diverse faculty are integrated into the strategies. This may be of particular concern for departments that have few or no women or under-represented minority faculty. In these cases, it may be helpful to develop long-term strategies for recruiting diverse faculty. For example, the department might consider inviting women or minority faculty to give talks and then inviting them to apply for positions the following year.
- Remind committee members that STRIDE is available to consult as questions arise throughout the search process.

How to Avoid Having Active Recruitment Efforts Backfire

- Women and minority faculty candidates wish to be evaluated for academic positions on the basis of their scholarly credentials. They will not appreciate subtle or overt indications that they are being valued on other characteristics, such as their gender or race. Women candidates and candidates of color already realize that their gender or race may be a factor in your considerations. It is important that contacts with women and minority candidates for faculty positions focus on their scholarship, qualifications, and potential academic role in the department.

Defining the Position

- Define the position in the widest possible terms consistent with the department's needs. Aim for consensus on specific specialties or requirements, while planning to cast the hiring net as broadly as possible. Make sure that the position description does not needlessly limit the pool of applicants. Some position descriptions may exclude female or minority candidates by focusing too narrowly on subfields in which few specialize.
- Consider as important selection criteria for all candidates (regardless of their own demographic characteristics), the ability of the candidate both to add intellectual diversity to the department, and to work successfully with diverse students and colleagues.
- If women or minority candidates are hired in areas that are not at the center of the department's focus and interest, they may be placed in an unfavorable situation. It is important to

carefully think about how the department will support not only the individual, but also the development of that person's area within the department. Consider "cluster hiring," which involves hiring more than one faculty member at a time to work in the same specialization.

- Establish selection criteria and procedures for screening, interviewing candidates, and keeping records before advertising the position.
- Make sure that hiring criteria are directly related to the requirements of the position, clearly understood, and accepted by all members of the committee.
- Get committee consensus on the relative importance of different selection criteria. Plan to create multiple short lists based on different key criteria. (See "Creating the Short List," in section IV, below.)

Language for Announcing Positions

- Proactive language can be included in job descriptions to indicate a department's commitment to diversity. This may make the position more attractive to female and minority candidates. Examples include:

- "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."
- "The University is responsive to the needs of dual career couples."
- "Women, minorities, individuals with disabilities, and veterans are encouraged to apply."

The Importance of Dual Career Considerations

While it is critical that women and minority candidates be treated first and foremost as the scholars they are, it is equally important that search committees and departments understand the importance of dual career considerations in recruiting women and underrepresented minority faculty in science and engineering. If your search committee and department chair are willing to do their best to help place qualified spouses and partners, you might consider including the following statement in the ads for positions: "The University is responsive to the needs of dual career couples."

At the same time, it is critical that all search committees recognize that it is inappropriate and illegal for individuals' marital or family status to affect evaluation of their application. Knowledge—or guesses—about these matters may not play any role in the committee's deliberation about candidates' qualifications or the construction of the shortlist. All committee members should recognize this and help maintain a proper focus in committee deliberations, but of course the committee chair has a special responsibility to ensure that the discussion excludes any inappropriate considerations.

The UM Human Resources and Affirmative Action Web site includes a chart comparing legal and discriminatory questions about:

- | | |
|-----------------|------------------------------|
| - Family status | - Age |
| - Race | - Arrests or convictions |
| - Religion | - Citizenship or nationality |
| - Residence | - Disability |
| - Sex | |

Details are listed below and can be found at the following URL:
<http://www.hr.umich.edu/empserv/department/empsel/legalchart.html>

TOPIC	LEGAL QUESTIONS	DISCRIMINATORY QUESTIONS
Family Status	Do you have any responsibilities that conflict with the job attendance or travel requirements? Must be asked of all applicants.	Are you married? What is your spouse's name? What is your maiden name? Do you have any children? Are you pregnant? What are your childcare arrangements?
Race	None	What is your race?
Religion	None You may inquire about availability for weekend work.	What is your religion? Which church do you attend? What are your religious holidays?
Residence	What is your address?	Do you own or rent your home? Who resides with you?
Sex	None	Are you male or female?
Age	If hired, can you offer proof that you are at least 18 years of age?	How old are you? What is your birthdate?
Arrests or Convictions of a Crime	Have you ever been convicted of a crime? You must state that a conviction will be considered only as it relates to fitness to perform the job being sought.	Have you ever been arrested?
Citizenship or Nationality	Can you show proof of your eligibility to work in the U.S.? Are you fluent in any languages other than English? You may ask the second question only as it relates to the job being sought.	Are you a U.S. citizen? Where were you born?
Disability	Are you able to perform the essential functions of this job with or without reasonable accommodation? Show the applicant the position description so he or she can give an informed answer.	Are you disabled? What is the nature or severity of your disability?

Regardless of candidates' personal characteristics (and without knowing anything about an individual's partner or family status), one feature of the University environment that is likely to be important and attractive to all candidates is policies that make it a humane work setting. As you provide that information to all candidates, keep a few notions in mind:

- While it is common for academics to be partnered with other academics, academic *women* are more likely to be partnered with other academics than academic men are. This means that disadvantages that affect two-career academic couples have a disproportionate impact on women.
- At the same time, recognize that there is variability among women in their personal and household circumstances. Do not assume one household type (e.g., a husband and children) applies to all women.
- Make sure everyone on the search committee has a good working knowledge of the UM's dual career support programs. Consult the Provost's Office for further information. Information is also available online at www.provost.umich.edu/programs/pfip.html. This site provides online resources for dual career partners seeking employment. In addition, the document, "University of Michigan Dual Career Program: Roles and Responsibilities & Steps in the Process," a resource for University administrators, is available by contacting the Provost's Office. Precise procedures vary in each school and college, so search committee chairs should consult their department chairs about the correct procedures they should follow.

The ADVANCE Program can be reached by email at: advanceprogram@umich.edu or by web form request at: <http://sitemaker.umich.edu/advance/contact>

- Provide all candidates with a copy of the flier, "Dual Career Program at the University of Michigan: A Guide for Prospective and New Faculty Members," which is also available online: www.provost.umich.edu/programs/dual_career/DualCareerBrochure9201.pdf
- Address perceptions that Ann Arbor, as a small city, offers limited opportunities for a candidate's spouse or partner. Make sure candidates know about the diverse employment possibilities their partners might find not only at the university, but also throughout Ann Arbor and in the larger Southeast Michigan area. The Dual Career office can provide helpful information about Ann Arbor and surrounding communities. (See contact information above).
- Identify someone in the department who can offer to have a confidential conversation (one not to be conveyed to anyone else in the department) with candidates about these issues. This person should be well-informed about all programs supporting faculty members' families, and willing to describe or discuss them with candidates, without transmitting information about the candidate's personal circumstances to the department or the rest of the search committee. Another possibility is to have this person come from outside the interviewing department. For example, the College of Engineering has a committee of senior faculty women who volunteer to serve as contacts for women candidates, and the Associate Dean for Academic Affairs (ADAA) requires that each female candidate meet with a member of this committee.
- If a candidate does mention having a spouse or partner who will need placement help, follow the procedures appropriate in your school or college to arrange interviews or other opportunities for the spouse or partner as early in the hiring process as possible. Your department chair is the best source on this, but it is always possible to get information and assistance from the Dual Career Coordinator in the Provost's office.

III. Committee Activity before the Search Begins

The search committee, and/or a larger group in the department, should engage in a relatively extended review of the wider disciplinary context, as well as the department's own past history of searching and hiring, before beginning a new search. The department is more likely to be able to achieve a different outcome from past outcomes if it has some understanding of factors that may have played a role in limiting past success in recruiting women and minorities.

Reviewing the National Pool

- Take steps to identify the national “pools” of qualified candidates for the field as a whole and for subfields in which you are considering hiring. Subfield pools are sometimes quite different from overall pools. ADVANCE Program staff are willing and able to assist you in identifying field and subfield pools.
- Identify any institutions or individuals that are especially successful at producing women and/or under-represented minority doctorates and/or postdoctorates in your field or the desired subfield. Recruit actively from those sources.

Reviewing Past Departmental Searches

- Find out how many women and under-represented minorities have applied for past positions in your department, as a percentage of the total applicant pool.
- Find out how many women and under-represented minorities have been brought to campus for interviews in your field in previous searches.
- If women or under-represented minority candidates have been hired in recent searches, ask the search committees, the department chair, and the recently hired faculty themselves how they were successfully recruited.
- If women or under-represented minority candidates have been offered positions but have turned them down, find out why they have turned them down. ADVANCE staff are willing and able to conduct confidential interviews with such candidates, if you think they might be less than candid in talking with colleagues in the same field. Be sure, in any case, to collect multiple accounts; individual stories often differ. Listen for potential insights into departmental practices that might have been a factor in candidates' decisions. Stories that appear to be highly individual at first may reveal patterns when considered in the aggregate.
- Find out what has happened to women and under-represented minorities who were not offered positions in previous searches. Where are they now? Does it appear that something interfered with the assessment of their likely success?
- If no women or under-represented minorities have been offered positions in recent searches, consider redefining departmental evaluation systems in ways that might better take strengths of female and under-represented minority candidates into account. Consider whether positions have been defined too narrowly. If candidates have been ranked on a single list, consider using multiple ranking criteria in the future.

The Psychology Department at the University of Michigan successfully recruited faculty of color by maintaining a standing committee to develop information about potential candidates, and following up on that information as opportunities arose.

IV. Recruiting Activities during the Search

Broadening the Pool

- Be aware that the University of Michigan's Provost's Faculty Initiative Program (PFIP) provides supplemental resources "to help the schools and colleges and other academic units to hire and retain faculty who contribute to the intellectual diversity of the institution, to assist the dual career partners of tenure track and tenured faculty, and to respond to unique opportunities." This program can often help you recruit and retain women and minority faculty. Consult the Provost's Office for further information.
- View your committee's task as including a process of generating a pool rather than merely tapping it. This may be accomplished by having committee members attend presentations at national meetings and develop a more diverse list of potential future candidates based on those meetings. Candidates identified in this way may be in any field, not necessarily the one targeted for a particular search. In fact, the department may consider creating a committee to generate women and/or minority candidates, who can then be considered for targeted recruitment outside of subfield-defined searches. In addition, the committee may consider issuing promising candidates invitations to visit UM informally to present research before those individuals are ready for an active search. Cultivating future candidates is an important activity for the search committee to undertake, and may require that the search have a longer time horizon than is typical.
- If your department is a significant source of qualified applicants nationally, consider setting aside the traditional constraint against "hiring our own." It may be important, if your department or related ones at UM is a significant producer of the pool, to avoid unduly constraining the search to those trained elsewhere.
- Keep in mind that some eminent universities have only recently begun actively to produce women and minorities Ph.Ds. Therefore, consider candidates from a wide range of institutions.
- Consider the possibility that women and under-represented minorities who have excelled at their research in departments less highly ranked than UM's may be under-placed and might thrive in the University of Michigan research environment.
- Beware of systems of evaluation that inadvertently screen out well-qualified applicants from minority-serving institutions.
- Be careful to place a suitable value on non-traditional career paths. Take into account time spent raising children or getting particular kinds of training, unusual undergraduate degrees, and different job experiences. There is considerable evidence that evaluations of men frequently go up when they have such work experience, while evaluations of women with the same kinds of experience go down.
- Keep in mind that when more than one woman and/or minority candidate is brought in for an interview, women or minority candidates are disproportionately more likely to be hired. Research indicates that interviewers evaluate women and underrepresented minorities more fairly when there is more than one woman in the interview pool. When there is only one woman or underrepresented minority, s/he is far less likely to succeed than women or minorities who are compared to a diverse pool of candidates, probably because of the heightened salience of his or her race or gender.

- Rank candidates separately on several different criteria, rather than using a single aggregate ranking list. This helps mitigate the tendency for “halo” effects that result from reliance on overall impressions rather than evidence-based judgments of particular criteria.
- Consider re-opening or intensifying the search if the pool of applicants does not include female or minority candidates who will be seriously considered by the search committee.

Using Active Recruiting Practices

- Advertise the position for at least thirty days before the application deadline.
- Use electronic job-posting services targeted at diverse groups such as minority and women’s caucuses or professional networks in your discipline. (Several resources are listed below)
- Make personal contacts with women and minorities at professional conferences and invite them to apply.
- Ask faculty and graduate students to help identify women and minority candidates.
- Contact colleagues at other institutions to seek nominations of students nearing graduation or others interested in moving laterally, making sure to request inclusion of minorities and women.
- Place announcements in websites, listservs, journals, and publications aimed specifically at underrepresented minorities and women.
- Identify suitable women and minority faculty at other institutions, particularly faculty who may currently be under-placed, and send job announcements directly to them.
- Contact relevant professional organizations for rosters listing women and minorities receiving PhDs in the field.

Using Active Recruiting Resources

Be aware that most fields have resources—listservs, email groups, etc.—that can help you identify or reach qualified women and minority candidates. Either seek these out on your own, or request assistance from advanceprogram@umich.edu in identifying them.

Recruitment Sources page at Rutgers lists several resources that can be helpful in recruiting women and minority candidates.

<http://uhr.rutgers.edu/ee/recruitmentsources.htm>

Faculty Diversity Office page at Case Western Reserve University provides links to many specific professional organizations and diversity resources for faculty searches.

<http://www.case.edu/president/aaction/diverse.html>

The WISE Directories publishes free annual listings of women and minority Ph.D. recipients, downloadable as pdf documents. <http://www-s.cic.net/programs/DirectoryOfWomenInScienceAndEngineering/archive/ResourceList/WiseDir/main.asp>

<http://www.cic.net/Home/Students/DoctoralDirectory/Introduction.aspx>

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.
www.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.
www.nsf.gov/statistics/srvydoctorates/

Ford Foundation Fellows is an on-line directory of minority Ph.D.s 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 doesnot include Ford Fellows whose fellowships were administered by an institution or agency other than the NRC.
<http://nrc58.nas.edu/FordFellowDirect/Main/Main.aspx>

Mellon Minority Undergraduate Fellowship Program provides an on-line list of minority Ph.D.s and their dissertation, book and article titles in all fields.
<http://www.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.
<http://www.engr.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.
<http://www.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 web site and gathers vitas from students and professionals of color.
<http://www.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.
<http://jobs.hbcuconnect.com/>

Society of Women Engineers maintains an online career fair.
www.swe.org

Association for Women in Science maintains a job listings page.
<http://societyofwomenengineers.swe.org/>

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.

www.cic.net/doctoraldirectory

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.

<http://www.aps.org/programs/roster/index.cfm>

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

<http://www.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.

<http://www.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 fields and to obtain professional engineering registrations.

<http://www.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.

<http://www.shpe.org>

Creating the Short List

As you begin to evaluate applicants and candidates, be aware of the kinds of evaluation biases that psychological research has identified in both women's and men's judgments of job candidates. Read Virginia Valian's book *Why So Slow?* (or some key chapters), or view her videotaped lecture summarizing this research [<http://mitworld.mit.edu/video/80>], and discuss it as a group. ADVANCE Program staff will be happy to help you obtain this material.

The most important general point about the process of creating the short list is to build in several checkpoints at which you make a considered decision about whether you are satisfied with the pool of candidates you have generated.

- Get consensus on the multiple criteria that will be used to choose candidates for interviews. Notice that different criteria may produce different top candidates. Be sure to consider all criteria that are pertinent to the department's goals (e.g., experience working with diverse students might be one). In addition, discuss the relative weighting of the different criteria, and the likelihood that no or few candidates will rate high on all of them.
- Develop a "medium" list from which to generate your short list. Are there women or minority candidates on it? If not, consider intensifying the search before moving on to a short list. Consider contacting STRIDE for advice or help.

- Consider creating separate short lists ranking people on different criteria, such as teaching, research potential, collaborative potential, and mentoring capacity. Develop your final shortlist by taking the top candidates across different criteria. Evaluate this step before finalizing the list; consider whether evaluation bias may still be affecting your choices.
- Alternatively, review the top female and/or minority candidates in your pool. Consider whether your short list should be revised because the committee's judgments were influenced by evaluation bias (the tendency to underestimate women and underrepresented minority members' qualifications and overestimate those of white males).
- Evaluation bias is minimized if you interview more than one woman and/or under-represented minority candidate. As noted earlier, research indicates that interviewers evaluate women and underrepresented minorities more fairly when there is more than one woman in the interview pool. When there is only one woman or underrepresented minority, s/he is far less likely to succeed than women or minorities who are compared to a diverse pool of candidates, probably because of the heightened salience of his or her race or gender.

V. Handling Campus Visits

The campus visit is an important opportunity for the department to communicate three messages:

1. You are seriously interested in the candidate's scholarly credentials and work;
2. Michigan is a good place to come because it is intellectually lively, and committed to diversity in the faculty, staff and student body;
3. Michigan is a good place to come because it has a variety of humane, family-friendly policies in place.

How these messages are communicated can make a critical difference in recruiting women to departments in which they will be vastly outnumbered by male colleagues.

- Make it clear that you are interested in the candidate's scholarship and skills, rather than his or her demographic characteristics. It is generally not helpful to make a point with candidates that the department is eager to hire women and minorities.
- Consider how the department will represent the university as a whole as a place in which women and minority faculty can thrive.
- Distribute information about "family-friendly" policies (dual career, maternity leave, modified duties, etc.) to *all* job candidates regardless of gender, partner or parent status, and race or ethnicity.
- Consider how the department will represent *itself* as a place in which women and minority faculty can thrive. This may be difficult for departments that currently have few or no women and minority faculty members. Some things that may make the department more attractive to women and under-represented minorities are:
 - Clear and public policies and procedures for evaluation and promotion
 - Mentoring resources for junior faculty in general and female faculty in particular
 - Development of some practices in evaluation and annual reporting that value mentoring of women and minority faculty and students

- Schedule interviews and events with consistency in achieving outcomes, recognizing that different means may be required. For example, white male candidates may automatically be meeting with white male faculty, given the composition of your department. When recruiting candidates with different race and/or gender characteristics, it will be equally important for them to meet people who share important demographic characteristics, but you may need to make particular arrangements to ensure that this happens. Race-ethnicity and gender are not the only personal characteristics that may be important to consider; if you learn that a candidate is particularly concerned with the availability of a community identified with a particular nationality, religion, family status, sexual identity or other characteristic, take steps to help them meet with appropriate members of that community. One option is to create opportunities for the candidate to meet with faculty members, including members of STRIDE, who can provide relevant information to candidates.
- Give the candidate a chance to interact with the department's faculty in multiple venues. Formal talks may not reveal every candidate's strengths. Consider including Q + A sessions, "chalk talks," and other less formal interactions.
- Be sure to offer information and access to faculty who might represent opportunities for interdisciplinary collaboration.
- Avoid leaving candidates alone with faculty who may be hostile to hiring women and underrepresented minorities. If a candidate is confronted with racist, sexist or homophobic remarks, take positive and assertive steps to defuse the situation. Be sure there is a practice in place in the department for dealing with the expression of racist, sexist or homophobic attitudes, and that the candidate is made aware of it, if the situation arises.
- Be sure to gather equivalent information from all candidates, so you will be able to evaluate them all in terms of the same criteria. This does not require use of uniform questions with all candidates, but does require care in obtaining comparable information.
- Introduce women and minority members of the department to all candidates, not just women and minorities. Moreover, if women and minority faculty members are expected to play an especially active role in recruiting new faculty, be sure to recognize this additional service burden in their overall service load.
- Focus on the candidate's ability to perform the essential functions of the job and avoid making assumptions based on perceived race, ethnic background, religion, marital or familial status, age, disability, sexual orientation, or veteran status.
- Ask faculty to provide feedback about specific facets of the candidate's potential, rather than just requesting generic feedback. Studies show that when people focus on particular issues of performance, they are much less likely to rely on implicit biases. A sample evaluation form follows; it can be modified to represent the key criteria for your search.

Candidate Evaluation Sheet

The following offers a method for department faculty to provide evaluations of job candidates. It is meant to be a template for departments that they can modify as necessary for their own uses. The proposed questions are designed for junior faculty candidates; however, alternate language is suggested in parenthesis for senior faculty candidates.

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"/> Met with candidate |
| <input type="checkbox"/> Read candidate's scholarship | <input type="checkbox"/> Attended lunch or dinner with candidate |
| <input type="checkbox"/> Read candidate's letters of recommendation | <input type="checkbox"/> Other (please explain): |
| <input type="checkbox"/> Attended candidate's job talk | |

Please comment on the candidate's scholarship as reflected in the job talk:

Please comment on the candidate's teaching ability as reflected in the job talk:

Please rate the candidate on each of the following:

excellent
good
neutral
fair
poor
unable to judge

	<i>excellent</i>	<i>good</i>	<i>neutral</i>	<i>fair</i>	<i>poor</i>	<i>unable to judge</i>
Potential for (evidence of) scholarly impact						
Potential for (evidence of) research productivity						
Potential for (evidence of) research funding						
Potential for (evidence of) collaboration						
Fit with department's priorities						
Ability to make positive contribution to department's climate						
Potential (demonstrated ability) to attract and supervise graduate students						
Potential (demonstrated ability) to teach and supervise undergraduates						
Potential (demonstrated ability) to be a conscientious university community member						

Other comments?

VI. Negotiating the Offer

- The way an offer is negotiated can have huge impact not only on the immediate hiring outcome, but also on a new hire's future career. Candidates who feel that chairs conduct negotiations honestly and openly, and aim to create circumstances in which they will thrive, are more satisfied in their positions and more likely to stay at the UM than are those who feel that a department or chair has deliberately withheld information, resources, or opportunities from them. Initial equity in both the negotiated conditions and in the department's follow-through on the commitments it makes are important factors in retention as well as recruitment.
- Women and minority candidates may have received less mentoring at previous career stages than their counterparts, and may therefore be at a disadvantage in knowing what they can legitimately request in negotiations. In addition, there is some evidence that women are less inclined to negotiate for themselves than men are. To ensure equity, aim to empower the candidate to advocate on his or her own behalf, by providing all candidates with a complete list of things it would be possible for them to discuss in the course of negotiations. This list will vary by field, and should include those items that will maximize the likelihood of candidate success in that field. For some fields these might include:
 - Salary
 - Course release time
 - Lab equipment
 - Lab space
 - Renovation of lab space
 - Research assistant
 - Clerical / administrative support
 - Attractive teaching opportunity
 - Travel funds
 - Discretionary Funds
 - Summer salary
 - Moving expenses
 - Assistance with partner/spouse position
 - Other issues of concern to the candidate

VII. Getting Off to a Good Start

- Consider appointing an advocate or mentor to help candidates throughout the negotiation process.
- Be sure to provide clear, detailed information about mentoring practices as well as all crucial review criteria and milestones such as annual reviews, third year reviews, tenure reviews, and post-tenure promotion reviews.
- If a candidate has a partner who will need placement help, try to help arrange interviews or other opportunities for the spouse or partner as early in the hiring process as possible. See the section on Dual Careers earlier, and be familiar with University resources to support these efforts. Consult the Provost's Office for further information.

VIII. Evaluating the Search

- If the department hires a woman and/or minority candidate, consider the factors that may have enabled it to do so and keep a record of good practices and successful searches for future reference.

- If the applicant pool was not as large, as qualified, or as diverse as was anticipated, consider:
 - Could the job description have been constructed in a way that would have brought in a broader pool of candidates?

 - Could the department have recruited more actively?

 - Were there criteria for this position that were consistently not met by women or candidates of color?

- If women and/or minority candidates were offered positions that they chose not to accept, what reasons did they offer? Consider as many factors as you can identify. Are there things that the department could do to make itself more attractive to such candidates in the future? Be sure that any analysis and insight is shared with departmental decision-makers and is part of the process of initiating future searches. If you would like someone outside your department to help with a confidential interview of the candidate(s), please contact ADVANCE Program staff for help.

Appendix 1: Reading Lists

Readings on Gender, Race, Ethnicity, and Faculty Recruitment

Babcock, L. & Laschever, S. (2003). *Women don't ask: Negotiation and the gender divide*. Princeton, New Jersey: Princeton University Press.

Women don't ask shows women how to reframe their interactions and more accurately evaluate their opportunities. The book includes examining how to ask for a desired outcome in ways that feel comfortable and possible, taking into account the impact of asking on relationships. It also discusses how to recognize the ways in which our institutions, child-rearing practices, and unspoken assumptions perpetuate inequalities—inequalities that are not only fundamentally unfair but also inefficient and economically unsound.

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.

Bertrand, M., & Mullainathan S. (2004). Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. *The American Economic Review* 94(4), 991–1013; "Employers' Replies to Racial Names." NBER Website. Thursday, August 31, 2006. <http://www.nber.org/digest/sep03/w9873.html>.

This is an empirical study demonstrating the 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.

This article is a 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 2 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.

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.

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.

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

This study investigated differences over a 10-yr 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.

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.

This essay 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.

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 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.

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.

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.

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.

Martell, R. F. (1996). What mediates gender bias in work behavior ratings? *Sex Roles* 35(3/4): 153–169.

This paper 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 derogating females'.

McNeil, L., and M. Sher. (1999). "The dual-career-couple problem." *Physics Today*. College Park, MD: American Institute of Physics.

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.

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 web site. *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.

Padilla, R. V. and Chavez, R. C. (1995). Introduction. *The Leaning Ivory Tower: Latino Professors in American Universities* (pp. 1–16). New York 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.

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*. 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.

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.

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

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

Smith, D. (2000). How to diversify the faculty. *Academe*, 86, no. 5. Washington, D.C.: AAUP.

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

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.

Steele, C. M. (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.

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 minorities. *Analyses of Social Issues and Public Policy*, 2, 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 position. 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.

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.

Valian, V. (1998). "Evaluating Women and Men." (Chapter 1 and Chapter 7.) *Why So Slow? The Advancement of Women*. Cambridge, Mass.: MIT Press.

In these chapters, Valian presents research that demonstrates that men and women who do the same things are evaluated differently, with both men and women rating women's performances lower than men's, even when they are objectively identical.

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

This Swedish study found that female applicants for postdoctoral fellowships from the Swedish Medical Research Council had to be 2.5 times more productive than their male counterparts in order to receive the same "competence" ratings from reviewers.

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

This paper 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.

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.

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.

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). Working it out. *The New York Times*.

Op ed article that counters the news and opinion articles claiming 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). We must make the academic workplace more humane and equitable. *The Chronicle of Higher Education*, 6.

This essay is a 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., & Sher, M. (1999). “The Dual-Career-Couple Problem.” *Physics Today*. College Park, MD: American Institute of Physics.

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*.

This paper 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., et al. (2000). “Dual-career couples: keeping them together.” *The Journal of Higher Education* 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.

Background Readings on Scientific Careers

A Study on the Status of Women Faculty in Science at MIT. (1999). *The MIT Faculty Newsletter*, Vol. XI, No. 4. This is the original MIT report that has spurred so many other studies

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.

General Accounting Office (1994). *Peer Review: Reforms Needed to Ensure Fairness in Federal Agency Grant Selection*. 138.

GAO examined grant selection in three federal agencies that use peer review: the National Institutes of Health (NIH), the National Science Foundation (NSF), and the National Endowment for the Humanities (NEH). At each agency, GAO collected administrative files on a sample of grant proposals, approximately half of which had been funded. GAO then surveyed almost 1,400 reviewers of these proposals to obtain information not available from the agencies. In addition, GAO interviewed agency officials and reviewed documents to obtain procedural and policy information. GAO also observed panel meetings at each agency.

Hopkins, Nancy, Lotte Bailyn, Lorna Gibson, and Evelyn Hammonds. (2002). *An Overview of Reports from the Schools of Architecture and Planning; Engineering; Humanities, Arts, and Social Sciences; and the Sloan School of Management*. Massachusetts Institute of Technology. The overview of MIT's more recent study of all of its schools.

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.

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.

Long, J. Scott, ed. (2001). *Executive summary. From scarcity to visibility: Gender differences in the careers of doctoral scientists and engineers*. 1–8. Washington, D.C.: National Academy Press. This excerpt provides an overview of differences in the science careers of men and women.

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.

Nelson, D. J., & Rogers, D. C. (2004). *A national analysis of diversity in science and engineering faculties at research universities*.

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.

Appendix 2: Active Recruiting Resources

Be aware that most fields have resources—listservs, email groups, etc.—that can help you identify or reach qualified women and minority candidates. Either seek these out on your own, or request assistance from advance@umich.edu in identifying them. Some fairly broad listings are included here.

“Guidelines for Recruiting a Diverse Workforce.” Penn State University. Available online: www.psu.edu/dept/aaoffice/pdf/guidelines.pdf

“Faculty Recruitment Toolkit.” (2001). University of Washington. Available online: http://www.engr.washington.edu/advance/resources/FacultyRecruitmentToolkit_20080205.pdf

“Recruitment and Selection of Faculty and Academic Professional and Administrative Employees Appendix A: Recruiting a Diverse Qualified Pool of Applicants” University of Minnesota. http://policy.umn.edu/groups/hr/documents/appendix/recruitfacpa_appa.pdf

“Massachusetts Institute of Technology Faculty Search Committee Handbook.” (2002). <http://web.mit.edu/faculty/reports/FacultySearch.pdf>

“Search Committee Toolkit.” University of California at Los Angeles. <http://faculty.diversity.ucla.edu/search/searchtoolkit/docs/SearchToolkit071008.pdf>

“Faculty Search Committee Guidelines.” Case Western Reserve University. <http://www.case.edu/president/aaction/Faculty%20Search%20Guide.pdf>

“Recruitment and Retention: Guidelines for Chairs.” (updated 2007). Hunter College, CUNY. <http://www.hunter.cuny.edu/genderequity/equityMaterials/Jan2007/recruitretain.107.pdf>

“Leap Recruiting Faculty Brochure.” University of Colorado, Boulder. http://www.colorado.edu/facultyaffairs/leap/downloads/leap_recruiting.pdf

The WISE Directories publishes free annual listings of women and minority Ph.D. recipients, downloadable as pdf documents. <http://www-s.cic.net/programs/DirectoryOfWomenInScienceAndEngineering/archive/ResourceList/WiseDir/main.asp>
<http://www.cic.net/Home/Students/DoctoralDirectory/Introduction.aspx>

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: <http://www.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. www.nsf.gov/statistics/srvydoctorates/

Ford Foundation Fellows is an on-line directory of minority Ph.D.s 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. <http://nrc58.nas.edu/FordFellowDirect/Main/Directory.aspx>

Mellon Minority Undergraduate Fellowship Program provides an on-line list of minority Ph.D.s and their dissertation, book and article titles in all fields. <http://www.mmuf.org/> (select Fellows Update from the menu bar on the main page)

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. <http://www.engr.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. <http://www.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 web site and gathers vitas from students and professionals of color. <http://www.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. <http://jobs.hbcuconnect.com/>

Society of Women Engineers maintains an online career fair. www.swe.org

Association for Women in Science maintains a job listings page. www.awis.org

American Indian Science & Engineering Society maintains a job listings page (and a resume database available to Career Fair exhibitors). <http://www.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. <http://www.aigcs.org>

National Society of Black Engineers <http://www.nsbe.org>

Society of Hispanic Professional Engineers <http://www.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. <http://www.aps.org/programs/roster/index.cfm>

Recruitment Sources page at Rutgers lists several resources that can be helpful in recruiting women and minority candidates. <http://uhr.rutgers.edu/ee/recruitmentsources.htm>

Faculty Diversity Office page at Case Western Reserve University provides links to many specific professional organizations and diversity resources for faculty searches. <http://www.case.edu/president/aaction/diverse.html>

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