Diversity, Equity, Inclusion, Accessibility and Belonging (DEIA&B) Annotated Resource List for Hiring and Workplaces

A community generated list of DEIA&B resources and best practices, compiled by the AAS Employment Committee (EC). A short summary of each article, program, white paper, or resource is included. Some of these links were collected from participants in the recent EC survey on ‘The State of the Industry in Diversity Hiring Practices’. This is not meant to be an exhaustive list, as we recognize there exist many other valuable resources for DEIA&B.

### Advice and Resources for Hiring

#### Academic Hiring
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- [C5] Astro2020 White Papers on Diversity, Inclusion, and Equity

### Advice for Applicants
Advice and Resources for Hiring

Academic Hiring

- [A1] The UC ADVANCE PAID program website and associated reports
  - Summary: Website of the ADVANCE PAID program, which focuses on research-based recruitment/retention/advancement of women and underrepresented minority faculty -- collecting data over the 10 UCA campuses and holding bi-annual roundtable meetings to discuss diversity programs and efforts. Website includes links to the UC round-table reports on workplace climate and to the UC data tables on diversity. Full reports on three round tables (1, 4, 5), with readings, slides, and presenter lists for two round tables (2 and 3). All Roundtable summaries here.
  - Roundtable 5: “Workplace Climate: Assessments and Interventions to improve diversity among STEM faculty” (2014, 12 pages) examines issues of workplace climate and how it affects recruitment/retention/advancement of STEM faculty, discusses what
affects workplace climate, and gives tools, resources, and strategies for assessing and improving workplace climate.

- **Roundtable 4:** “The Role of Contributions to Diversity in Faculty Hiring and Academic Review” (2013, 10 pages) discusses the relationship between diversity and academic excellence and the benefits, works to develop well grounded measures to evaluate/reward contributions to diversity, and seeks a greater understanding of faculty roles in building a better pipeline. It also includes a discussion of the use of diversity statements in hiring and in promotion and tenure.

- **Roundtable 3:** Mentoring Faculty in an Inclusive Climate: Supporting Women and URM STEM Faculty at UC (2013, readings and slides)


- **Roundtable 1:** Using Research and Data to improve the faculty search process in STEM (2012, 5 pages)
  - **Source:** UC ADVANCE PAID program, with round-table reports between 2012 and 2014.
  - **Recommended by:** Diversity, Culture, and Respect Working Group at STScI

- [A2] **UM ADVANCE STRIDE program**
  - **Summary:** A compilation of faculty recruitment resources from the Committee of Strategies and Tactics for Recruiting to Improve Diversity and Excellence (STRIDE) at U Michigan. Includes: workshop slides, hiring handbooks with strategies, recommended readings, tools for evaluation, a list of best practices, dual career FAQ, examples of both good and bad practices in faculty recruitment, guides for writing letters of recommendation, FAQ on retention of faculty, guides for junior and senior faculty, and a list of family friendly programs and policies.
  - **Source:** U. Michigan ADVANCE STRIDE program website
  - **Recommended by:** Diversity, Culture, and Respect Working Group at STScI

- [A3] **Unconscious Schemas: Bias and Assumptions**
  - **Summary:** An article giving an overview of the concept of unconscious bias and how it can influence evaluations of faculty applications. Details some of the various studies on unconscious bias and their findings, and provides links to those publications and resources. Gives specific examples of how unconscious bias might affect a faculty search and applicant review. Although this page is archived, the current University of Missouri support website also includes a list linking to resources and services for those who have experienced discrimination and violence.
  - **Source:** University of Missouri Equity Office website (now the Office for Civil Rights & Title IX)
  - **Recommended by:** Diversity, Culture, and Respect Working Group at STScI
- **[A4] Recommendations for a Faculty Search that Prioritizes Excellence and Diversity In MSU College of Natural Sciences**
  - **Summary:** A list of recommendations for faculty searches at MSU in order to prioritize excellence and diversity, based on results of a recent search. Each recommendation comes with the reasoning behind it, references to relevant studies, and specific examples of what was done in the recent faculty search at each stage. Recommendations include: Design the search for all aspects of the job (not research alone); keep position’s field general as possible; actively search for and reach out to potential candidates; be specific in requests for job application materials; consider strategies to assess communication skills; avoid reading recommendation letters as long as possible (as they tend to be highly subjective and can be biased against applicants underrepresented groups); and to carefully design a rubric with pre-specified weights that reflect what is valued in a colleague.
  - **Source:** Written by Laura Chomiuk of Michigan State University (8 pages).
  - **Recommended by:** Participant from the AAS Employment Committee survey on the state of the industry hiring practices.

  - **Summary:** A step-by-step guide for improving inclusive hiring in astronomy at the postdoctoral and faculty levels, providing specific recommendations for better hiring that are backed up by data, studies, and citations. Emphasizes the importance of self-assessment and building accountable structures at one’s institution. References specific studies (with links) that discuss what works and what doesn’t. Includes several sections discussing: 1) what to do before the job is listed; 2) evaluation of applicants; 3) Post-hiring evaluation of the process; 4) Common pitfalls; and 5) field-wide recommendations.
  - **Source:** Written by Alicia Aarnio (UNCG), Benjamin Brown (CU Boulder), Sarah Hörst (Johns Hopkins) and Nicole Cabrera Salazar (Movement Consulting) (8 pages, plus 3 pages of detailed citations and links)
  - **Recommended by:** Member of the AAS Working Group on Accessibility and Disability (WGAD)

  - **Summary:** A detailed guidebook for academic hiring, which provides step by step advice and good practices for search committees. Breaks the hiring process into six parts: Running an effective and efficient search committee; actively recruiting an excellent and diverse pool of applicants; raising awareness of unconscious assumptions and their influence on the evaluation of applicants; ensuring a fair and thorough review of applicants; developing and implementing an effective interview process; and successfully hiring the selected candidate. Each section gives an overview on the topic, then goes through a series of necessary steps and good practices. This guide includes bulleted summaries of
each topic, specific examples and templates for the committees to use, “do’s and don’ts” lists, and links to more resources on each topic. The guide also covers types of problems or misconceptions that may arise along the way and how to deal with them.

- **Recommended by:** Member of the AAS Board

**[A7] WISELI Guidebooks and Brochures**

- **Summary:** A series of useful brochures summarizing topics related to diversity and inclusion, accompanying the WISELY guidebook [see A6]. Includes specific information aimed at Institutional leadership, at department chairs, and at faculty.
  - **Reviewing Applicants: Research on Bias and Assumptions** (2012, 8 pages). Summarizes studies on unconscious bias, and provides advice for minimizing the effects of bias, with examples.
  - **Benefits and Challenges of Diversity in Academic Settings** (2010, 9 pages). Highlights the importance and benefits of having a diverse staff and student body, with numerous examples of research to this effect. Discusses common challenges that arise when seeking to diversify an institution, plus some of the additional roadblocks that the underrepresented can face, with possible methods of addressing these issues.
  - **Enhancing Department Climate: A guide for Department Chairs** (2008, 10 pages). A brief guide to building a more inclusive department aimed at department chairs. Includes a list of some of the biggest concerns relating to department climate, how to address those concerns, some baseline good practices, advice on good communication, and discussions of faculty retention.
  - **Fostering Success for Women in Science and Engineering: Advice for Departmental Faculty** (2010, 14 pages) This brochure is aimed for what can be done to support women in STEM at the **faculty level**. Identifies the main four factors contributing towards low representation of women in the sciences as subtle bias, discrimination and harassment, lack of role models and encouragement, and worklife balance. Discusses each of these factors and gives specific actions for what faculty can do to counter them.
  - **Advancing Women in Science and Engineering: Advice to the Top** (2009, 6 pages) A “Top 10” list for how to help women advance at your institution, aimed at the **leadership level**.

- **Source:** Women in Science & Engineering Leadership Institute.
- **Recommended by:** Member of the AAS Board
• [F2] **A curated list of hiring sites which focus on underrepresented minorities**
  ○ *Summary:* A useful list of hiring sites, programs, organizations, and networks focusing on minority groups. Can be sorted by minority group, by field, or by name/website link. Includes over 60 groups.
  ○ *Source:* Github list curated by Ranpall Gill of Rubin Observatory.
  ○ *Recommended by:* Participant from the AAS Employment Committee survey on the state of the industry hiring practices.

**Non-Academic Hiring**

• [B1] **Improving Diversity Hiring in Tech**
  ○ *Summary:* Article that discusses areas of disconnect common to tech companies and recruiters. Suggests that 1) tech recruiting should be more like what is done in sports (early recruiting, grassroot efforts, human to human connection); 2) recruiters need to look beyond historically black colleges/universities (a greater population of underrepresented groups go to ‘majority’ schools); and 3) everyone should think more about retention (foster a diverse and welcoming environment, encourage different ways of making connections, start chapters of groups like Society of Hispanic Engineers; Society of Women Engineers, etc).
  ○ *Source:* 2015 article by Wendell Tull, published in TechCrunch (online newspaper focusing on high tech and startups)
  ○ *Recommended by:* Diversity, Culture, and Respect Working Group at STScI

• [B2] **How to Increase Workplace Diversity**
  ○ *Summary:* forthcoming
  ○ *Source:* 2009 article by Erin White, published in the Wall Street Journal (newspaper focusing on business and finance). Note: article is behind a paywall.
  ○ *Recommended by:* Diversity, Culture, and Respect Working Group at STScI

• [B3] **Recruiting Strategies to Improve Your Diversity Brand**
  ○ *Summary:* Article that gives advice for companies who want to develop more diverse recruiting strategies. Outlines a process of making sure that everyone is on the same page, assessing where the company is currently, determining where it needs the most work, setting specific goals, and building a recruiting strategy from there. Gives a seven point strategy focusing on ways to reach out to different groups, as well as suggestions for using social media for diversity marketing.
  ○ *Source:* 2017 article by Johnny Torrance-Nesbitt, published on Smart Recruiters (online resources and software for recruiters and recruiting companies)
  ○ *Recommended by:* Diversity, Culture, and Respect Working Group at STScI
  ○ **Summary:** Article that acts as an introduction to workplace diversity and hiring diversity for companies, with examples of starting points. Emphasizes making sure that everyone understands the business case for having a diverse workforce (e.g., marketing to a wider audience; better performance). Gives examples of first steps and initiatives for companies working to expand diversity at their workplace, as well as examples of successful businesses and how these practices helped. Ends with a list of minority groups and organizations that companies can talk to.
  ○ **Source:** 2001 article by Patricia Digh, published in HR Magazine (magazine for HR professionals and business leaders)
  ○ **Recommended by:** Diversity, Culture, and Respect Working Group at STScI

• [B5] JobTarget website
  ○ **Summary:** A platform of tools for job advertisement and hiring, both for recruiters and employers -- including diversity advertisement resources. Allows for anonymized applications, reviewing the applicant pool to ensure diversity, and automates advertising job openings on different diversity focused job sites. Enables tracking to determine where candidates are coming from and what advertising is most effective for recruitment.
  ○ **Source:** JobTarget website
  ○ **Recommended by:** Participant from the AAS Employment Committee survey on the state of the industry hiring practices.

• [F2] A curated list of hiring sites which focus on underrepresented minorities
  ○ **Summary:** A useful list of hiring sites, programs, organizations, and networks focusing on minority groups. Can be sorted by minority group, by field, or by name/website link. Includes over 60 groups.
  ○ **Source:** Github list curated by Ranpall Gill of Rubin Observatory.
  ○ **Recommended by:** Participant from the AAS Employment Committee survey on the state of the industry hiring practices.

**Recommendations and Best Practices for Workplaces and Conferences**

• [C1] Project Include website
  ○ **Summary:** Website of the non-profit Project Include, which works to accelerate diversity and inclusion in the tech industry using data and advocacy. Project Include focuses on inclusion, comprehensiveness, and accountability. It has a page of information and recommendations on each of 14 different topics: defining culture; implementing culture; a guide to writing a code
of conduct; employee lifecycle; hiring; onboarding; compensating fairly; providing feedback; training; training managers; investing in sponsorships; resolving conflicts; measuring progress; and leading as venture capitalists, educators, and employees. It also has an article on how to make the first steps to move forward and get a company/start-up invested. There are specific case studies for different groups (Disability, LGBT+ including specific examples, religious, caregiver) and companies. There is also a news page which has a list of articles for further reading.

- **Source:** Project Include website
- **Recommended by:** A member of the AAS Employment Committee


- **Summary:** An extensive guide of best practices for increasing LGBT+ inclusivity in astronomy and physics, with an introduction to LGBT+ issues and first steps: assess and address; break the silence and invisibility; educate and advocate; set the example and expectations; and support and include. Includes an overview on how best to use the guide itself and apply recommendations most effectively, with specific advice and tags for different categories of activities (department level, classroom level, staff, institution, hiring, travel, collaborations, advising). Appendix includes more resources for LGBT+ support, an example survey for collecting demographic information; and a glossary of definitions of LGBT+ related terminology.

- **Source:** A Joint Publication of LGBT+ Physicists and The AAS Committee for Sexual and Gender Minorities in Astronomy, published in 2018 (85 pages)
- **Recommended by:** Participant from the AAS Employment Committee survey on the state of the industry hiring practices.

**[C3]** (Un)conscious Bias in the Astronomical Profession: Universal Recommendations to improve Fairness, Inclusiveness, and Representation

- **Summary:** A white paper presenting a plan with universal recommendations to increase diversity and inclusiveness in the Astronomical Community as a whole, based on STScI’s efforts to raise awareness of unconscious bias and increase diversity representation. It first gives an introduction of why diversity is important in science and examples of how we have not truly succeeded in that. It then gives an overview of bias and unconscious bias with specific examples and studies of their effects on evaluations and hiring. Next it describes the efforts of STScI over the past 10 years to work towards better diversity outcomes and describes their newfound best and most effective practices. Finally, it suggests the universal adaptation of some of these practices to increase diversity, inclusion, and fairness in Astronomy as a whole.

- **Source:** 2019 white paper by Alessandra Aloisi and Neill Reid from STScI, for the 2020 Decadal Survey (13 pages).
- **Recommended by:** A member of the AAS Employment Committee
Enhancing Conference Participation to Bridge the Diversity Gap

Summary: A white paper which provides recommendations and best practices for broadening conference participation, based on a survey of STScI research staff. Best practices include: allowing remote participation, having a diverse organizing committee and a gender balanced speaker list, giving flexible funding for dependent care support, and giving additional targeted funding for travel to underrepresented groups. The survey results also show some of the issues that disproportionately affect women and minorities. For example, while conference attendance rates are very similar for men and women without dependents, women with dependents are significantly less likely to attend or submit abstracts to conferences than men who have dependents. The survey considered participants gender, career stage, racial and ethnic groups, relationship status, and number of dependents.


Recommended By: A member of the AAS Employment Committee

Astro2020 White Papers on Diversity, Inclusion, and Equity

Summary: A brief introduction to the 2020 Decadal Survey and the “Activities, Projects, or State of the Profession Consideration” (APC) white papers, with a focus on and links to the 20 white papers related to DEI that were submitted for the 2020 Decadal Survey. The decadal survey offers astronomers the opportunity to present topics and ideas they think should be high priority for the community. While the number of white papers from 2010 related to DEI increased (5 in 2010, 20 in 2020), the percentage of APC white papers related to DEI went down (7.2% to 5.9%). These white papers serve both to introduce readers to DEI related topics and to recommend best practices. Topics span a wide range, including: mental health, using indigenous knowledge respectfully and as a collaboration, gender equity and marginalized genders, breaking down institutional barriers, and eliminating harassment.

Source: 2019 article by Sofia Sheikh and Shirin Zaidi, for the Penn State University Women and Underrepresented Genders in Astronomy group (3 pages).

Recommended by: A member of the AAS Employment Committee

Advice for Applicants

Guidelines for Writing a Statement of Contributions of Diversity, Equity, and Inclusion (UC Davis)

Summary: Advice to applicants for writing a strong diversity statement in applications. Gives a description of what search committees are often considering (awareness of inequities/challenges; your track record; vision and plans for the future) and examples of ways that current faculty have contributed
to the university’s strategic plan for diversity, equity, and inclusion (e.g., creation of programs, outreach, mentoring, service).

- **Source:** UC Davis Academic Affairs website
- **Recommended by:** Diversity, Culture, and Respect Working Group at STScI

**[D2] Contributions to Diversity Statements**

- **Summary:** Overview of Diversity Statement requirements for faculty candidates at UC San Diego. Includes links to guidelines for applicants, examples in different fields (Biology, Physical Science, Engineering), and evaluation guidelines.
- **Source:** UC San Diego, Center for Faculty Diversity and Inclusion website.
- **Recommended by:** Diversity, Culture, and Respect Working Group at STScI


- **Summary:** FAQ page for the faculty applicant diversity statement at UC Irvine. Includes what a diversity statement should consists of (contributions and track record, awareness of inequities and challenges, and future plans); what the statement should address (how an activity advances equal opportunity and diversity, what impact/significance an activity has, and how the activity has been recognized); and a diversity statement evaluation [note: the diversity statement evaluation link from the website itself is broken, please use this one instead].
- **Source:** UC Irvine ADVANCE program for Equity and Diversity
- **Recommended by:** Diversity, Culture, and Respect Working Group at STScI

**[D4] AAS Internships & Summer Jobs website**

- **Summary:** A list of fellowships, internships, summer jobs, summer camps, fellowships, scholarships, and other opportunities (ranges from summer camps for children to faculty opportunities). Gives an overview of the NSF REU programs, Pathways for Science from Institute for Broadening Participation, and a list of other summer research and outreach opportunities for undergraduates, including those specifically targeting underrepresented minorities. Also includes Aerospace industry internships and fellowships; a list of summer camps for kids/highschoolers; summer opportunities for grad students, postdocs, and faculty; scholarships for women and/or single moms; science policy fellowships; and a link to the AAS Job register.
- **Source:** AAS Website
- **Recommended by:** A member of the AAS Employment Committee.

**[D5] Amendment to NASA’s Research Opportunities in Space and Earth Science (ROSES) 2021 Astrophysics Theory Program, regarding Inclusion and Data Management Plans, with Frequently Asked Questions/Q&As**

- **Summary:** An announcement of the requirement for an inclusion plan when applying for the ROSES-2021 Astrophysics Theory Program, along with a FAQ page for this and other updates. Items in the inclusion plan may be
included in the budget and budget justification when applying. The FAQ page includes links to resources from NASA, AAS, and AIP that are related to Diversity and Inclusion and that could be helpful when writing an inclusion plan.

○ Source: ROSES-2021, the NASA Astrophysics Theory Program.
○ Recommended by: A member of the AAS Employment Committee

● [F2] A curated list of hiring sites which focus on underrepresented minorities
  ○ Summary: A useful list of hiring sites, programs, organizations, and networks focusing on minority groups. Can be sorted by minority group, by field, or by name/website link. Includes over 60 groups.
  ○ Source: Github list curated by Ranpall Gill of Rubin Observatory.
  ○ Recommended by: Participant from the AAS Employment Committee survey on the state of the industry hiring practices.

Examples of existing institution DEIA&B programs

● [E1] UC Recruitment and Retention of Faculty documentation
  ○ Summary: A detailed document going over the UCA policies and programs related to affirmative action and the recruitment and retention of diverse faculty. Includes an overview of proposition 209 (1996 California non-discrimination law), a discussion of under-representation and it’s costs, and descriptions of both mandatory and voluntary affirmative action programs that can be undertaken. Also includes best practices for recruitment, hiring, and retention, as well advice on creating a welcoming campus climate.
  ○ Source: 2002 University of California affirmative action guidelines, 16 pages.
  ○ Recommended by: Diversity, Culture, and Respect Working Group at STScI

● [E2] University of Arizona & Steward Observatory Diversity and Inclusion website
  ○ Summary: Website of the University of Arizona/Steward Observatory’s Diversity and Inclusion committee, with links to both internal and external programs and initiatives supported by the University and it’s members. Some examples of initiatives include Astrocharlas (a spanish lecture series for the hispanic community of Tucson); the UA Native American Student mentor program; the Prison Education project (teaching at the local state prison system), The Supernova Foundation (a mentorship network for young women in astronomy).
  ○ Source: University of Arizona/Steward Observatory website.
  ○ Recommended by: Participant from the AAS Employment Committee survey on the state of the industry hiring practices.
Other Recommended Reading & Resources

  ○ Summary: A book that presents an overview of modern physics concepts such as dark matter and the standard model; a history of science including a critique of its ongoing legacy of racism and sexism; and the journey of a current leader in particle physics told firsthand from the viewpoint of an LGBT+ black woman in a white/male dominated field.
  ○ Source: 2021 book by Chanda Prescod-Weinstein
  ○ Recommended by: A member of the AAS employment committee

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  ○ Source: Github list curated by Ranpall Gill of Rubin Observatory.
  ○ Recommended by: Participant from the AAS Employment Committee survey on the state of the industry hiring practices.

● [F3] Online Text Evaluation Tools for Gender Bias and Inclusion
  ○ Summary: Several links to online tools where text can be evaluated for inclusivity and/or gender-bias.
    ■ Gender Bias Calculator: http://www.tomforth.co.uk/genderbias/
    ■ Interactive Inclusivity and Marketing Tool: https://textio.com/
  ○ Recommended by: Member of the AAS Working Group on Accessibility and Disability (WGAD)

● [F4] Resources for Unconscious Bias Training
  ○ Summary: Links to resources for unconscious bias training.
  ○ List of unconscious bias training resources, with video lessons and links to groups which offer training both online and in person.
    https://gradschool.cornell.edu/diversity-inclusion/faculty-resources/implicit-bias-resources/
  ○ Free online unconscious bias training:
    https://www.nonprofitready.org/unconscious-bias-training
  ○ Recommended by: Member of the AAS Committee on the Status of Women in Astronomy (CSWA)

● [F5] Resources for Interviewing Job Candidates
  ○ Summary: A series of articles providing introductory information on how to interview job candidates, as well as particular questions to avoid.

○ Interviewing techniques and how to prepare to interview job candidates: https://www.shrm.org/resourcesandtools/tools-and-samples/toolkits/pages/interviewingcandidatesforemployment.aspx

○ Questions to avoid during interviews: https://www.shrm.org/resourcesandtools/hr-topics/talent-acquisition/pages/interview-questions-hr-trouble.aspx

○ Illegal Interview Questions: https://www.linkedin.com/business/talent/blog/talent-acquisition/interview-questions-that-can-get-you-in-trouble

○ Recommended by: Member of the AAS Committee on the Status of Women in Astronomy (CSWA)