

Presentation Abstracts
National Diversity Equity Workshop (NDEW) 2013

Focus session #1: Organizational structure, behavior, & dynamics

Behavioral and Organizational Strategies for Minimizing the Influence of Unconscious Bias

Dr. Eve Fine

WISELI, University of Wisconsin – Madison

A vast and growing body of research demonstrates that people who have strong egalitarian values and believe that they are not biased may unintentionally behave in discriminatory ways. Because unconscious or implicit bias can influence our judgments and interactions with others, becoming aware of these biases and consciously striving to minimize them are important steps towards creating diverse, dynamic, inclusive, and welcoming university departments and campuses. This presentation will briefly describe the research on unconscious bias, illustrate its potential influence on differential experiences of campus climate, and focus on behavioral and organizational strategies for minimizing the influence of unconscious or implicit bias.

Stereotype Threat and Underperformance: A Meta-Analytic Review of Causes, Consequences, & Remedies

Prof. Valerie Jones Taylor

Department of Psychology, Spelman College

Stereotype threat is a disruptive concern that one will be treated, judged, or evaluated through the lens of negative group stereotypes in a particular setting (Steele, 1997). Hundreds of experiments demonstrate that stereotype threat undermines stereotyped individuals' intellectual performance and learning in laboratory settings (e.g., Steele, Spencer, & Aronson, 2002; Taylor & Walton, 2011), as well as their outcomes on standardized tests in applied settings (Danaher & Crandall, 2008). Importantly, when stereotype threat concerns are alleviated, the "underperformance effect" is eliminated. Using meta-analysis, my co-author (G. Walton) and I examine the various strategies that have been most effective at reducing stereotype threat for different groups (e.g., women in STEM, racial/ethnic groups in academics) and offer recommendations for scaling such strategies. This work addresses the importance of fostering "identity-safe environments" across a wide variety of academic and professional domains to promote retention and success.

The Psychology of Equity and Inclusion: Individual and Organizational Insights and Implications

Prof. Victoria C. Plaut

Berkeley Law, University of California, Berkeley

In pursuing goals of equity and inclusion, is it more effective to attend to difference or to ignore or minimize it? How do we structure our work environments in ways that discourage certain groups from participating? What can organizations do to curb underrepresentation?

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Psychological and sociological research will be presented to help address these questions regarding diversity climate and representation. In short, blindness to group differences is not as helpful as many well-intentioned people believe it to be, and it can often backfire, affecting intergroup interactions and work-related outcomes for underrepresented groups. Additionally, we often set up our work environments in ways that unintentionally signal to underrepresented groups that they would not fit in there. These diversity climate problems can be addressed through individual and organizational solutions. In addition, recent research on diversity in organizations highlights which structural remedies may be most effective in pursuing goals of numerical representation.

Focus session #2: Recruitment, hiring, retention, and promotion

Building Communities of Scholars in the STEM Disciplines

Dean Peter K. Dorhout

College of Arts and Sciences, Kansas State University

Professional organizations such as the American Chemical Society or the American Physical Society are large organizations with broad missions to serve their members and the profession through publications, meetings, and education. Each also has a vested interest in attracting and maintaining new and emerging professionals in their membership—and the faces of that membership are changing. At Colorado State University, we also recognized the demographic shift in our young science and engineering majors and a need to build communities of scholars on campus that promote professional development in a cultural context. One successful mechanism was through the creation of a consolidated program of activities including McNair Scholars, Louis Stokes Alliance for Minority Participation, Bridges to the Doctorate, Alliance for Graduate Education and the Professoriate, as well as connections to our student cultural centers and professional organizations such as the American Indian Science and Engineering Society (AISES) and the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS). The presentation will discuss the path taken and the impacts of these local organizations on our student body.

The ACS Presidential Commission on Graduate Education in the Chemical Sciences:

Summary and Focus on Diversity Issues

Dean Paul Lyon Houston

College of Sciences, Georgia Institute of Technology

The report of the ACS Presidential Commission on Graduate Education in the Chemical Sciences is available at <http://www.acs.org/gradcommission>. Two versions are available: a full 60-page report and a 20-page summary report. These are the major conclusions:

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1. Current educational opportunities for graduate students, viewed on balance as a system, do not provide sufficient preparation for their careers after graduate school.
2. The system for the financial support of graduate students, as currently operated by private, institutional, state, and federal funds, is no longer optimal for national needs.
3. Academic chemical laboratories must adopt best safety practices. Such practices have led to a remarkably good record of safety in the chemical industry and should be leveraged.
4. Departments should give thoughtful attention to maintaining a sustainable relationship between the availability of new graduates at all degree levels and genuine opportunities for them. Replication in excess is wasteful of resources and does injustice to the investment made by students and society.
5. Postdoctoral training and education is an extension of graduate education that is important for success in a variety of career paths, particularly for faculty appointments. Postdoctoral associates should be treated as the professional scientists.

Issues of educating students who represent the broad diversity of the U.S. population were addressed by one of five working groups. Their recommendations will be highlighted.

University of Michigan ADVANCE: Strategies and Tactics for Recruiting to Improve Diversity and Excellence

Prof. Denise Sekaquaptewa
Department of Psychology, University of Michigan

This presentation describes initiatives instituted by the ADVANCE program at the University of Michigan to improve the climate for faculty. Initiatives focus on recruitment, retention, climate, and leadership, using an evidence-based approach. Specifically regarding faculty recruitment, a workshop developed by the STRIDE committee (Committee on Strategies and Tactics for Recruiting to Improve Diversity and Excellence) is designed to provide information and advice about practices that will maximize the likelihood that diverse, well-qualified candidates for faculty positions will be identified and, if selected for offers, successfully recruited. Information on the development and support of ADVANCE and STRIDE activities will be discussed.

Keynote address

The Exclusion Principle Revisited

Prof. Larry Dalton
Department of Chemistry, University of Washington

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The impact of social isolation (exclusion) is discussed from both a personal and more global perspective considering the temporal evolution, over the past half century, of the nature of the phenomena related to chemistry.

Focus session #3: Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, and Questioning (LGBTQIQ) equity

Creating a Welcoming Environment for LGBT Scientists and Engineers

Dr. Janice M. Hicks

Division of Materials Research, National Science Foundation

To build a strong innovation workforce, we want to attract and retain the best possible talent in Science and Engineering. It is important to reap benefits of expensive investments in the training of scientists and engineers. Further, we must provide workplace climates that allow participants to be authentic, for to hide one's identity takes energy away from one's work. This talk will discuss the importance of visibility of LGBT scientists. It is particularly important that leaders speak knowledgeably about LGBT issues and implement best practices because this can increase their success in hiring and retaining top talent. LGBT affinity groups provide education that can help improve climate, making it easier for people to come out, which benefits all.

Preparing Students for Life After Graduate School: GLBT Scientists and Engineers Outside of Academe

Dr. Christopher J. Bannochie

Savannah River National Laboratory and National Organization of Gay & Lesbian Scientists and Technical Professionals

Gay, lesbian, bisexual, and transgender (GLBT) Americans are found throughout the United States, according to a recent Gallup poll. The American workplace, both public and private, has rapidly moved to welcome and support gay and transgender employees, even going so far today as to actively recruit them as students now that the business case for GLBT diversity has been made. They have worked to varying degrees to equalize their benefits packages by providing same-sex spousal/domestic partner benefits, transgender healthcare benefits, GLBT employee resource groups, gay pride observances, and support for equality legislation on the local, state, and federal levels. The Human Rights Campaign's (HRC) Corporate Equality Index ranks companies on their progress in these areas. Professional organizations such as the American Chemical Society have also extended their outreach to gay and transgender professionals and students, providing programming, subdivision membership, and a Presidential GLBT Reception annually at a National Meeting. This talk will look at the current

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landscape in the U.S. and suggest ways for graduate schools to prepare their students for life outside of academe.

Factors Impacting the Academic Climate for LGBQ STEM Faculty

Dr. Eric V. Patridge

Out in Science, Technology, Engineering & Mathematics (oSTEM) Incorporated and Yale Center for Molecular Discovery, Yale University

Initiatives to advance underrepresented groups in the STEM fields typically exclude lesbian, gay, bisexual, transgender, queer, and questioning (LGBTQQ) people, but given the critical need for STEM talent, it is important to identify factors impacting the recruitment and retention of LGBTQQ communities in STEM. It is well understood that institutional “climate” has a profound effect on the academic community and impacts its implicit goals of teaching, research, and service (Bauer, 1996; Boyer, 1990; Peterson & Spencer, 1990; Rankin, 1998; 2003; 2010; Rankin & Reason, 2008; Tierney & Dilley, 1996). Research also suggests that a challenging campus climate exists for LGBTQQ students, faculty, and staff. Based on the literature, a challenging climate leads to decreased productivity, decreased sense of value to the community, decreased retention, and negatively influences educational outcomes (Settles, et al. 2006; Trower & Chait (2002); Pascrell & Terenzini, 2005; Whitt, Edison, Pascarella, Terenzini, & Nora, 2001). Currently, there is little available in the literature on LGBTQQ faculty in the STEM fields. This program will engage participants in a review of the results of a data-driven project (2010 State of Higher Education for Lesbian, Gay, Bisexual, and Transgender People) with regard to the experiences of LGBTQQ faculty in the STEM fields.

Focus session #4: Creating an inclusive culture

AMERICA'S GOT STEM TALENT: Should We Include Persons with Disabilities?

Dr. Ted Conway

Chemical, Bioengineering, Environmental & Transport Systems Division, National Science Foundation

Historically, persons with disabilities have not been encouraged to become scientists or engineers and have largely not been able to bring their unique and hard-earned experiences of life to bear on developing the technologies and tools that ostensibly are designed to make their lives and the lives of countless others easier. The National Science Foundation has, agency-wide, a number of programs with some emphasis on research that has specific benefits for people with disabilities. The Directorate for Engineering has led the Foundation in these efforts with the General & Age Related Disabilities Engineering Program. NSF research related to disabilities also addresses four of the 14 National Academy of Engineering’s Grand Challenges. Specifically:

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- Advancing health informatics,
- Engineering better medicines,
- Reverse-engineering the brain, and
- Advancing personalized learning.

It has been recognized that engineers with disabilities habitually focus on problem-solving in their professional lives and also in their personal lives. As individuals with disabilities, we have had to develop a unique approach to overcoming the barriers and perceived limitations presented by our disability. These insights can contribute to adaptations of existing assistive technology to fit the dimensions of the specific science and engineering fields, job requirements, or individual needs.

Professional Cultures and Inequality in Science

Prof. Erin Cech

Department of Sociology, Rice University

Can the culture of scientific professions reproduce inequality? The professional cultures of science, which give each discipline its particular “feel” and unite discipline members under a taken-for-granted system of meanings and values, are not benign. Drawing from social science literature and research, I explain how these professional cultures can have built within them disadvantages for women and under-represented minorities and can work to reproduce inequality therein. The presentation will end with a discussion of how these cultural processes of inequality might be addressed.

Diversity in the U.S. Biomedical Workforce

Dr. Roderic Ivan Pettigrew

National Institute of Biomedical Imaging and Bioengineering, National Institutes of Health

This abstract is unavailable. For more information on this topic, please see the following:

<http://acd.od.nih.gov/dbr.htm>

<http://www.nih.gov/news/health/dec2012/od-07.htm>

Keynote address

Diversity at the Forefront of Science: One View from NSF

Dr. F. Fleming Crim

Directorate for Mathematical and Physical Sciences, National Science Foundation

The National Science Foundation, as the agency with a mission of supporting broadly

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fundamental research in science, funds roughly half of all of the academic research in our nation. Because the Foundation plays a central role in the development of the workforce of the future, it is critically concerned with fostering a diverse, capable, and innovative group of scientists and engineers. They are the bedrock on which future innovation rests, and their diversity is important for both practical and philosophical reasons. I hope to provide the perspective of a new member of the leadership team for the Directorate of Mathematical and Physical Sciences (MPS) on some of these issues. The Directorate, which includes the Divisions of Astronomy, Chemistry, Mathematics, Materials Research, and Physics, encompasses a large range of scientific problems, styles, and traditions, but broad inclusion is a central issue for all of these areas.