

Out to Innovate:
Furthering LGBT
Diversity and
Inclusion in
Science,
Technology,
Engineering, and
Mathematics



An Educational Outreach
Presented by The National
Organization of Gay and
Lesbian Scientists and
Technical Professionals

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Out to Innovate™: Furthering LGBT Diversity and Inclusion in Science, Technology Engineering, and Mathematics

The Need

“Acceptance in the workplace for “out” gay scientists is not that unusual in today’s scientific work force—whether it be a university, industry, or federal setting—thanks to the enormous strides that have been made in the movement for lesbian, gay, bisexual, and transgendered (LGBT) people’s equality. And yet, despite the progress, obstacles for LGBT’s in science still exist in various and sometimes subtle forms, including access mentorship, visible role models and ultimately, the science itself.”¹

The above observation, quoted from “Shattering the Glass Closet” in *Science Careers* from the journal *Science*, captures the quandary faced by many LGBT students and professionals in science, technology, engineering, and mathematics (STEM) fields. Although acceptance and inclusion is increasing, there are often barriers and prejudices that hamper academic and career growth.

At a time when the United States faces a critical need to fill the technological pipeline with highly trained scientists and technicians, especially for research, design, and engineering positions that require college or post-graduate degrees, students continue to drop out of the educational pipeline in STEM fields at alarming rates. Two recent studies of LGBT students and young adults concluded that academic and career choices are influenced by sexual orientation “a great deal,”² and that reducing school-related victimization of LGBT students will “likely result in significant long-term health gains and will reduce health disparities for LGBT people.”³ Feeling the isolation and the pressure to succeed, many students may choose not to stay the course in their career tracks. Successful “out” role models are too often lacking on college campuses, where faculty and administrators themselves often feel pressure to remain incognito in order to secure career stability and advancement.^{4,5}

Diversity programs that address the challenges that face women and ethnic minorities in STEM academics and careers are the norm in colleges and universities. However, similar programs that address the unique challenges of LGBT individuals are only beginning to take shape. Indeed, many LGBT college and university programs are “tagged on” to existing diversity initiatives, thereby making it difficult to create support and outreach programs that are specific to LGBT concerns. Hence, the need to assist talented LGBT students in STEM studies is perhaps greater than ever.

An increasing body of evidence shows the unique challenges that young LGBT individuals inclined toward careers in STEM fields face. As reported in “Navigating the Heteronormativity of Engineering: The Experience of Lesbian, Gay and Bisexual Students,”⁶ LGBT engineering students at The University of California, San Diego reported increased emotional and mental strain from navigating the social isolation they experience in their academic environment. This isolation adversely affected their ability to work with their peers on class projects. The researchers noted that many respondents in their study found engineering school to be a “hostile place,” where “both pervasive prejudicial cultural norms and perceptions of competence particular to the engineering professions can limit these students’ opportunities to succeed, relative to their heterosexual peers.”⁶ In their study, “Don’t Ask, Don’t Tell: The Academic Climate for Lesbian, Gay, Bisexual, and Transgender Faculty in Science and

Engineering,”⁷ Bilimoria and Stewart reported similar findings of isolation and overt hostility toward LGBT faculty in science and engineering programs at two research universities.

Out to Innovate™: Servicing the Need

In its over 30-year existence, The National Organization of Gay and Lesbian Scientists and Technical Professionals (NOGLSTP)⁸ has witnessed first-hand the need to bring together LGBT and Ally high school, college, and post-doctoral students with LGBT career professionals, academics, and employers in the STEM community for mentoring, career, and learning opportunities. In 2010, NOGLSTP, in conjunction with the LGBT community at the University of Southern California, produced the first-ever career summit for LGBT students, academic and career professionals in STEM fields.

Out to Innovate™ was a day-long summit that brought together nearly 200 attendees and featured workshops and speakers ranging from students and faculty, to senior STEM policy officials from The White House, The National Institutes of Health (NIH), and Standard and Poor’s 500 Companies.⁹ As such, **Out to Innovate™** was groundbreaking. For the first time, the unique needs of LGBT students and career professionals in demanding STEM careers were addressed. No longer “lumped in” with other diversity programs, **Out to Innovate™** clearly illustrated that the time has come for specific programs that target LGBT diversity and inclusion in the STEM world. From the challenges faced by “out” medical students, to the double-discrimination faced by ethnic minority LGBT individuals, to the legal and societal challenges associated with gender identity and expressions, **Out to Innovate™** is committed to furthering the presence, acceptance, and career success of LGBT individuals in STEM careers. The responses from the attendees of **Out to Innovate™ 2010** were overwhelmingly positive. Written comments from attending students ranged from, “Great conference! I’m so happy something like this exists,” to “...definitely got me thinking about how I view myself as a minority student,” and “Inspiring! Nothing seemed preachy or self-congratulatory.”

Building upon the initial success of **Out to Innovate™** at USC in 2010, NOGLSTP is committed to expanding the summit both in geographical location and program content. **Out to Innovate™ 2012** will take place October 13-14 at The Ohio State University (OSU) in Columbus, Ohio. OSU, a leader in academic strength through diversity, is hosting **Out to Innovate™ 2012 with** the on-campus LGBT-STEM student organization oSTEM¹⁰. This year’s summit will feature expanded workshop topics in a format that allows attendees greater interaction with presenters. To assist students, post-doctoral fellows, and early career professionals with academic and career placement opportunities, the second day of the summit will be dedicated to a career fair that allows for recruiting and face-to-face interaction with **Out to Innovate™ 2012** sponsors.

Out to Innovate™ and NOGLSTP salute the University of Southern California and The Ohio State University, along with our generous academic and industry sponsors, for their vision and commitment in furthering the presence, contributions, and success of LGBT individuals in STEM careers.

Citations

- ¹Kurzweil, J. (2008) "Shattering the Glass Closet." <http://sciencecareers.sciencemag.org>
- ²Schneider, M.S. and Dimito, A. (2010) Factors influencing the career and academic choices of lesbian, gay, bisexual, and transgender people. *J. Homosexuality* 57: 1355-1369.
- ³Russell, S.T., Ryan, C., Toomey, R.B., et. al. (2011) Lesbian, gay, bisexual, and transgender adolescent school victimization: implications for young adult health and adjustment. *J. School Health* 81: 223-230.
- ⁴Oberst, J.R. (2010) "Closeted Discoverers: Lesbian, Gay, Bisexual, and Transgender Scientists." <http://sciencecareers.sciencemag.org>
- ⁵Schock, J.N. (2011) "Secrets are Out: Lesbian, Gay, Bisexual, and Transgender Engineers Are No Longer Willing to Hide Their True Selves." *ASEE PRISM* http://www.prism-magazine.org/oct11/feature_o3.cfm
- ⁶Cheh, E. and Waidzunas, T. (2009) Engineers who happen to be gay: lesbian, gay, and bisexual students' experiences in engineering. *Proc. Of the 2009 Conf. of the Amer. Soc. For Engin. Educ.*
- ⁷Bilimoria, D. and Stewart, A.J. (2009) "Don't ask, don't tell": The academic climate for lesbian, gay, bisexual, and transgender faculty in science and engineering. *NWSA Journal* 21: 85-103.
- ⁸The National Organization for Gay and Lesbian Scientists and Technical Professionals. www.noglstp.org.
- ⁹Out to Innovate™. www.outtoinnovate.org
- ¹⁰oSTEM. www.ostem.org