

## Program Report

### **PROF 1 Introductory Remarks**

**E. Ann Nalley**, ACS Past President, Professor of Chemistry, Physical Sciences Department, Cameron University, Lawton, OK 73505, [ann@cameron.edu](mailto:ann@cameron.edu)

*Abstract text not available.*

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### **PROF 2 Commitment to our future: Preparing America's Science, Technology, Engineering and Mathematics (STEM) workforce to compete in the flat world**

**Brian K. Fitzgerald**, The Business-Higher Education Forum, 2025 M St NW Suite 800, Washington, DC 20036, Fax: 202-367-2269, [Brian.Fitzgerald@bhef.com](mailto:Brian.Fitzgerald@bhef.com)

In response to numerous studies that show the United States losing ground to its international competitors, Brian Fitzgerald will talk about his organization's new initiative that focuses on securing America's role as the global leader in science, technology, engineering and mathematics, or STEM. He will identify problems in the educational pipeline and recommend steps that key stakeholders—the P-16 educational system, government, and business—can take to ensure that all students are equipped with the necessary skills to participate in an increasingly STEM-oriented “flat world.”

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### **PROF 3 Industry workforce issues of the future: Chemistry Ph.D. supply and demand trends**

**D. Ronald Webb**, Senior Manager, Doctoral Recruiting, Procter & Gamble Company, Miami Valley Laboratories, P.O. Box 538707, Cincinnati, OH 45253-8707, Fax: 513-627-2266, [webb.dr@pg.com](mailto:webb.dr@pg.com)

This presentation will focus on the relationship between the academic supply of Ph.D. chemists and the industrial demand for their talents over the next decade. Key trends in total doctoral student output, student demographics (e.g., foreign vs. domestic students), emerging immigration policy and legislation issues, and the impact of an aging U.S. workforce will be discussed.

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### **PROF 4 Getting the most out of industry-university partnerships**

**Susan B. Butts**, Dow Chemical Company, 1776 Building, Midland, MI 48674, Fax: 989-636-1705, [sbbutts@dow.com](mailto:sbbutts@dow.com)

Companies increasingly seek to accelerate their research and development by tapping into external resources. One of the most important of these resources is the research university. Research partnerships offer many benefits to both the company and the university but there are also barriers that must be overcome. This talk will explore the benefits of these partnerships to both the institutions and individuals and suggest ways to overcome the barriers to collaboration.

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### **PROF 5 Science teacher: Key to the next generation workforce**

**Michael J. Padilla**, National Science Teachers Association, University of Georgia, 315 Aderhold Hall, Athens, GA 30605, Fax: 706-542-2502, [mpadilla@uga.edu](mailto:mpadilla@uga.edu)

How do we ensure that today's students are ready for the scientific and technical workforce in a flat world? Science teachers are the key. This talk will describe data on the science teaching force, K-12. It will highlight several important issues to improving science teaching, including, more and better professional development and mentoring of new and experienced teachers.

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### **PROF 6 Excellence and diversity: The Meyerhoff Scholarship Program at UMBC**

**J. Lynn Zimmerman**, Provost's Office, University of Maryland Baltimore County (UMBC), 1000 Hilltop Circle, Baltimore, MD 21250, Fax: 410-455-1107, [zimmerma@umbc.edu](mailto:zimmerma@umbc.edu)

The Meyerhoff Scholarship Program at UMBC has become a national model for increasing the number of underrepresented students, particularly African Americans, who earn Ph.D.s or MD/Ph.D.s and pursue research careers in science and engineering. This multifaceted, strengths based approach to education and research training has made significant strides in changing the face of science and engineering. Now in its 17th year, the program has graduated nearly 500 students, the majority of whom have gone on to graduate and professional degree programs. This presentation will describe the approach, the outcomes and the key features of the program that are all geared toward supporting and encouraging success at the highest levels.

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### **PROF 7 Glass ceiling for academic women scientists**

**Sue V. Rosser**, History, Technology and Society, Ivan Allen College, Georgia Institute of Technology, Habersham Building, 781 Marietta St., Atlanta, GA 30332, Fax: 404-894-8573

In January, 2001 at a special meeting held at MIT, for the first time in public and print, the presidents of the most prestigious research universities have suggested that science and engineering might need to change to accommodate women. Simultaneously, the National Science Foundation (NSF) has initiated ADVANCE, a new awards program that has two categories to include institutional, rather than individual, solutions to encourage the full participation of women in science. In order to be effective, the institutional changes attempted should address barriers identified by the women science and engineering faculty as the most problematic. Data from the almost 400 respondents to an e-mail survey of FY '97, '98, '99, and '00 NSF POWRE awardees and to almost 50 Clare Boothe Luce respondents in 2002 reveals the barriers that academic women scientists and engineers find most challenging for their careers. Since POWRE was the NSF program that preceded ADVANCE and since the CBL Professors hold five year awards to facilitate establishment of their scientific careers, the quantitative and qualitative data from these awardees should be particularly relevant for institutional changes to empower and enable women scientists and engineers.

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### **PROF 8 Students repairing the leaky pipeline: The Georgia Tech Women in Chemistry Committee**

**Shannon Watt**, School of Chemistry and Biochemistry, Georgia Institute of Technology, 770 State St. NW, Atlanta, GA 30332-0400, shannon.watt@chemistry.gatech.edu

Despite earning approximately one-third of all Ph.D.s in chemistry, women are significantly underrepresented in many academic, industrial, and government positions. While many successful programs exist to promote and support women in science from preschool through the workplace, few focus on equipping female Ph.D.s-in-training to attain their personal and professional goals. A group of graduate students and post-doctoral associates at Georgia Tech founded a Women in Chemistry (WIC) Committee to: (i) raise awareness of and propose solutions to the challenges faced by female scientists, and (ii) encourage students, especially women, to pursue careers in chemistry. The Committee addresses a variety of student needs by enhancing mentoring opportunities for incoming graduate women; advocating for uniform family-friendly parental leave policies and childcare options on campus; creating networking and support programs for graduate women; and organizing a full-day, 21-speaker, 100+ attendee Women in Chemistry Symposium. A byproduct of these activities is the realization that addressing these issues will create a more accessible profession for all chemists.

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