CHANGING THE CONVERSATION

USC Viterbi has been at the forefront of changing stereotypes about engineers: what they do, who they are, what they look like, and how their work affects our lives. Some recent highlights:

"The Next MacGyver"
The global competition in partnership with the national Academy of Engineering Imagine the future. TV show about a female engineer main character. On July 23, 2015, five winners (out of nearly 3,000 entries) were paired with Hollywood producers to inspire a new generation of engineers.

USC VITERBI STUDENTS
Among the top 333 students hired by Google full time, freshman class, the percentage of female engineering undergraduates stands at 35%. The national average of 19%.

LEADING A NATION-WIDE INITIATIVE
Over 450 engineering school chairs signed a letter drafted by leading engineering chiefs in the nation under the leadership of Dean Harry V. Yoshikai for an initiative to change the conversation and enhance diversity and inclusion in engineering. This initiative was acknowledged by the President of the United States on Aug. 4, 2017, at the first ever White House Career Day or inclusive entrepreneurship. The chair initiative consists of the following:

1. Partner with national organizations to craft, implement and assess a comprehensive diversity Plan for our engineering programs.
2. Commit that at least one CS community outreach program with target goals and measures of accountability will address the diversity and inclusiveness of the engineering student body in our institutions.
3. Develop strong partnerships between research intensive engineering schools and non-PhD granting engineering schools serving populations underrepresented in engineering.
4. Integrate and implement practices strategies to increase the representation of women and underrepresented parts of the society in our faculty.

GRAND CHALLENGES SCHOLARS PROGRAM
National Science Foundation, close to 20 million dollars annually as Grand Challenge Scholars as a result of the Grand Challenges Scholars Program (GCSP). Pioneered by USC Viterbi Dean and College of Engineering in 2009, this program is now adopted by more than 150 engineering schools nationwide and is spreading globally. It stresses, in addition to the traditional engineering education the follow:

Research
Interdisciplinary
Global Context
Innovation and Entrepreneurship
Service Learning and Societal Responsibility

GLOBAL GRAND CHALLENGES SUMMIT
As California’s annual Grand Challenges Summit is the first ever global business plan competition during the Global Grand Challenges Summit held in Beijing, China (Oct 3-5, 2017). The contest, conceived and organized by China’s Ministry of Science and Technology under the guidance of the US-China Innovation. The summit starts from the U.S., China and the UK.

By The Numbers

19%

share of women who receive engineering degrees, which according to a 2015 report from National Student Clearinghouse, has actually fallen in the last 10 years

7 HOURS

number of TV shows with female engineers, of 25 prime-time television shows, according to a 2012 study by Professor Kiley Smith and the Media, Diversity and Social Change Initiative at the USC Annenberg School.

35%

women in USC Viterbi’s undergraduate classes

38 MINUTES

number of men in the top 25% of all STEM majors.

"If she can see it, she can be it."—Geena Davis, Founder, Geena Davis Institute on Gender in Media

USC Viterbi at a glance

USC Engineering began in 1905

Student Population
Approximately 3,600 undergraduate and 3,100 graduate students

Faculty
160 tenure-track faculty, 65 endowed chairs and professorships, 64 NSG Career Awards, 22 full-time, tenure-track, and 56 Associate members (40 total affiliated), 7 NAS members, 11 MTR winners

Academic Departments
Eight

Alumni
More than 60,000

Annual Research Expenditures
More than $650 million, with more than 40 research centers and institutes

Research Centers and Institutes

- Information Sciences Institute (ISI)
- The Ming Hsieh Institute
- The Daniel J. Epstein Institute
- Institute for Science, Medicine & Technology (IShMT)
- National Institute for Information and Communication Technology (NIICT)
- University Center of Excellence of the U.S. Department of Homeland Security - Center for Risk and Economic Analysis of Terrorism Events (CREATE)
- DOD/Whitney House Materiel Genome Initiative Center
- Center for Energy and Nanoscience at USC
- Biomedical Informatics Research Network (BIRN)
- NECTAR (Health, Technology and Engineering@USC)
- LADWOO (Smart Grid Demonstration Project)
- Lockheed Martin Quantum Computing Center
- Center for Interactive Smart Oilfield (CISO)
- Pratt & Whitney Institute for Collaborative Engineering (PICE)
- Institute for Knowledge Discovery (IKD)
- Wireless Center for Advanced Software Technologies (CAST)
- NIH Center on Genomics and Phenomics of Autism
- USC Energy Institute

Affiliated with:
- Alfred E. Mann Institute for Biomedical Engineering (AMIB)
- USC Institute for Creative Technologies (ICT)
- USC Stevens Center for Innovation

Education and Outside-the-Curriculum Centers
- Division of Engineering Education
- K-12 Alliance for Engineering Education (K-12AE)
- VAST: Viterbi Adopt a School, Adopt a Teacher
- Student Entrepreneurship Prize Competition (MEPC)
- Viterbi Student Innovation Institute (VSII)
In the last several months we have launched a number of new national initiatives with the goal to “change the conversation” about engineering. In the process, we are helping dispel stereotypes about engineers — what they do, who they are, what they look like.

These stereotypes have left many of our women and traditionally underrepresented segments in engineering on the sidelines. For engineering to remain society’s engine of innovation, this must change.

As the chair of the Diversity Committee of the ASEE Engineering Deans Council, I recently drafted a pledge letter from engineering deans to take concrete steps to ensure that our institutions provide inclusive educational experiences. I am pleased to tell you that in less than one month, more than 148 engineering deans have signed to date. President Obama celebrates these commitments at the White House Demo Day for inclusive entrepreneurship on August 4, 2015, an event I attended on behalf of my fellow engineering deans.

In a separate initiative, July 28, 2015 was the culmination of the six-month long “The Next MacGyver” competition — sponsored by Google and Ford, but conceived and co-organized by USC Viterbi, the National Academy of Engineering and MacGyver creator Lee Zlotoff. Five talented writers — several of them engineers — were selected from a field of nearly 2,000 entries, to write a script for a new TV show starring a female engineer. Just as CSI led to a surge of interest in forensics, we hope that one or more of our finalists’ visions for a strong female engineer lead will make it to the TV screen. This will galvanize middle-school and high-school girls everywhere to become the new face of engineering.

The new phase of engineering — the new face of engineering.