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**USC Viterbi**

School of Engineering  
Department of Biomedical Engineering

# USC Viterbi Department of Biomedical Engineering



BIO-SIGNALS  
AND SYSTEMS

17

TENURED & TENURE-TRACK FACULTY



NEURAL  
ENGINEERING

5

**NSF CAREER AWARD RECIPIENTS:** Stacey Finley, Bartlett Mel,  
Ellis Meng, Richard Roberts, Francisco Valero-Cuevas



MEDICAL DEVICES  
AND IMAGING

2

**TR35 RECIPIENTS:** Ellis Meng, Megan McCain



SYSTEMS CELLULAR  
MOLECULAR  
BIOENGINEERING

1

**National Medal of Technology and  
Innovation recipient:** Mark Humayun

1

**NIH Director's New Innovator Award:** Eun Ji Chung

# Innovation & Translation

## New technologies to improve care for patients with hydrocephalus

In an effort to invent a “self-aware” shunt implant that could inform doctors with a sense of the shunt’s condition in real-time, Professor **Ellis Meng** and **Tuan Hoang** recruited a team of PhD students to help develop novel sensor technologies. Four years later, Senseer came to life – a start-up specializing in biomedical devices with patented microsensing technologies for the world’s first-ever multi-sensor “smart” shunt system. Senseer’s CEO Sascha Lee calls the system a “game-changer for patients.”

Funding has been provided by grants from the NSF, the FDA-funded CTIP, the NSF-funded I-Corps and the USC Coulter Translational Research Partnership Program, among other sources.

## The Coulter Translational Research Partnership Program

supports and funds translational projects that focus on applying developed technologies to solve an unmet or underserved clinical need.

### Since launching in 2011:

**\$30 million** in follow-on funding

**\$3 million** in seed funding for project teams

**98** teams supported by the program

**22** innovation teams invested in the program

## Exceptional Students



### Associated Students of Biomedical Engineering

**2018** BMES Student Chapter Outstanding Achievement Award

**2018** Best Student Organization at USC Viterbi

The 3rd annual ASBME Makeathon challenged over 80 students to design and build an inexpensive and customizable prosthetic arm. In just 30 hours, their creations needed to include an extension-based hand grip mechanism and a user grip feedback mechanism, while maintaining a user-friendly design that cost \$250 or less.

