“THIS IS THE MOST EXCITING ERA FOR SCIENCE AND ENGINEERING IN HUMAN HISTORY.”

Charles Vest, President Emeritus, NAE NAE Grand Challenges Summit, USC October 6-8, 2010

USC Viterbi at a Glance

USC Engineering began in 1909

Student Population
Approximately 4,400 undergraduate students and 4,400 graduate students

Facility
177 tenure-track faculty, with 68 endowed chairs and professorships, 55 NSF Career Awards, 13 full-time, tenure-track NSF members (34 total) and 7 junior faculty listed on the NSF Young Investigator List since 2009

Academic Departments
81

Alumni
More than 60,000

Annual Research Expenditures
More than $717 million, with more than 47 research centers and institutes

Research Centers and Institutes
- Home to:
  * Information Sciences Institute (ISI)
  * The Ming Hsieh Institute
  * The Daniel J. Epstein Institute
  * Two National Science Foundation (NSF) Engineering Research Centers (ERC)
  * Biomedical Microsystems Center (BMEC)
  * University Center of Excellence of the U.S. Department of Homeland Security - Center for Risk and Security Analysis of Terrorism Events (CREATE)
  * Department of Energy Frontier Research Center (EFRC) - Center for Energy Nanoscience at USC
  * Biomedical Informatics Research Network (BIRN)
  * Integrated Health Informatics (iHI) (Health, Technology and Engineering Initiative (HTEI))
  * LADWP/DWE Smart Grid Demonstration Project
  * Center for Interactive Smart Oil Field Technology (iSOFT)
  * Pratt & Whitney Institute for Collaborative Engineering (PWICE)
  * Airbus Institute for Engineering Research (AIER)
  * Center for Research and Education in Advanced Software Technologies (CAREST)
  * NH Center on Genomics and Phenomics of Autism
  * Viterbi Student Innovation Institute (VSI)
  * USC Energy Institute

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

Education Centers
- Division of Engineering Education
- XRIJ (Klein Institute for Undergraduate Engineering Life)
- VDAI: Viterbi Adopt-a-Teacher

DEAN’S REPORT 2013

THE EVOLUTION OF EXPLORING AND ENGINEERING:
EXPLOITING THE POWER OF PHYSICAL, CHEMICAL, BIOLOGICAL . . . AND SOCIAL PHENOMENA?
T he National Academy of Engineering (NAE) hosted a symposium on the "Technology Exploring a Phenomenon for Useful Purposes" in February 2019. The event aimed to explore how technology can be used to address real-world problems. The symposium featured a variety of experts discussing topics ranging from physical and biological sciences to engineering and social sciences.

A CENTURY OF INNOVATION, NAE

1. ELECTRICITY
2. AUTOMOBILE
3. AIRPLANE
4. ELECTRON
5. SPACE

THE NAE GRAND CHALLENGES

SUSTAINABILITY

MAKE SOLAR ENERGY/ECONOMICS
Increase the efficiency of solar energy and develop new methods of managing the hydrocycle.

SECURITY

SECURITY CYBERSECURITY, PREVENT NUCLEAR TERROR, AND PROTECT INTELLIGENT SYSTEMS

HEALTH

ADVANCE HEALTH: SOMATIC AND ORGANISM ORGANIZE THE BRAIN

ENRICHING LIFE

ENHANCE VIRTUAL REALITY, TURN AUGMENTED REALITY INTO VIRTUAL REALITY

SOCIETY ORGANIZATION?

EDITING GENOMIC PHENOMENA THROUGH DIGITAL MEDIA

THE EVOLUTION OF KNOWLEDGE (Hence Education?)

DEUTSCH, DAVID "THE BEGINNING OF INFINITY"

"Variation creates new options, ideas, comparisons and solutions. These are the ingredients for progress. 

"PROBLEMS ARE INEVITABLE, ALL PROBLEMS ARE SOLVABLE"

DEUTSCH, DAVID "THE BEGINNING OF INFINITY"

"Includes guideposts and problems."

THE NAE GRAND CHALLENGES: A CALL TO ACTION

CHANGING THE CONVERSATION

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