Celebrating UTSA's National Leadership

Cybersecurity and the Biosciences

June 5, 2018
San Antonio’s National Leadership in Biomedical Research & Development
San Antonio has 3,300+ MDs and PhDs and more than $1 billion in federal R&D expenditures.
San Antonio’s Biomedical Landscape

Department of Defense

Vaccine Development Center of San Antonio

Texas Biomedical Research Institute

BioMed SA

SAMHS

UT Health San Antonio

RegenMed SA

SwRI
UTSA’s alignment with San Antonio’s Bioscience Sector

**CANCER**
- 22 Faculty
- 5 Departments

**DIABETES**
- 15 Faculty
- 5 Departments

**INFECTIOUS DISEASES**
- 21 Faculty
- 2 Departments

**REGENERATIVE MEDICINE**
- 36 Faculty
- 4 Departments

**BRAIN HEALTH**
- 37 Faculty
- 5 Departments
San Antonio and its population genomics is the future of medicine

- Precision Medicine
- Drug Discovery and Delivery
- Regenerative Medicine
- Obesity
- Neurodegenerative Disorders
- Infectious Diseases
Dr. Jenny Hsieh
Semmes Foundation Chair in Cell Biology

Fighting Brain Disease
Charting the Future of Cybersecurity
Undergraduate
- B.B.A. Cyber Security (online and residential)
- B.B.A. Information Systems
- B.S. Computer Engineering
- B.S. Computer Science
  Cyber Security Concentration
  Cyber Operations Track

Masters
- M.S. Computer Engineering
- M.B.A. Cyber Security Concentration
- M.B.A. Information Systems Concentration
- M.S. Data Analytics
- M.S. Information Technology
  Cyber Security Concentration
- M.S. Computer Science
  Cyber Security Concentration
  Data Science Concentration

Doctoral
- Ph.D. Information Technology
- Ph.D. Computer Science

Certificate
- Cloud Computing
- Data Center Design
- Pathogenic Outbreak Investigations

Cyber UTSA
A leader in cyber education since 1999
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**Faculty**
- 70
  - Six of which are endowed from entities such as AT&T and Rackspace (80/20 Foundation)

**Students**
- 3,145 undergrads in cyber, cloud, computing & analytics
- 323 masters students
- 164 doctoral students
- 98 students earned undergraduate cybersecurity degrees in 2017-18
- 26 students earned graduate cybersecurity degrees in 2017-18

**Research**
- $100+ Million Research awards in cyber programs since 2000

**Rankings**
- #1 Cybersecurity undergraduate program
  - Ponemon Institute
- #2 Cybersecurity graduate program
  - Universities.com
UTSA’s Cyber Designations
National Security Agency & Department of Homeland Security

Information Assurance Education 2002
Information Assurance Research 2009
Cyber Defense Digital Forensics Focus Area 2014
Cyber Operations Fundamentals 2018
A NEW PARTNERSHIP

Cybersecurity
Digital Forensics
Data Analytics
Machine Learning
Infrastructure Risk Modeling
Innovative Education Outreach
UTSA’s Current & Future National Security Portfolio

- Cybersecurity & Cloud Computing
- Counter Terrorism
- Election Security
- Cyber Attack/ Deterrence & Policy
- Infectious Diseases & Biological Threats
- Military Health & Wellness
- Demographic Methods & Trends
- Governance & Policy
- Emergency Management & Communications
- Border & Refugee Issues
- Advanced Materials
- Nanotechnology
- Critical Infrastructure Protection
- Robotics & UAVs
- Analytics
- High Performance Computing
- Artificial Intelligence
- Machine Learning
- Data Visualization
- High Tech Intelligence
- Governance & Policy
- Emergency Management & Communications
- Border & Refugee Issues
- Advanced Materials
- Nanotechnology
- Critical Infrastructure Protection
- Robotics & UAVs
- Analytics
- High Performance Computing
- Artificial Intelligence
- Machine Learning
- Data Visualization
- High Tech Intelligence
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- Advanced Materials
- Nanotechnology
- Critical Infrastructure Protection
- Robotics & UAVs
- Analytics
- High Performance Computing
- Artificial Intelligence
- Machine Learning
- Data Visualization
- High Tech Intelligence
Proposed National Security Collaboration Center Ecosystem

- 24th Air Force (Cyber Command)
- 25th Air Force (formerly Intelligence, Surveillance and Reconnaissance Agency)
- Army Research Laboratory (ARL)
- Air Force Research Laboratory (AFRL)
- NSA Texas
- Federal Bureau of Investigation
- Dept. of Homeland Security/JTF West/US Secret Service
- Dept. of Energy National Labs

+ additional federal partners
+ multiple data centers
+ state and local agencies
+ defense technology businesses

Government University Industry
National Security Collaboration Center
Current Partners

CISOs
- top producer in the nation

Collaboratory
- solving the nation’s intractable cyber problems

Partners
- leaders in the industry
National Security Collaboration Center

Research Centers
• Cyber Center for Security and Analytics
• Collaborative research and training spaces
• Center for Infrastructure Assurance and Security

Sensitive Compartmentalized Information Facility
• Classified Research
• Federal Partners/Contractors

Cyber Protective Operations Center
• Federal Partners

Computational Technology
• Visualization Laboratory
• High Performance Computing
• Cyber Range

Innovation Factory
• Early Stage Technologies
• Student & Faculty Start Ups
National Security Collaboration Center

- Fills dire need for cybersecurity workforce
- Fuels San Antonio’s Tech Corridor
- Supports major companies growing or moving to San Antonio
- Aligns with federal agency presence
- Advances San Antonio’s position as a leader in national security
- Hub for Texas Cyber Corridor
Dr. Nicole Beebe
Melvin Lachman Distinguished Professor in Entrepreneurship
Associate Professor of Information Systems and Cyber Security

A leader in the cybersecurity revolution
TALENT ACQUISITION

UTSA is focused on bringing the world’s best and brightest researchers to San Antonio, boosting our capacity to solve society’s grandest challenges.
Building Other Areas of Scholarly Expertise

Materials Science & Advanced Manufacturing
35 faculty across 4 departments

Chemistry/Drug Discovery
24 faculty
Chemistry department ranked 78th in the U.S.

Cyber/Machine Learning & Analytics
79 faculty across 3 colleges
nationally ranked cyber programs

Sustainable Cities: Water & Energy
40 faculty across 5 departments

Others to be determined
Thank you!