

# MISSOURI S&T

Dr. Christopher Maples, Interim Chancellor  
Rolla Area Chamber of Commerce  
October 12, 2017



MISSOURI  
S&T

# UNIVERSITY OF MISSOURI SYSTEM

## Four campuses in UM System:

- Missouri University of Science and Technology (Missouri S&T)
- University of Missouri-Columbia (MU or Mizzou)
- University of Missouri-Kansas City (UMKC)
- University of Missouri-St. Louis (UMSL)





# FALL 2017 BY THE NUMBERS

8,884 students: 6,920 undergrads and 1,964 grads

70% Missourians

18% out-of-state

11% international

77% men

23% women

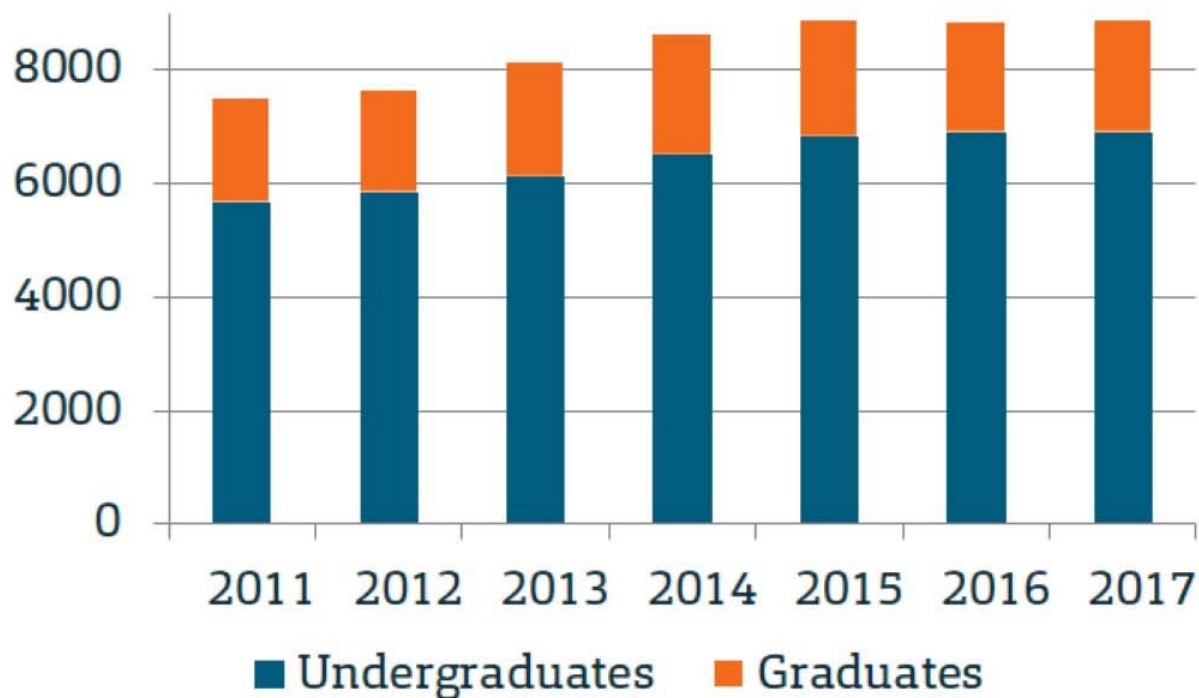
73% white

13% minority

11% international

2% not specified

## Steady Enrollment



Totals may not equal 100% due to rounding.

# HISTORY & ADVANTAGE

- Founded in 1870 as the Missouri School of Mines and Metallurgy
- 98 degree programs, 39 areas of study
- Broad range of engineering and computing degree programs (18)
- Cooperative Engineering Program with Missouri State
- Experimental Mine, named *Popular Science's* “awesome college lab”
- Missouri’s first nuclear reactor
- Experiential learning — and genuine critical thinking
- S&T offers the nation’s only Ph.D. in explosives engineering



Dr. Catherine Johnson  
Assistant Professor, Explosives Engineering



# SUCCESSFUL GRADUATES

## Return on Investment

**8<sup>th</sup> in the nation** for annual ROI

**6<sup>th</sup> in the nation** for public universities

**1<sup>st</sup> in Missouri** colleges and universities

*2017 PayScale College ROI Report*

Average  
undergraduate  
starting salary:  
**\$62,314**

Average graduate  
starting salary:  
**\$80,892**

2017 Fall  
Career Fair:  
**315 employers**  
**3,800 students**

*2016-2017 data from S&T's Career  
Opportunities and Employer Relations (COER)*



# SUCCESSFUL GRADUATES



## Most popular majors

- Mechanical Engineering
- Computer Science
- Electrical Engineering
- Engineering Management
- Chemical Engineering

## Top Hiring Employers

The Boeing Company

Cerner

Honeywell

Burns & McDonnell

MoDOT

AT&T

Accenture

Anheuser-Busch

Ford Motor Company

EN Engineering

Intelligrated

Amazon

*2016-2017 data from S&T's Career  
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# ABOUT OUR STUDENTS

## About our first-year students

**39%** involved in Project  
Lead The Way

**30%** involved in  
VEX or FIRST Robotics

**22%** are first generation

**19%** attended an S&T  
summer camp

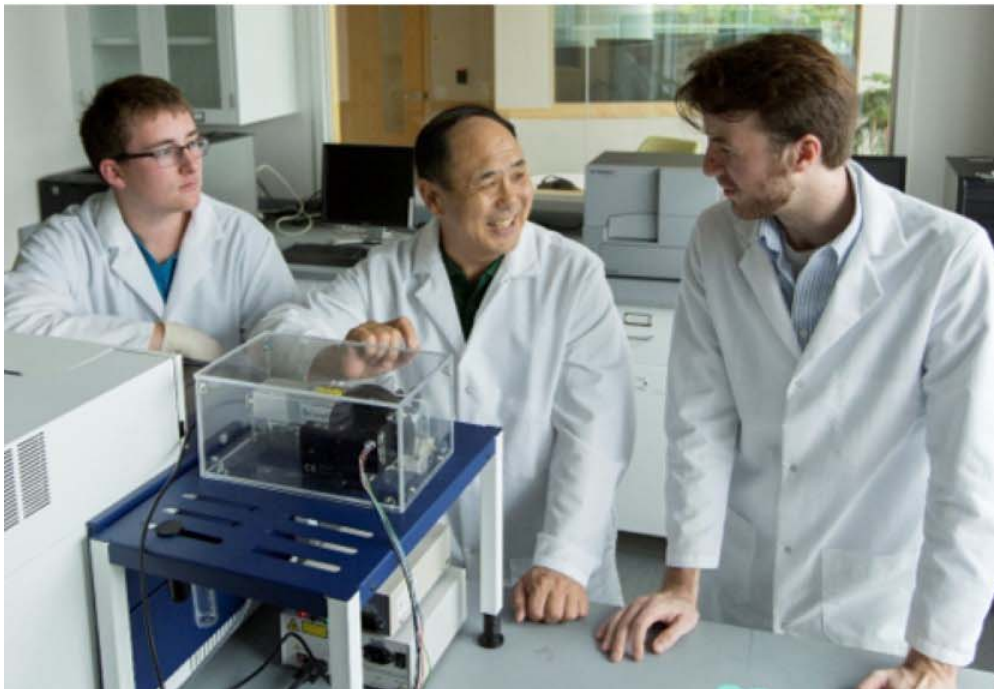
Average ACT score: **28**



# INNOVATION AND DISCOVERY

Research that tackles the world's greatest challenges

Dr. Yinfa Ma's P-scan technology could provide early cancer detection  
Bioactive glass fiber developed at S&T and MO-SCI speeds healing of wounds





# CONNECTING MISSOURI

## Two national University Transportation Centers at S&T

- Research and education aimed at solving problems affecting nation's aging infrastructure
- Technology developed at S&T used in dozens of Missouri bridges, including bridge on Highway 50 east of Jefferson City
- Developing robotic tools (drones) to monitor and inspect bridges



# 2017 NEW FACULTY

## Areas of expertise and research include:

- American Revolution
- Asphalt applications
- Astronautical engineering
- Comparative politics
- Computer networks
- Complex electricity markets
- Computational mathematics
- Cybersecurity
- Environmental economics
- Isotopic and environmental geochemistry
- Genetics
- Hydraulic fracturing
- Industrial organization
- Infrastructure sustainability
- International relations in high-tech sectors
- Irradiation effects in materials
- Modeling electromagnetic fields
- Music history
- Neural networks
- Partial differential equations from fluid dynamics
- Petroleum engineering
- Piezoelectric nanomaterials
- Plasma dynamics
- Power system planning
- Smart buildings
- Smart transportation
- Social & political theory
- Transportation engineering
- Ultra-high temperature materials
- Wireless and sensor networks



# 2017 NEW FACULTY

New faculty come from these universities:



**PURDUE**  
UNIVERSITY



UNIVERSITY OF  
NOTRE DAME

**IOWA STATE  
UNIVERSITY**



**UConn**



1865 THE UNIVERSITY OF  
MAINE



UNIVERSITY of  
LOUISIANA  
LAFAYETTE

ARKANSAS  
TECH  
UNIVERSITY

SOUTHERN ILLINOIS UNIVERSITY  
**EDWARDSVILLE**

**Berkeley**  
UNIVERSITY OF CALIFORNIA



CHESTNUT  
HILL  
COLLEGE



UNIVERSITY OF  
**ALBERTA**



**WPI**

**Beloit**  
College

UMASS  
AMHERST

**Alfred University**



UNIVERSITY OF  
**OREGON**

**UAF**  
UNIVERSITY OF  
**ALASKA**  
FAIRBANKS



**Rensselaer**

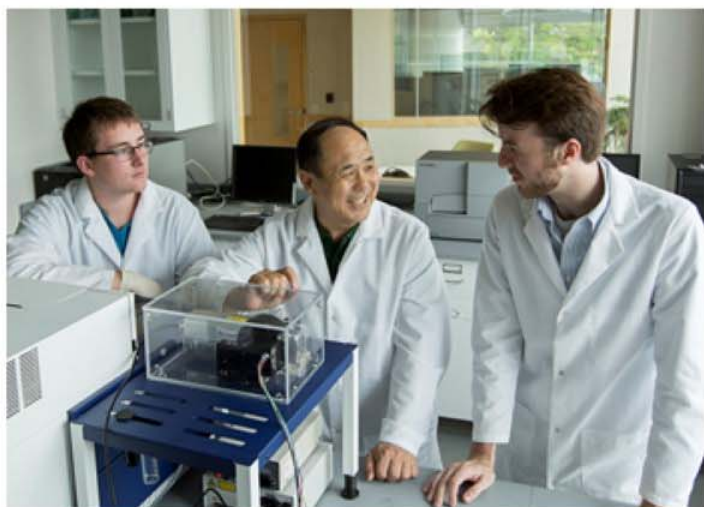


THE UNIVERSITY  
OF ARIZONA

**NDSU** NORTH DAKOTA  
STATE UNIVERSITY

**Idaho State**  
UNIVERSITY

# FACULTY AWARDS & RECOGNITION



Dr. Yinfu Ma named American Chemical Society Fellow



Dr. Bonnie Bachman receives Leavey Award for Excellence in Private Enterprise Education



Dr. Ian Ferguson named Royal Society of Arts Fellow



Dr. Julia Medvedeva leading \$1.6 million NSF grant on materials



Dr. Wan Yang leading \$2.1 million NSF grant on Permian extinction



# ECONOMIC IMPACT

The state is served by Missouri S&T and UM System:

**6,547** Missouri S&T students  
from Missouri

**2,616** S&T employees & retirees

**21,027** S&T alumni residing  
in Missouri



**In Phelps County:**

**\$962,000** UM construction  
projects with local vendors

**\$3.5 million** UM state tax  
revenue

**\$16.5 million** UM federal  
tax revenue

**\$98.6 million** UM salary and  
retirement income

*2016 data reported by UM System*

# ECONOMIC IMPACT

Students are expected to spend approximately \$24 million in Rolla this academic year.

**\$1,975** average spent by freshmen

**\$2,720** average spent by upperclassmen

**\$5,700** average spent by grad students & families

**161,000** vacant STEM jobs in Missouri projected for 2022

**\$3 million** annual increase in state GDP per engineer





# COMMUNITY INVOLVEMENT

- Celebration of Nations
- Haunted Mine
  - Oct. 20-21, Oct. 27-28 & Oct. 31
- Visitor nights at Missouri S&T Observatory
- Homecoming, Oct. 27-29 weekend
- Leach Theatre
  - William Shatner will present "Shatner's World" on Oct. 29
- Service days (e.g. Martin Luther King Jr. Day of Service and St. Pat's Gonzo Gives Back Day of Service)
- Student organizations (e.g. Society of Women Engineers hosts annual lock-in with high school girls)



# THANK YOU!

## Missouri S&T Mars Rover Design Team Winners of the 2017 University Rover Challenge

