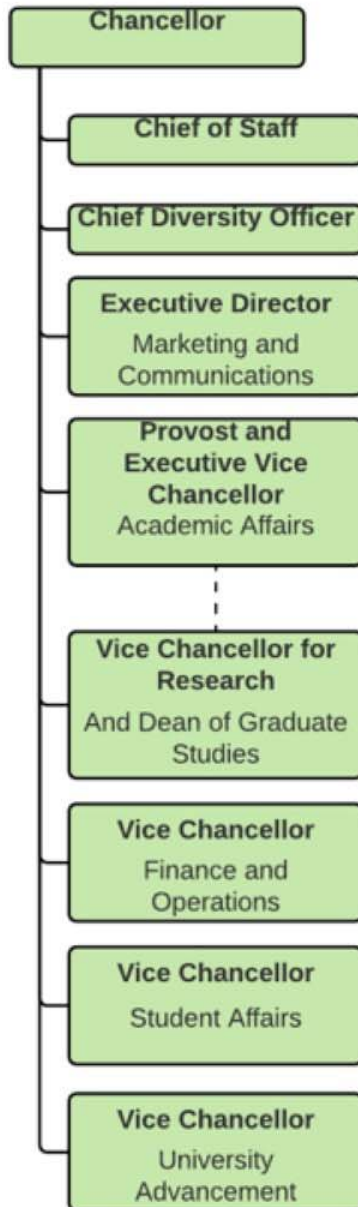


STATE OF THE UNIVERSITY

MISSOURI
S&T

Dr. Christopher Maples
Interim Chancellor
October 2, 2017

NEW LEADERSHIP



Neil Outar
Interim Chief
Diversity Officer
August 2017



Dr. Richard Wlezien
Vice Provost & Dean,
College of
Engineering and
Computing
August 2017



Cuba Plain
Interim Vice
Chancellor,
Finance and
Operations
September 2017

NEW LEADERSHIP

NEW CHAIRS FOR FALL 2017



**Dr. David
Borrok**

Geosciences,
Geological &
Petroleum
Engineering



**Dr. David
Duvernell**

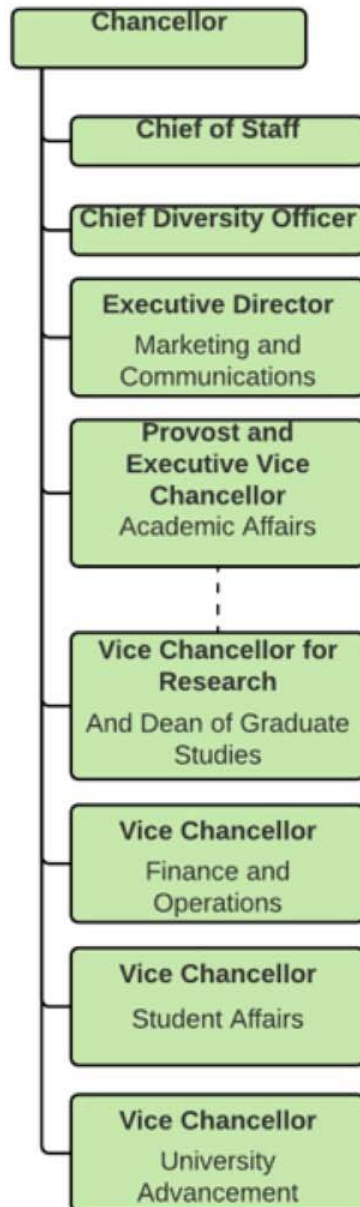
Biological
Sciences



**Dr. George
Markowsky**

Computer
Science

REALIGNMENT/RE-FOCUS



Update on Transitions – Effectiveness Driven

- ~9% Budget reduction from State for UM System
- Vice Chancellor for Research & Dean of Graduate Studies
 - Search under way
 - Will report to chancellor and provost
- CDO departments
 - Student diversity, outreach and women's programs (SDOWP) renamed **Student Diversity Initiatives**
 - Equity and inclusion programs named **Equity and Title IX**
- Eliminated 36 vacant & 15 occupied staff positions

HOW WE RANK

PayScale

- #24 (In-State) Best Value Colleges in Missouri [ROI type: 20-yr net]
- #34 (Out-of-State) Best Value Colleges in Missouri [ROI type: 20-yr net]
- #8 (In-State) Best Value Colleges [ROI type: Annual %]
- #9 (In-State) Best Value Colleges [ROI type: Annual %- with financial aid]
- #83 (Out-of-State) Best Value Colleges [ROI type: Annual %]

USAToday/College Factual

- #3 Best University for Engineering, for the fourth consecutive year in 2017
- #3 Best University for Veterans Studying Engineering
- #5 Best Value for Civil Engineering
- #5 Best Value for Mechanical Engineering
- #8 Best Investment for Engineering Degrees in 2017



HOW WE RANK

U.S. News & World Report

The Top Schools - #89 Schools of Engineering (Graduate); #61 (Undergraduate)
Best Colleges Rankings - #77 Top Public Schools
Best Online Programs - #72 Best Online MBA Rankings
Best Online Programs - #9 Best Online Graduate Engineering
Best Online Programs - #22 Best Online Graduate Business (Excluding MBA)
Best Online Programs - #8 Best Online Graduate Computer Information Technology

Princeton Review

Top 50 - Colleges That Pay You Back - #37
Colleges That Pay You Back Without Aid - #21

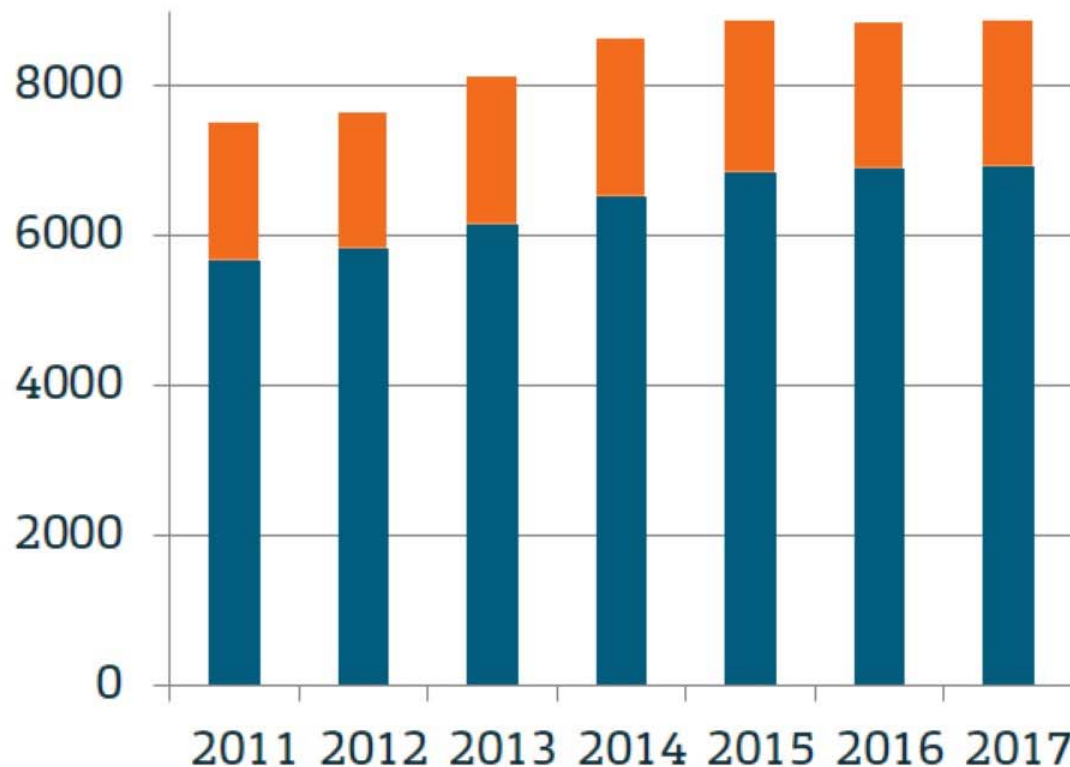
Forbes

#21 in the Midwest
#41 in Public Colleges
#73 in Research Universities
#123 in America's Best Value Colleges

MISSOURI
S&T



STEADY ENROLLMENT



Graduates
Undergraduates

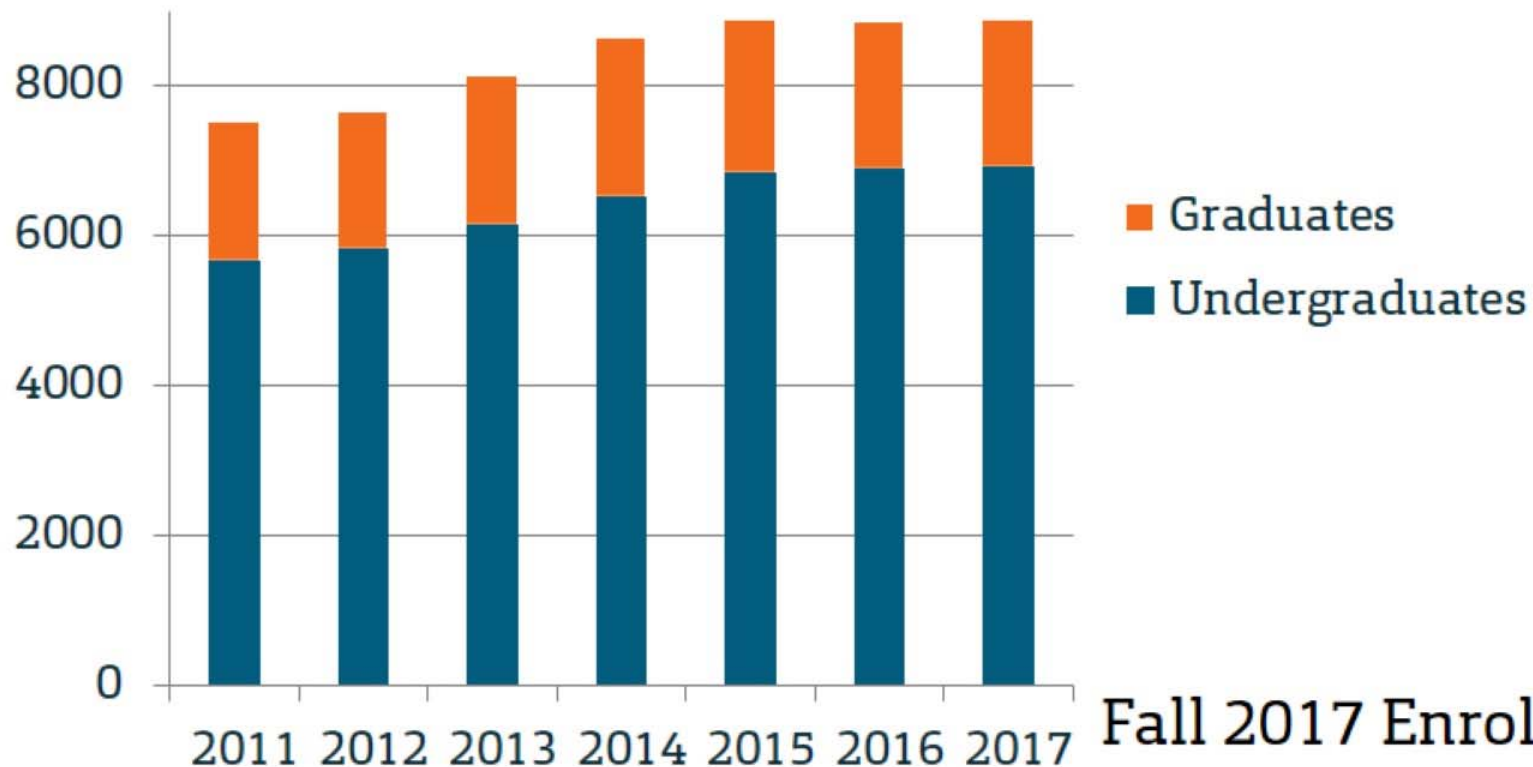
Fall 2017 Enrollment

6,920 Undergraduates

1,964 Graduates

8,884 Total **+0.5%**

STEADY ENROLLMENT



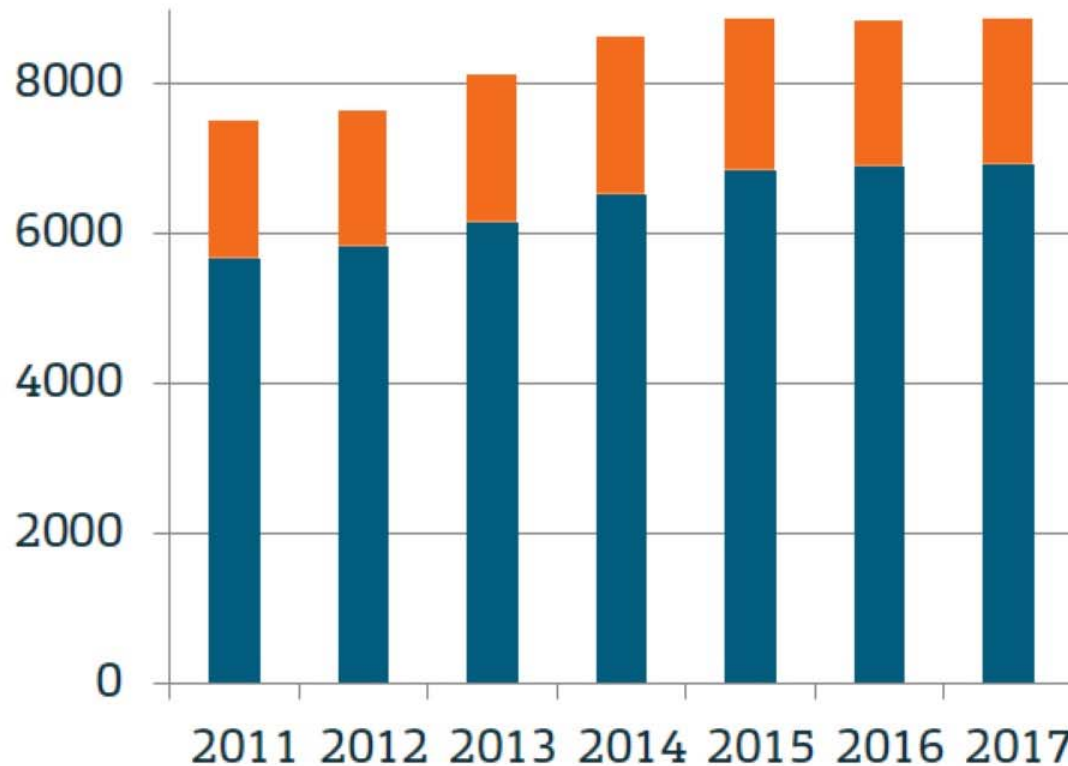
Fall 2017 Enrollment

1,929 Grad Students 2016

1,964 Grad Students 2017

1.8% Increase

STEADY ENROLLMENT



Graduates
Undergraduates

Fall 2017 Enrollment

1,426 New Freshmen

1,482 Fall 2016

(3.8%) Decrease

ENROLLMENT TRENDS

Fall 2017 Enrollment

8.1% URM 2015

8.4% URM 2016

8.6% URM 2017

Fall 2017 Enrollment

28.1 ACT 2016

28.0 ACT 2017

3.79 GPA 2016

3.88 GPA 2017

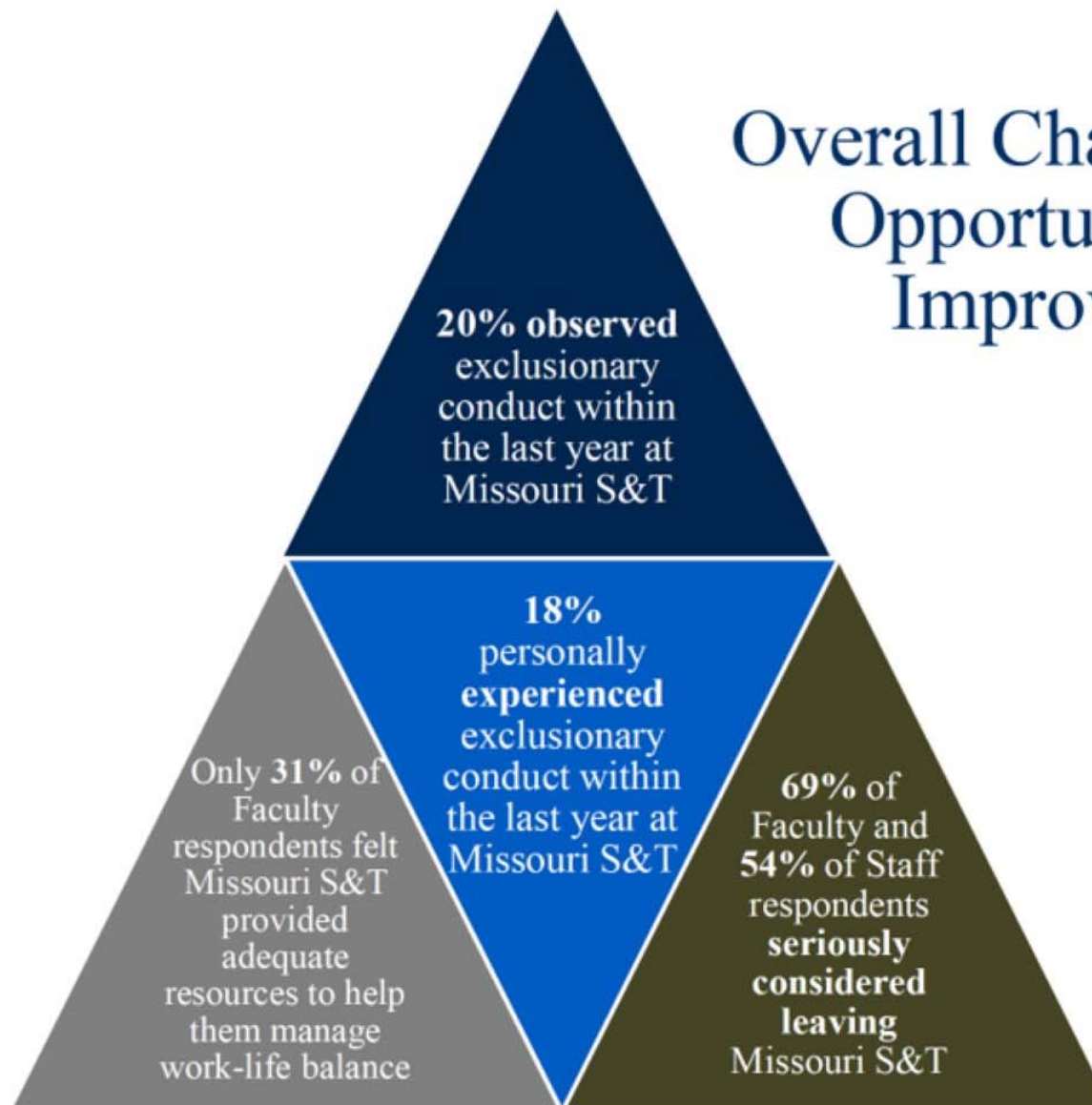
Fall 2017 Enrollment

32.6% Out-of-state
2015

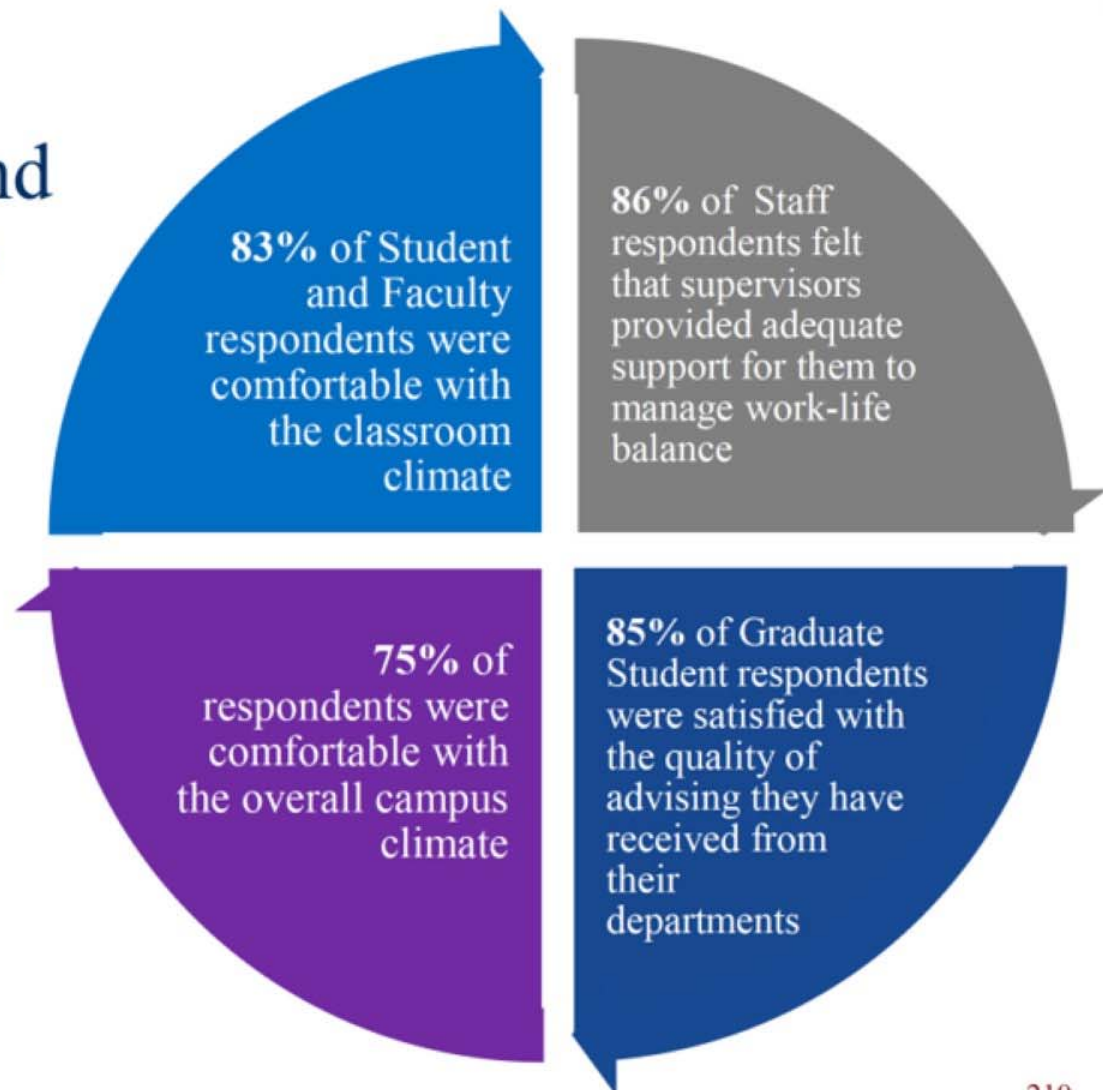
29.2% Out-of-state
2016

27.7% Out-of-state
2017

Overall Challenges and Opportunities for Improvement



Overall Strengths and Successes



BECOMING A NATIONAL LEADER

Advanced Construction and Materials Laboratory



Missouri S&T, UM System to fund project through gifts & university funds

S&T Legislative Priorities

- > **UM System priority:**
 - University of Missouri System core funding

- > **S&T campus priorities:**
 - Graduate engineering degree programs in North Kansas City (\$1M)
 - Mechanical engineering partnership with Missouri State University in Springfield (\$1M)
 - Expansion of Project Lead The Way (\$400,000) to the state's poorest school districts in southern Missouri

- > **S&T capital priority:**
 - Biosciences Complex (Phase 3), including Bertelsmeyer Hall and Schrenk Hall (\$54M)

BUILDING ON SUCCESS

Biosciences Complex



Phase I: James E. Bertelsmeyer Hall
\$22.3M—100% S&T + donors
Opened Fall 2014



Schrenk Hall upgrade
(Phases II & III)

- Phase II: \$20M
(\$12M State; **\$8M S&T**)
- Phase III: \$54M request (~56% total project cost)

ECONOMIC DEVELOPMENT

FY2017 – a record-breaking year at Missouri S&T for technology transfer

- \$540,396 received in royalty income (>2X 2013)
- \$187,998 in royalties paid to inventors and authors
- \$121,177 in royalty income returned to S&T departments (~ \$25,000 more than 2016)
- 47 new invention disclosures, including five software disclosures

FOCUS ON FACULTY & RESEARCH STAFF SUCCESS

Research, Teaching, and Service

- Graduate student and post-doctoral support
- Appropriate facilities and equipment
- Streamlined processes, but safeguards
- Recognition, advocacy, and telling the story in RTS
- Support for the non-RTS functions
- Increased faculty and staff diversity
- Clear compensation strategy for faculty and staff

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

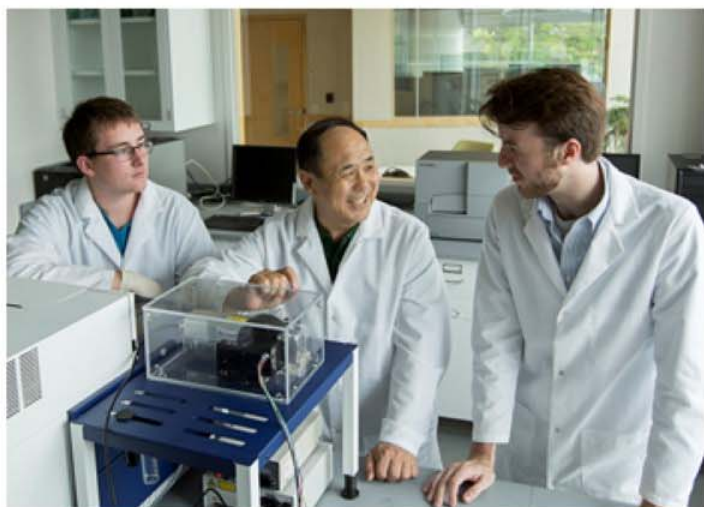


THE UNIVERSITY
OF ARIZONA

NDSU NORTH DAKOTA
STATE UNIVERSITY

Idaho State
UNIVERSITY

FACULTY AWARDS & RECOGNITION



Dr. Ma named American Chemical Society Fellow



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



Dr. Ferguson named Royal Society of Arts Fellow



Dr. Medvedeva leading \$1.6M NSF grant on amorphous materials



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

FACULTY AWARDS & RECOGNITION

College of Arts, Sciences, and Business

- > \$800,000 NSF grant on energy management in smart homes

Dr. Denise Baker

- > \$100,000 NEH grant for Latin American studies

Dr. Kathryn Dolan

Dr. Kathryn Northcut

Dr. Kathleen Sheppard

Dr. Jorge Porcel

MISSOURI
S&T



FACULTY AWARDS & RECOGNITION

College of Engineering and Computing

> NSF CAREER Awards

- Dr. Jie Gao, optical metasurfaces
- Dr. Ed Kinzel, scaling metasurface manufacturing
- Dr. Xiaodong Yang, optical metasurfaces research
- Dr. Caizhi Zhou, metallic composites



> ONR Young Investigator



Dr. Xiaodong Yang

STATE & NATIONAL TRENDS

- Decrease in State Support
 - ~9% this year
 - Likely more each year for the next several years
- Tuition Cap
 - Particularly problematic when coupled with decreasing state support
- Increased Competition for Excellent Students, Faculty, & Staff
 - Especially prevalent for out-of-state students & underrepresented groups
- Changing Demographics
 - High-school graduation generally flattening
 - High-school diversity generally increasing
- Changing Demands for Degrees, Certificates, & Locations
 - Increasing emphasis on post-graduate degrees and certificates
 - Students increasingly want degrees & certificates to come to them (jobs too!)
- Cost/Benefit of Attending College
 - Loans and student debt increasing
 - More students with credits in hand (dual enrollment, transfer credits, etc.)
 - Increasing disparity between haves and have-nots

MISSOURI COMPACT

Missouri Compact for Education, Research, Engagement and Economic Development

- Excellence in Student Success
 - Experiential learning focus (18 student design teams, internships, co-ops, study abroad, service learning/research); employer satisfaction; student services
- Excellence in Research and Creative Works
 - Unique labs and facilities, productive faculty & staff, record year in IP
- Excellent Community Engagement & Economic Development
 - Project Lead The Way for Missouri, UTCs, local businesses
- Inclusive Excellence
 - Climate Survey (full report at climatesurvey.mst.edu); celebration of nations
- Excellence in Planning, Operations, & Stewardship
 - Geothermal project (reduced deferred maintenance by \$60 million, saves \$1.2 million/year in reduced energy costs); ahead in strategic planning

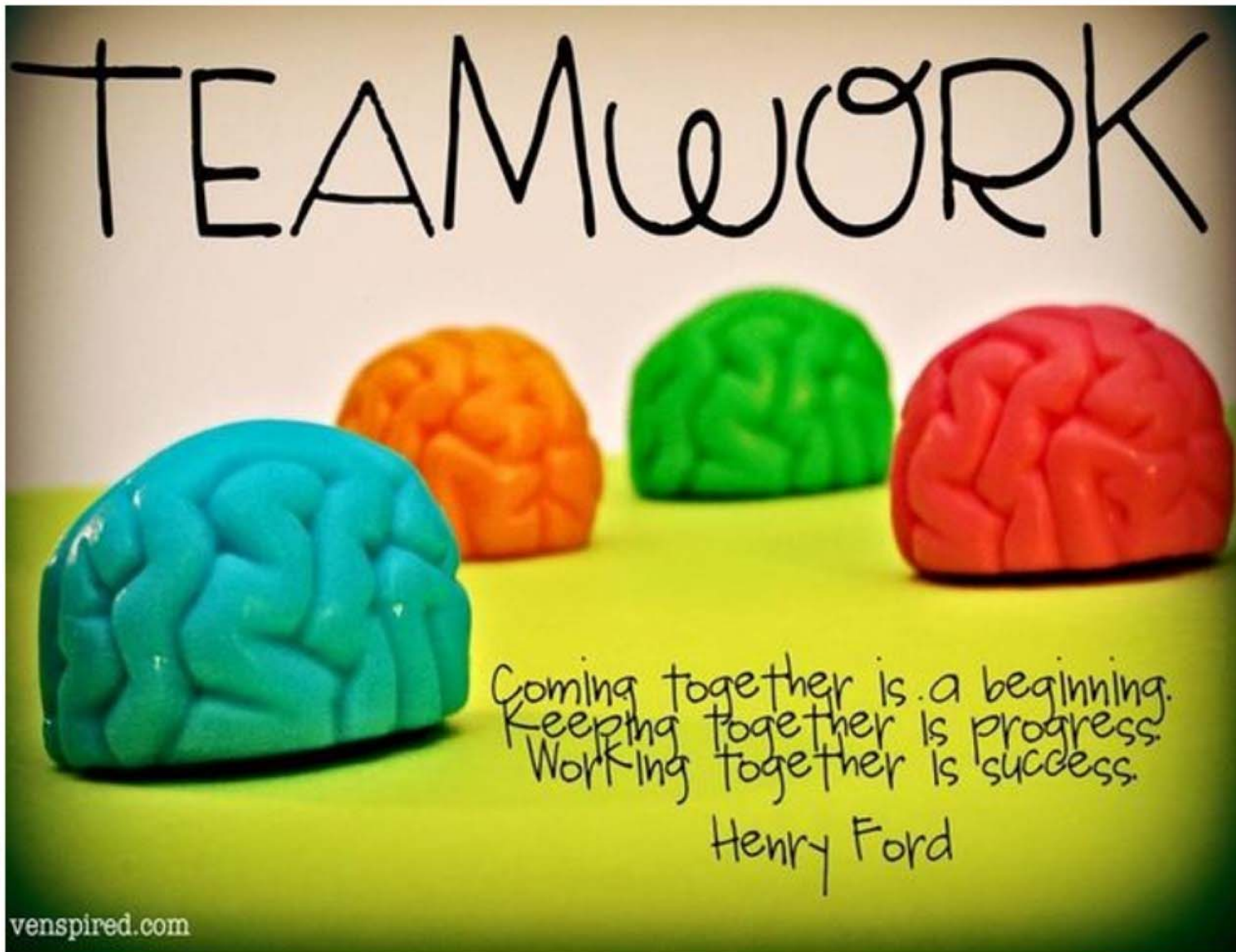
THE S&T EXPERIENCE: GENUINE CRITICAL THINKING

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



MISSOURI
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S&T SUCCESS BEGINS NOW WITH EACH OF US!



THANK YOU! QUESTIONS?

