



John Mitchell
Industrial Liaison Officer

**creating connections
for our industry partners**



People

- ~ 92,000 students
- ~ 16,000 graduate students

Programs

- > 150 undergraduate majors
- > 75 doctoral programs
- \$2+ billion total revenue
- \$350M state support (<20%)

Research

- \$350M total awards (research, gifts)
- Looking to grow to \$700M by 2020





19,076

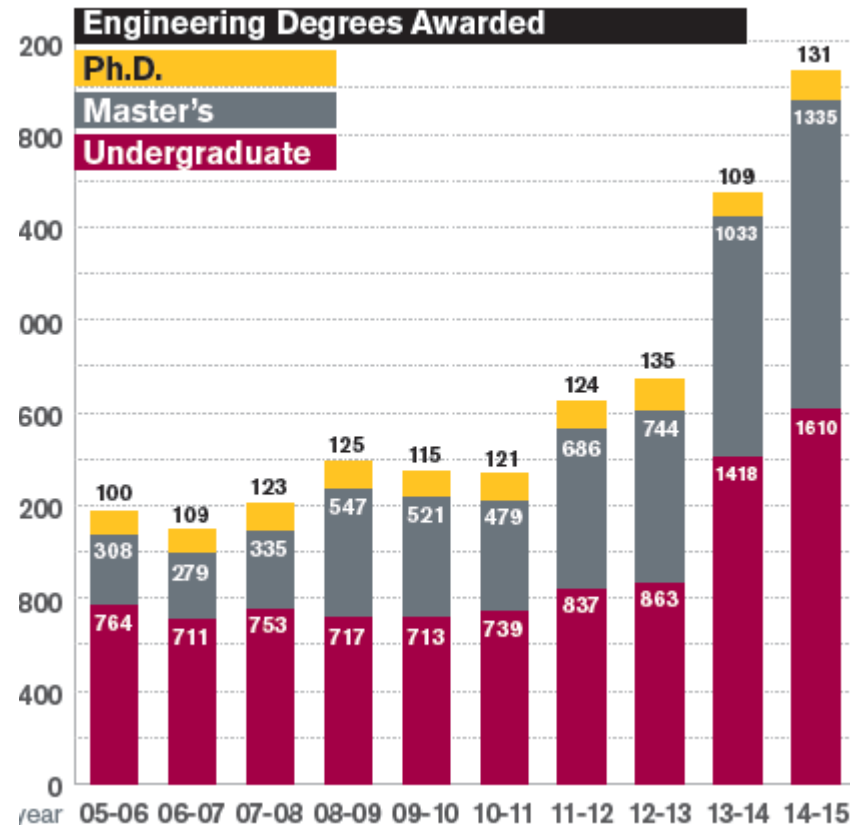
Ira A. Fulton Schools of Engineering

fall 2015 enrollment

2,801 first-time freshmen
fall 2015

3,076 degrees granted
2014–2015

30% of Barrett, the Honors
College students are
in the Fulton Schools



ENGINEERING RESEARCH CENTERS



We are leading **critical national initiatives**

QESST NSF-DOE Engineering Research Center with partners MIT, Caltech, Georgia Tech and others

CBBG NSF Engineering Research Center with partners Georgia Tech, New Mexico State and UC Davis

Partner on Rice University-led NEWT NSF Engineering Research Center with Yale and UTEP

Five NSF I/UCRCs (Industry/University Cooperative Research Programs): PSERC, Connection One, SenSIP, WET, and Center for Embedded Systems

Two NSF IGERTs (Integrative Graduate Education and Research Traineeship)

Six MURI awards (Multidisciplinary University Research Initiatives); 11 total since FY2005

\$18 million from USAID to establish the Partnership Center for Advanced Studies in Energy (PCASE) to improve power production in Pakistan

HEEAP, Higher Engineering Education Alliance Program (Intel, Siemens) \$20M cash and more than \$50M in-kind donations by academic, government and industry partners

20 young investigator awards from NSF CAREER, AFOSR YIP, DARPA YFA, and NIH Directors/Development over the past two years

Get our latest news: fullcircle.asu.edu



**student
engagement**



**industry
research**



**extended
education**



**corporate
scholarships**





student engagement

Scholarships: build brand awareness with students

Capstones and eProjects:

Teams of students working on industry challenges

Co-ops: students get credit for internship at your company; eases academic to work transition; offer workforce development, economic resources

Research consortia: graduate students and postdocs working on industry challenges in robust multi-university, multi-company environments; training of the country's next generation technology and thought leaders



laboratory access: many laboratories are made available for use by the public at competitive rates

research center membership

sponsored research

IP licensing

sharedresources.asu.edu

industry research



extended education

20+ years experience

professional development
programs

2,000+ graduate students

enrolled annually into **150
online courses** across **13
degree programs**

500+ professionals trained

annually through online and
via campus-based and
custom non-credit programs

Flexible delivery: online,
accelerated and blended
formats



**corporate
scholarships**

**Corporate brand
awareness for
improved recruiting
and student access**

**Can be as small as a
sponsored lunch or as
large as sponsoring a
career night**

Perfect Storm



student engagement



research



extended education



development



Member engagement

Sustainability and CdTe projects

new efficiency record

Four year commitment

Co-author papers

Donated 1000 modules

Solar Energy Engineering & Commercialization

Academic Advisory Board member

20+ alumni from the program



Dr. Vasileska
QESST Faculty

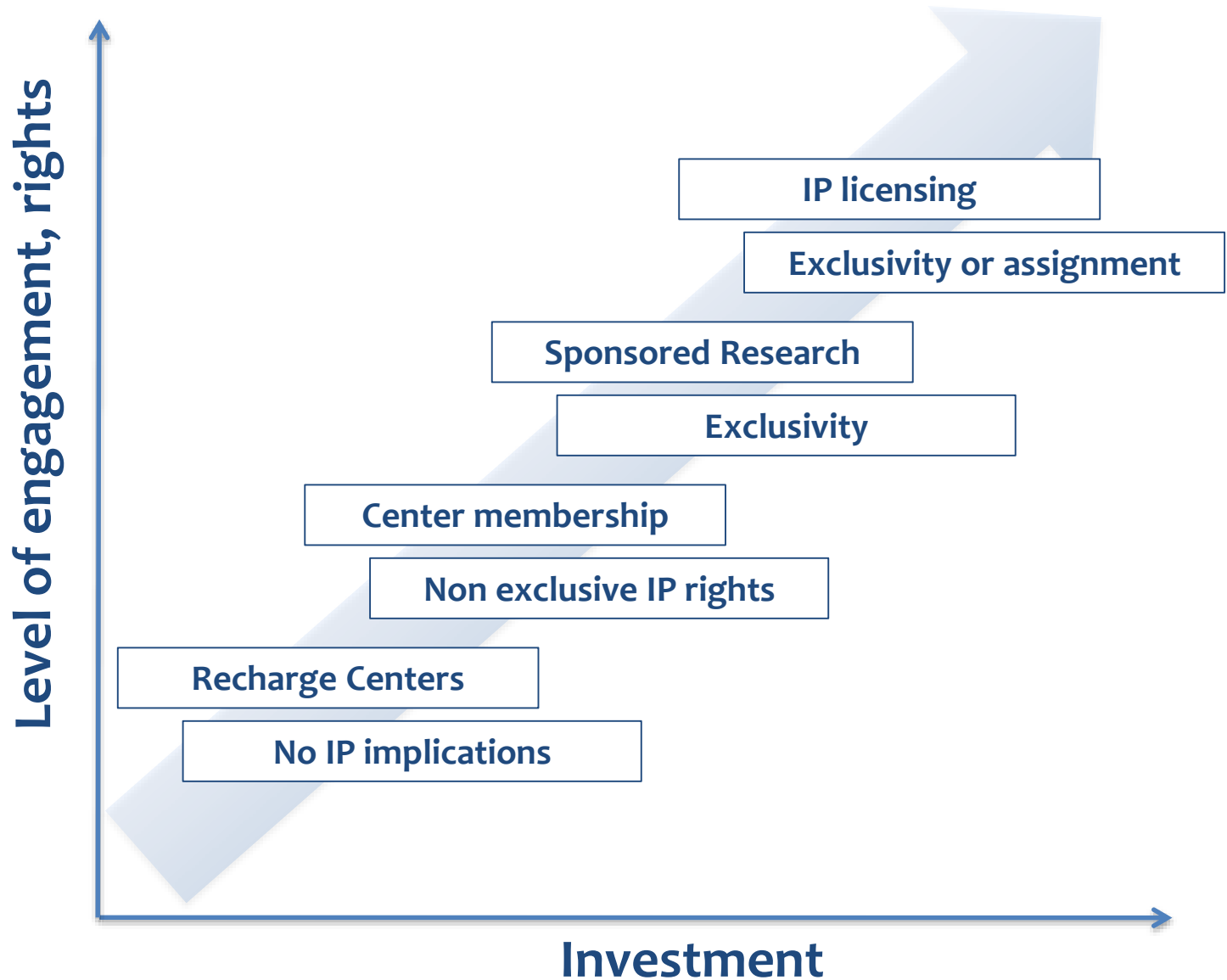


Dwarak Rav.
QESST Scholar

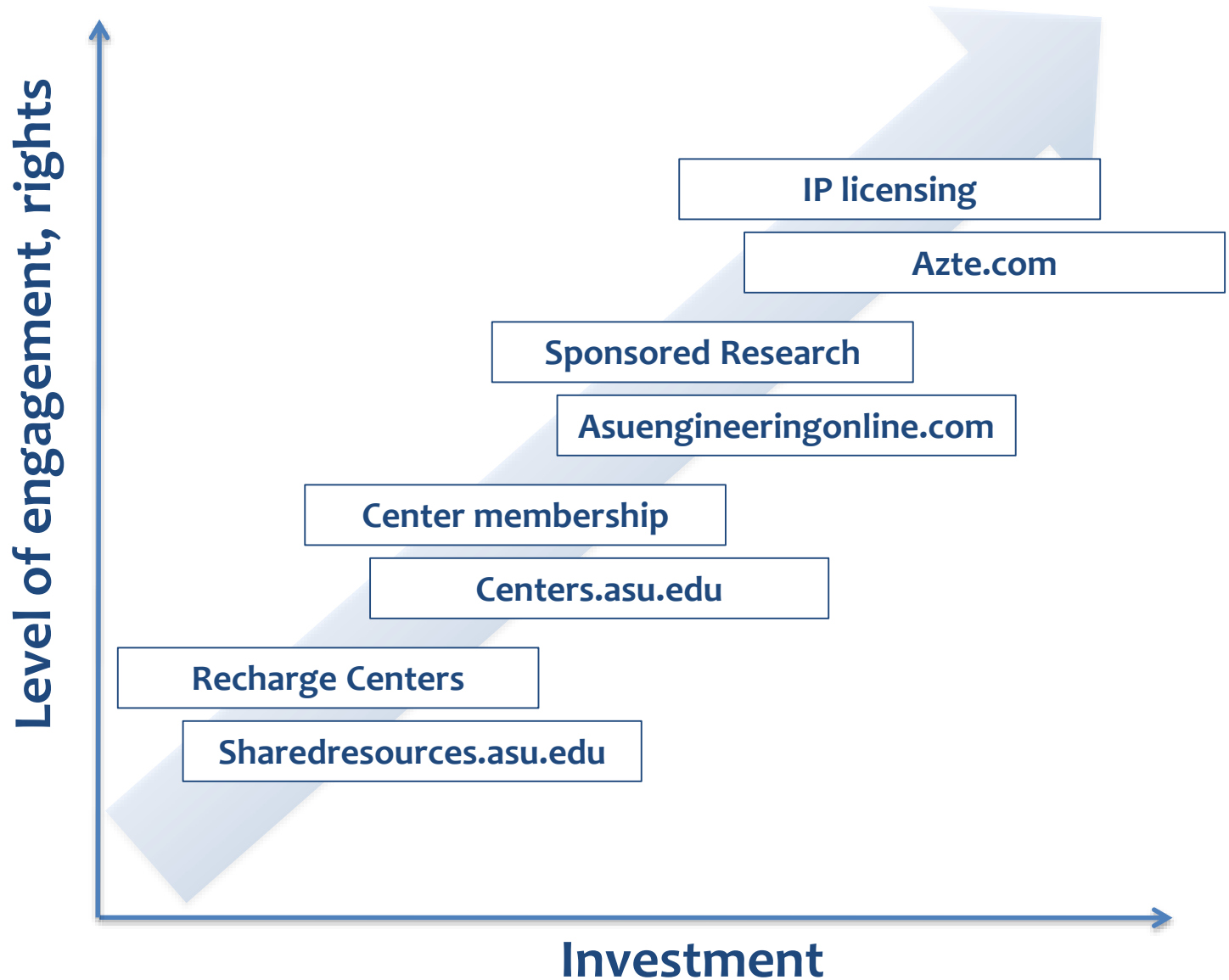
Key Components

Research **Education**
Joint Proposals
Students **Industry**
Engagement
Partner Universities **Faculty**
Workshops **Innovation**

Industry engagement pathways



Industry engagement pathways



IAB meetings

Feedback

research

student presentations
(technical and style)

Thrust / testbed alignment

Open floor for students

career questions

SWOT analysis

Poster sessions

Tours



Project reviews

Individual projects are reviewed
by one company per project
typically once per month



Research Agenda

Rank and provide feedback annually on
all proposed projects (faculty and member)



Mentor program

One student – one IAB mentor
monthly meetings



Semi monthly webinars

Wide variety of center/industry related topics
industry, student, faculty topics
new breakthroughs
SLC updates



Social Media

Best practices workshops



Where are they now



Eva Pettinato
Aerospace Engineer at Orbital ATK
Phoenix, Arizona Area | Aviation & Aerospace
Current: Orbital ATK, Self-Employed
Previous: Arizona State University, Arizona Science Center, Envy
Education: Arizona State University - Ira A. Fulton Schools of Engineering

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Akhil Mehrotra
Process Engineer at Applied Materials
Sunnyvale, California | Semiconductors
Previous: University of Houston
Education: University of Houston

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Jim Keblitz
Application Engineer at Applied Materials
Tempe, Arizona | Semiconductors
Current: Applied Materials, Test3C Engineering
Previous: Arizona State University, Applied Materials, Direct Alliance
Education: Arizona State University

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Chloe Fabien
Nanomaterials and Vacuum
Greater Seattle Area | Nanotechnology
Previous: Georgia Institute of Technology
Education: Georgia Institute of Technology

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Guy Pickett
Process Engineer at Alta Devices
San Francisco Bay Area | Higher Education
Previous: Arizona State University, Applied Materials, United States Marine Corps
Education: Arizona State University

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Carrie Culp
Engineer II Expansion Planning at MISO
Greater New Orleans Area | Utilities
Current: MISO
Previous: Arizona State University, QESST, Midwest ISO
Education: Arizona State University

Priyaranga Koswatta
Research Assistant
Tempe, Arizona | Semiconductors
Current: Arizona State University
Previous: Applied Materials, Sri Lanka Institute of Information Technology, Purdue University
Education: Arizona State University

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Junli Li
DER Consultant at ICF International
Washington D.C. Metro Area | Oil & Energy
Current: ICF International, Mid-Atlantic Industrial Assessment Center
Previous: Environmental Defense Fund, Center for Energy and Environmental Policy, University of Delaware, Foundation for Renewable Energy and Environment
Education: University of Delaware

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Juan Manuel
Research Scientist at Lumintec
Tucson, Arizona Area | Research
Previous: The University of Arizona, Prism
Education: University of Arizona



Shi Liu
Process TD engineer
Hillsboro, Oregon | Electrical/Electronic Manufacturing
Current: Intel Corporation
Previous: Arizona State University



Nicole Kotulak
NRC Postdoctoral Associate at Naval Research Laboratory
Washington, D.C. | Research
Previous: University of Michigan
Education: University of Michigan

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Vivek Sharma
PTD Thin Film Module Engineer at Intel Corporation
Hillsboro, Oregon | Semiconductors
Previous: Solar Power Lab, Arizona State University, TUM, Philips, Tevco, Texas Instruments, Intel
Education: Arizona State University

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Matthew Erdman
Graduate Technical Intern at Sandia National Laboratories
Rio Rancho, New Mexico | Semiconductors
Current: Sandia National Laboratories, University of New Mexico
Previous: Arizona State University, 310 Solar LLC
Education: The University of New Mexico

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Sergio Castellanos
Energy Fellow at Berkeley Energy & Climate and ITESM
San Francisco Bay Area | Renewables & Environment
Current: Berkeley Energy & Climate Institute - ITESM
Previous: Massachusetts Institute of Technology (MIT), Shell Energy (SENER) - Mexican Secretariat of Energy Architects & Engineers, Inc.
Education: Massachusetts Institute of Technology



Stephanie Scott
Mechanical Design Engineer at Apple
San Francisco Bay Area | Mechanical or Industrial Engineering
Previous: MIT, PARC, CARES Project (Community Assessment Renewable Energy & Sustainability)
Education: MIT

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Prateek Garg
Electrical Engineer specializing in Solid State Devices
Hillsboro, Oregon | Electrical/Electronic Manufacturing
Current: Intel Corporation
Previous: Arizona State University, Qualcomm, Jawaharlal Nehru Centre for Advanced Scientific Research
Education: Arizona State University

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Ben Wender
STAR Fellow at US EPA
(EPA)
Tempe, Arizona | Higher Education



Hal Emmer
Senior Process Engineer at Maxim Integrated
Greater Los Angeles Area | Electrical/Electronic Manufacturing
Education: California Institute of Technology

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Shelby Vorndran
Intern at Edmund Optics
Tucson, Arizona Area | Renewables & Environment
Current: Photon Engineering, LLC, The University of Arizona, College of Optical Sciences
Previous: Edmund Optics, University of California, Los Angeles, DePaul University
Education: University of Arizona

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Where are they now in industry

Solar

Alta Devices

First Solar

Gehrlicher Solar

Global Solar Energy

OCI Solar Power

DEPCOM Power

Modern Electron

SunPower

Sunprime

Solexel

1366 Technology

SolarWorld

Sinton Instruments

Trina Solar

Solar City

Semiconductor

Intel

ON Semiconductor

Maxim Integrated

Optics

Luminit

Photon Engineering

Edmond Optics

Laser Components

Agril

Governmental agency

Sandia

Naval Research Labs

Other

L3 Communications

Omnivision

Orbital ATK

Apple

Materials

Applied Materials

Air Liquide

Heraeus

DuPont

Utility

MISO Energy

SRP

Consulting

Synapse

ICF International

Poster sessions

Soft skills development



NSF and DoE Support

Site visit

Sustainability plan

Associated projects

Member referrals



National Science Foundation Director Dr. France Córdoba

Industry Calendar

Activities

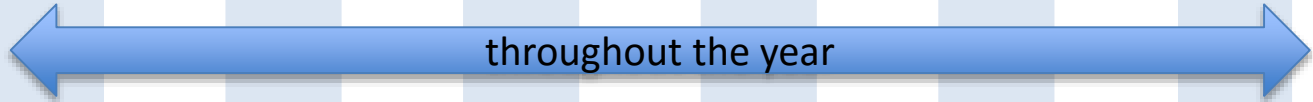
J A S O N D J F M A M J

Industry Advisory Board Meeting



Annual site visit

Annual 1-1 meetings with individual members



IAB ranks faculty project proposals



Mentor program



Vidyo series 1st and 3rd Monday of each month



PVSC Conference – student, industry luncheon



Perfect Pitch



National Perfect Pitch Winner



Perfect Pitch Winner to Rock star



Radio interview



Headline news



Letter from the mayor



Buenos Dias Canarias

da

Diario de Avisos.com

DECANO DE LA PRENSA DE CANARIAS



**PABLO
GUIMERÁ COLL**
CIENTÍFICO
TINERFENO

Este orotavense de 28 años ganó un importante concurso científico en Estados Unidos con una investigación sobre energía solar que permitirá reducir los gastos de producción de los paneles en el 30%.



del año con 50 actuaciones y la participación de más de 40 bailarines.

horas, en el campo de fútbol municipal de Garachico.



**HASSAN SHEIKH
MOHAMUD**
PRESIDENTE
DE SOMALIA

El Gobierno de Somalia, en el colmo de la intransigencia, ha prohibido la Navidad en el país por creer que "esta festividad es contraria a la cultura islámica y podría dañar la fe de la comunidad musulmana".

1. Hom...
y en ve...
chun...
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La is...

SUPER...

Questions?

John.J.Mitchell@asu.edu