Semiconductor Faculty Search

Electronic Devices, Materials and Integrated Circuits

Ira A. Fulton Schools of Engineering

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Arizona State University

The opportunity

The Ira A. Fulton Schools of Engineering (Fulton Schools or FSE) at Arizona State University invites applications for tenured or tenure-track faculty in engineering with specific interest in semiconductor devices, materials, and integrated circuit design and processing technologies. While the tenure home may be in any of the schools within the Ira A. Fulton Schools of Engineering, the School of Electrical, Computer and Energy Engineering (ECEE) has significant activity in these areas. Appointment may be at the Associate or full Professor rank commensurate with the candidate's experience and accomplishments. This initiative is a key element of ASU's major expansion of the Fulton Schools to position it as one of the top 15 engineering schools in the U.S. and expand its semiconductor and integrated circuit expertise and research.

One of the nation's top public universities and ranked #1 in Innovation by U.S. News & World Report, ASU is undertaking a bold reinvention of higher education as the New American University. ASU has developed numerous new programs and units that defy and bridge disciplinary boundaries to enable the exploration and discovery of new knowledge, while developing practical solutions to serve Arizona and the world at large. **ASU has strong and simultaneous commitments to educational access, research and teaching excellence** and assumes significant responsibility for the cultural, social, and economic vitality of its surrounding communities in the metropolitan Phoenix region and beyond.

One of the fastest growing academic research enterprises in the U.S., ASU has created a vibrant environment of discovery, interdisciplinary research and innovation focused on addressing society's greatest challenges. Its research expenditures have nearly tripled over the last decade, totaling more than $670 million last year. **ASU is well on its way to expanding the university's research enterprise to over $800 million in annual activity by 2025.** The Fulton Schools play a pivotal role in this continued expansion.

Ira A. Fulton Schools of Engineering research and innovation

The Fulton Schools of Engineering is achieving new levels of national and international prominence as it grows its global leadership in engineering education, research and innovation at scale.

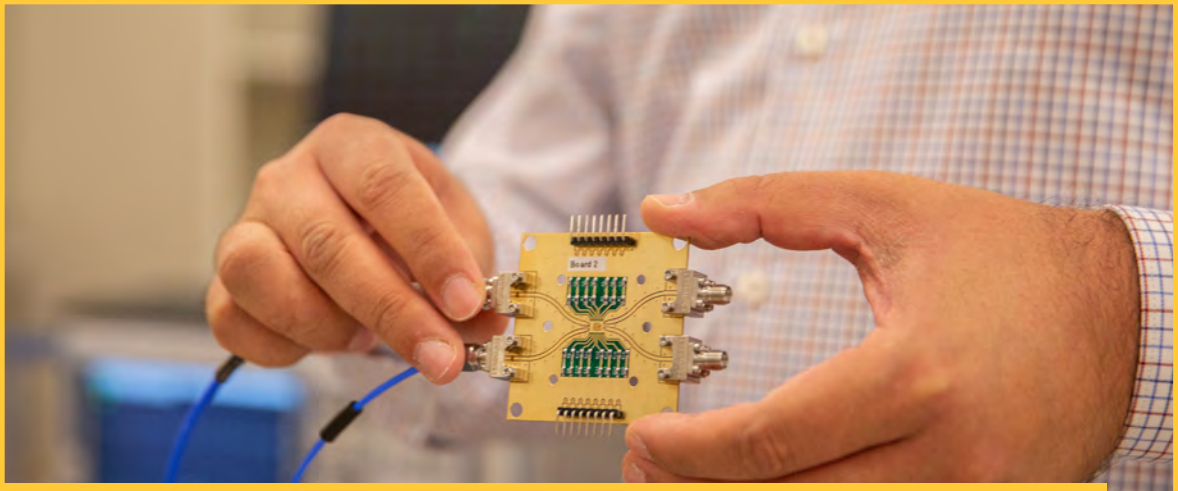
The Fulton Schools of Engineering research enterprise is at the cutting-edge of use-inspired research and is leading critical national initiatives. This includes being the lead institution on two National Science Foundation Engineering Research Centers (ERCs) and partner on one other ERC whose breakthrough discoveries are leading to new paradigms in geotechnical engineering, photovoltaics, clean water technologies and the modern electrical grid.

The Fulton Schools is also home to dozens of research centers that capitalize on faculty expertise and span areas that include additive manufacturing, artificial intelligence, bioelectronics, cybersecurity, communication systems, emerging materials, energy, engineering education, regenerative medicine, robotics, sustainability, transportation, and more.

FSE faculty are actively involved in many of ASU's university initiatives, including collaborative research activities with the Biodesign Institute, and the Julie Ann Wrigley Global Futures Laboratory (including the Global Institute of Sustainability and Innovation). Through these and other initiatives, Fulton Schools researchers connect across their disciplines to team in pursuit of transdisciplinary and convergent research engagements.

The Fulton Schools of Engineering research enterprise is characterized by discoveries of foundational value and advancement of ideas and technologies of translational impact, as evidenced by the fact that FSE is among the top engineering colleges in the country for invention disclosures, issued U.S. patents and startups (per $10 million of research expenditures, according to Association of University Technology Managers (AUTM)).

The university's research, innovation and entrepreneurship efforts, and technology transfer are facilitated through Skysong Innovations, ASU's technology transfer arm, which helps researchers successfully navigate the path to launching startups and commercialization of their technologies.



School of Electrical, Computer and Energy Engineering

The School of Electrical, Computer and Energy Engineering's graduate programs are highly ranked with its electrical engineering graduate program at #31 by U.S. News and World Report (2022) and in the top 20 according to the NSF Higher Education Research and Development rankings (2019).

ECEE's long-standing research excellence, new areas of research engagement, growth in student enrollment to record levels, and the development of innovative new academic programs has attracted national and international attention. Annual research expenditures continue at impressive levels in an environment of increasing competition for federal funds. ECEE continues to accelerate its progress through aggressive faculty hiring.

$38.8M
research expenditures
FY2020

76
tenured/ tenure-track faculty

3,338
Fall 2020 total enrollment

2,494
undergraduates

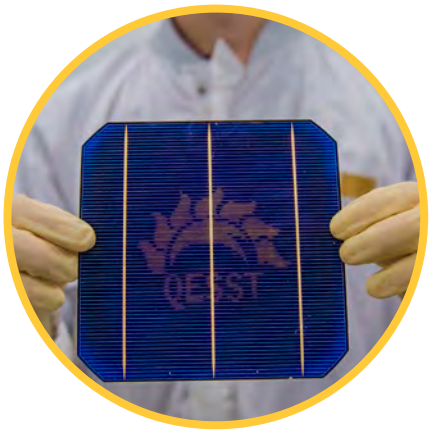
834
graduates

Research

Research

Our research areas reflect the diversity of the electrical engineering profession and range from the very small (nano-scale electronic devices and their modeling), to the very large (the U.S. electric power grid and its control). Our faculty includes experts in many application areas such as the design of flight control for aircraft and the implementation of neural interfaces for biomedical applications.

Graduate students are involved in all of our research activities and have access to state-of-the-art facilities such as the electromagnetic anechoic chamber, the wireless communications lab, and the integrated circuit fabrication clean-room. Some programs offer students theoretical approaches for the design of communication systems, while others include the implementation of wireless communications devices such as the circuits in cell phones.



These research efforts are aligned with national and international efforts to address worldwide challenges in semiconductor and integrated circuits, energy production and distribution, healthcare technology and delivery, sustainable development and economic growth, communications technology and information management, and global security.

Semiconductor Faculty and Research

ASU offers a deep well of expertise in semiconductor technology among the faculty of the Fulton Schools. ECEE's faculty members are expanding the frontiers of research and growing the next generation of semiconductor and integrated circuit industry professionals.

Why ASU

"The culture of open collaboration and generous mentorship was a major factor in my decision to join ASU. The working environment and the strong research support the Fulton Schools has provided is enabling me to build a research program around the questions that inspire me and to pursue use-inspired fundamental research."

Gautam Dasarathy, Assistant Professor, ECEE

"I was attracted to ASU by the state-of-the-art research facilities, established semiconductor industry network, and inspired student body."

Zhaoyang (Frank) Fan, Professor, ECEE

"I came to ASU from industry in the 1980s and have led efforts to develop facilities and faculty expertise in solid-state electronics. ASU's international aspirations and entrepreneurial approach match my interests in creating innovations with near-term commercialization prospects and leveraging faculty collaborations around the world."

Michael Kozicki,
Director, Center for Applied Nanoionics and Professor, ECEE

"ASU has established strong research programs in semiconductor, materials, energy, and bioengineering research. I came to ASU to establish an interdisciplinary program in advanced optical and optoelectronic devices for energy and biomedical applications."

Yu Yao, Assistant professor, ECEE

"ASU is the leading national institution in innovation, which makes it the ideal environment to grow my research."

Nicolo Michelusi,
Assistant professor, ECEE

"I was attracted to ASU by the prospect of working with top researchers in the communications and energy systems fields."

Duong Nguyen, Assistant professor, ECEE

Semiconductor Faculty Search
Electronic Devices, Materials and Integrated Circuits

ASU seeks applicants who will contribute to its academic programs, promote transdisciplinary teaching and research, and help the university to achieve its aspirations, including enabling student success, transforming society, valuing entrepreneurship, and conducting use-inspired research.

Faculty members in the Fulton Schools are expected to develop an internationally recognized and externally funded research program, adopt effective pedagogical practices in the development and delivery of graduate and undergraduate courses, advise both undergraduate and graduate student research and projects, and undertake service activities.

Qualifications

Required Qualifications:

- PhD or terminal degree in electrical engineering, computer engineering, or a closely related field by the time of appointment.
- Demonstrated evidence of research capability and of teaching excellence as appropriate to the candidate's rank.

Desired Qualifications:

- Record of impactful publications;
- Demonstrated commitment to a collaborative, transdisciplinary approach to research and teaching in an engineering context;
- Commitment to mentoring students and delivering courses in multiple technology-enhanced formats;
- Commitment to curriculum development and innovative pedagogy; and
- Demonstrated appreciation for entrepreneurial activities.

The Ira A. Fulton Schools of Engineering

is the largest and one of the most comprehensive engineering schools in the nation and is excelling in its mission to educate engineers and inspire innovation. One out of every five students at ASU is a Fulton engineer or technologist. FSE's strategic goals center on advancing research and innovation at scale, revolutionizing engineering education, and expanding global outreach and partner engagement.

FSE's differentiating hallmark is the "Fulton Difference" that is grounded in the following principles:

- A focus on student success in the classroom and beyond.
- Excellence in research from discovery to application and in engineering education.
- An acceleration of use-inspired research and entrepreneurial engagement.
- Engagement with stakeholders in industry and the community.
- Drive to make global impacts.

31 **NSF CAREER awards**
over past three years

233 **patents**

54 **startups**
in the last three years

355
tenured and tenure-track faculty

Lead institution on two National Science Foundation Engineering Research Centers

QESST

CBBG
Center for Bio-mediated & Bio-inspired Geotechnics

Lead institution on the Department of Homeland Security Center of Excellence

CAOE | Center for Accelerating Operational Efficiency
A Department of Homeland Security Center of Excellence

42%
faculty from diverse backgrounds

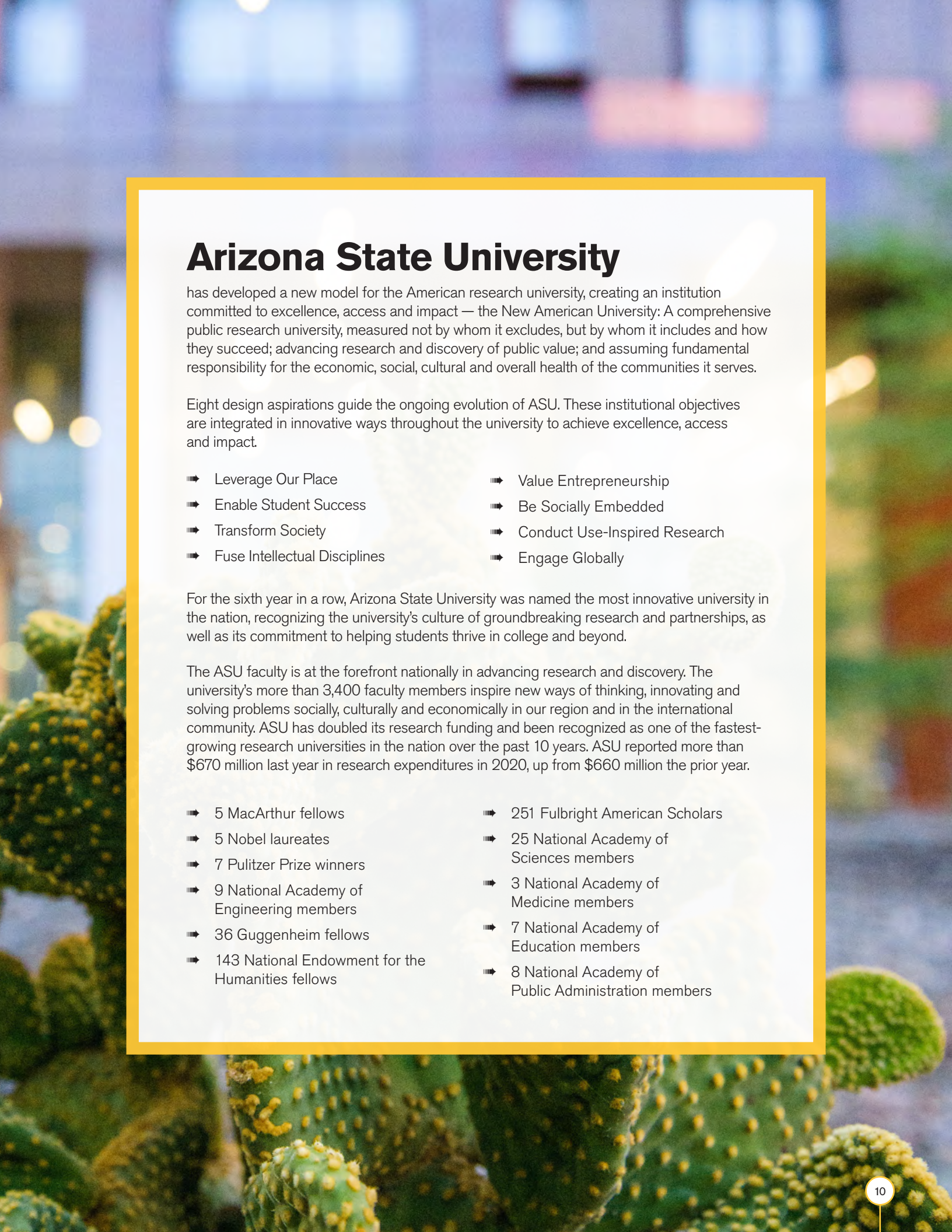
$126M
research expenditures
FY 2020

#3 **Issued U.S. Patents**
Behind Caltech and Michigan

#5 **Startups**
Behind Penn and Carnegie Mellon

#6 **IP Disclosures**
Behind Carnegie Mellon, Caltech and Purdue

#7 **Licenses and Options**
Behind Purdue and Carnegie Mellon



Arizona State University

has developed a new model for the American research university, creating an institution committed to excellence, access and impact — the New American University: A comprehensive public research university, measured not by whom it excludes, but by whom it includes and how they succeed; advancing research and discovery of public value; and assuming fundamental responsibility for the economic, social, cultural and overall health of the communities it serves.

Eight design aspirations guide the ongoing evolution of ASU. These institutional objectives are integrated in innovative ways throughout the university to achieve excellence, access and impact.

- Leverage Our Place
- Enable Student Success
- Transform Society
- Fuse Intellectual Disciplines
- Value Entrepreneurship
- Be Socially Embedded
- Conduct Use-Inspired Research
- Engage Globally

For the sixth year in a row, Arizona State University was named the most innovative university in the nation, recognizing the university's culture of groundbreaking research and partnerships, as well as its commitment to helping students thrive in college and beyond.

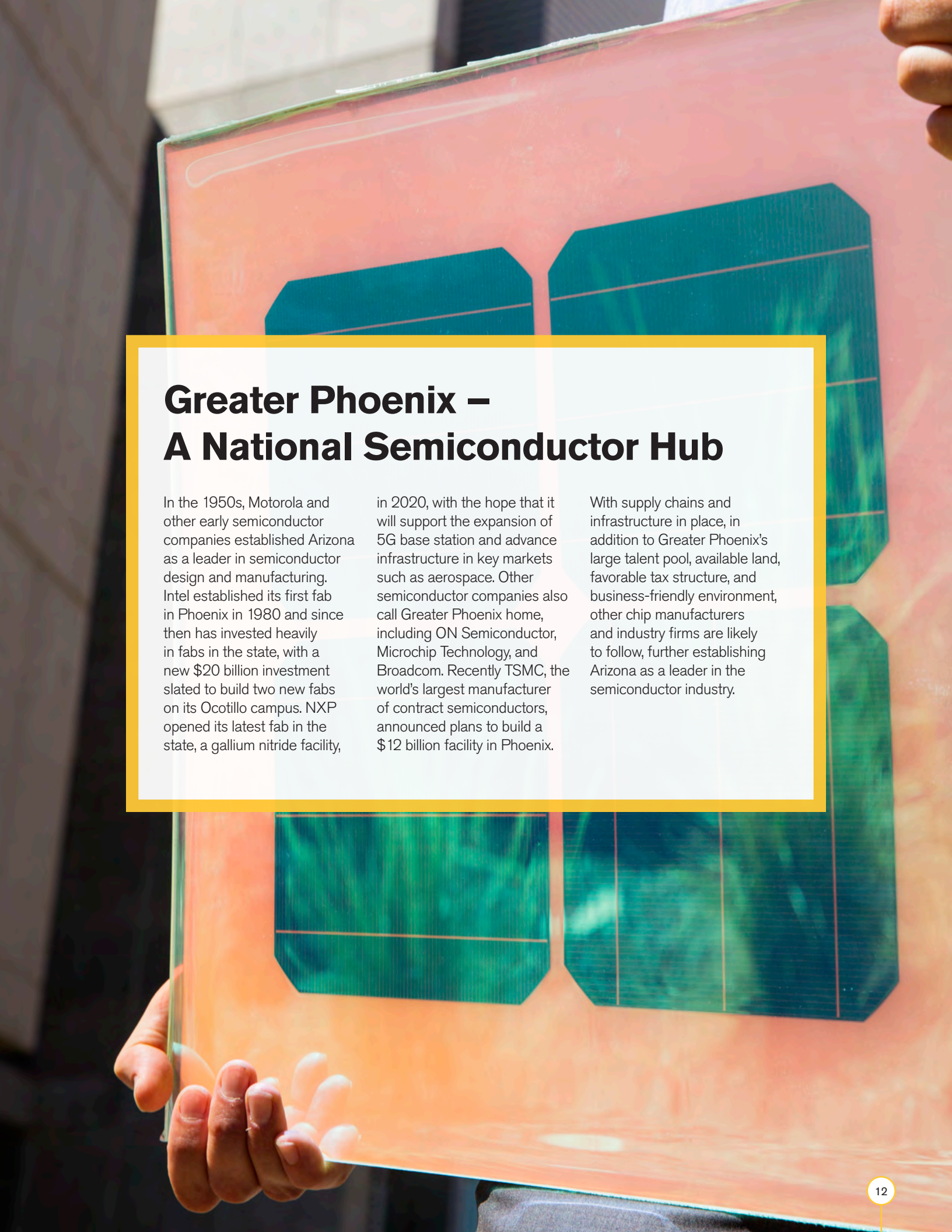
The ASU faculty is at the forefront nationally in advancing research and discovery. The university's more than 3,400 faculty members inspire new ways of thinking, innovating and solving problems socially, culturally and economically in our region and in the international community. ASU has doubled its research funding and been recognized as one of the fastest-growing research universities in the nation over the past 10 years. ASU reported more than $670 million last year in research expenditures in 2020, up from $660 million the prior year.

- 5 MacArthur fellows
- 5 Nobel laureates
- 7 Pulitzer Prize winners
- 9 National Academy of Engineering members
- 36 Guggenheim fellows
- 143 National Endowment for the Humanities fellows
- 251 Fulbright American Scholars
- 25 National Academy of Sciences members
- 3 National Academy of Medicine members
- 7 National Academy of Education members
- 8 National Academy of Public Administration members

Diversity and Inclusion

Arizona State University is deeply committed to positioning itself as one of the great new universities by **seeking to build excellence,** enhance access and have a positive impact on its community, state, nation and the world. To do that requires ASU faculty and staff to reflect the intellectual, ethnic and cultural diversity of our nation and the world at large so that students learn from the broadest perspectives, and we engage in the advancement of knowledge with the most inclusive understanding possible of the issues we are addressing through our scholarly activities. Diversity and inclusion are integral to ASU's commitment to excellence in research, engagement and education.

Candidates who have demonstrated experience in fostering an inclusive environment and incorporating diverse perspectives in research and the classroom are strongly encouraged to apply.



Greater Phoenix – A National Semiconductor Hub

In the 1950s, Motorola and other early semiconductor companies established Arizona as a leader in semiconductor design and manufacturing. Intel established its first fab in Phoenix in 1980 and since then has invested heavily in fabs in the state, with a new $20 billion investment slated to build two new fabs on its Ocotillo campus. NXP opened its latest fab in the state, a gallium nitride facility, in 2020, with the hope that it will support the expansion of 5G base station and advance infrastructure in key markets such as aerospace. Other semiconductor companies also call Greater Phoenix home, including ON Semiconductor, Microchip Technology, and Broadcom. Recently TSMC, the world's largest manufacturer of contract semiconductors, announced plans to build a $12 billion facility in Phoenix.

With supply chains and infrastructure in place, in addition to Greater Phoenix's large talent pool, available land, favorable tax structure, and business-friendly environment, other chip manufacturers and industry firms are likely to follow, further establishing Arizona as a leader in the semiconductor industry.

Greater Phoenix

Greater Phoenix is known for year-round sun, desert beauty, sophisticated urbanscapes, southwest culture, and so much more.

Climate
Enjoy 300 days of sunshine a year and an average temperature of 76 degrees.

Arts and Culture
Greater Phoenix is a rich arts and culture environment, with diverse museums, theater, concert halls, and cultural centers, such as the renowned Heard Museum, Phoenix Art Museum, Arizona Science Center, Phoenix Symphony, Arizona Opera, Ballet Arizona and the Arizona Theatre Company.

Outdoors
Phoenix has a number of lakes just a short drive away offering opportunities for boating, sailing, windsurfing, water and jet skiing, fishing and more. The area is home to dozens of parks and preserves — both in and around the city — with hundreds of miles of multi-use trails for hiking and biking. The state is home to three national parks, including the Grand Canyon, and other popular destination spots like Sedona.

Sports
All four of Arizona's major professional sports teams — Arizona Cardinals (NFL), Phoenix Suns (NBA), Arizona Diamondbacks (MLB) and Arizona Coyotes (NHL) — call the metro Phoenix area home, as do the Phoenix Mercury (WNBA), Arizona Rattlers (IFL) and Phoenix Rising FC (USL). The area has over 170 golf courses.

Cost of Living
Greater Phoenix offers the diverse amenities of a major metropolitan region without the high cost of living. As the fifth largest state in the U.S. and one of the most dynamic and rapidly growing regions in the nation, living and working here is both exciting and affordable.

Low Tax Position
Low personal income taxes and low effective property tax rates offer affordability and opportunities for everyone to thrive.

Business and Industry
Arizona is home to a surging industrial ecosystem, early stage entrepreneurs, and tech-savvy millennial talent who are breaking new ground across a wide range of industry growth sectors. What's more, Arizona offers a robust portfolio of programs and resources supporting both large and emerging tech companies. The state's rich startup culture continues to thrive and is a preferred choice for technology companies seeking growth. Leading startups have collectively taken advantage of Arizona's high-skills talent base. Arizona's solid reputation and assertive stance on innovation led Fast Company to rank Arizona No. 1 in the country for "entrepreneurial activity."

AGB Search is pleased to assist ASU with this recruitment initiative.

Applications will be accepted on a rolling basis and reviewed in the order in which they are received. To apply for this position, candidates are requested to submit a Curriculum Vitae and contact information for three references (to be contacted with candidate's permission at a later date) to: ASUsemiconductor@agbsearch.com

Additional materials, such as a teaching statement, research statement, and diversity statement, will be requested at a later point in the search process.

Interested individuals are encouraged to contact the consultants listed below by email prior to submitting materials.

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AGB SEARCH

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