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PIONEERS IN COLLABORATIVE

SEMICONDUCTOR RESEARCH CORPORATION

ADVANCING THE SEMICONDUCTOR INDUSTRY

SRC®

Semiconductor
Research Corporation

At SRC

Students are the Heart of It All

Semiconductor Research Corporation has maintained a sharp focus on developing engineering and science students since 1982 by creating and nurturing a unique, award-winning model of collaboration involving corporate competitors and top universities. SRC-sponsored students have, in turn, made an extraordinary impact on semiconductor technology through use-inspired, career-enhancing research shared for the industry's greater good.

SRC results are impressive:

- Since 1982, nearly 10,000 students at more than 260 universities have already contributed significantly to SRC's extensive research portfolio: 400 patents, more than 675 software tools and 55,000 technical documents published in top journals.
- On average, SRC supports more than 1,200 advanced-degree students, more than 340 undergraduates and 500 faculty supervisors at top universities across the United States each year.
- Always at the center of the collaboration, SRC students have many meaningful interactions with industry scientists and engineers as well as with researchers from the academic community.

Even more significantly, SRC has a 30- to 40-year impact through careers of students who have participated in its programs. These graduates will address pressing challenges in technology, energy, healthcare, national security and environmental protection for years to come.

"SRC counts among its college and university partners more than 130 institutions. Add to that more than 20 corporate, government and NGO members, and it's easy to come to the conclusion that SRC is the world's leading technology research consortium." *– Dr. John Kelly, Senior Vice President and Director of Research, IBM*

Commitment to Future

"My most important accomplishment is undoubtedly in the professional development of my students. As someone who started their professional career as an SRC student, I always wanted to bring my fruitful SRC experience into the growth and maturity of students."

– Professor Li C. Wang, SRC Alumnus, University of Texas at Austin, Class of 1996, SRC Researcher, University of California, Santa Barbara

SRC Alumni – masters of innovation across a broad platform of engineering and academic disciplines – are changing our technologies, our world and our tomorrows.

STUDENTS, STUDENTS, STUDENTS

Clearly, students will be the major beneficiary from SRC's profoundly important role in the semiconductor industry.

Together, SRC and NSF are funding 12 interdisciplinary research teams at 24 universities focusing on discovering a new switching mechanism using nanoelectronic innovations as a replacement for today's transistor.

For example, SRC has joined the National Science Foundation in funding $20 million for nanoelectronics research at U.S. universities.

Students are also at the heart of SRC's successful collaboration between industry and academia. Fundamentally, SRC values the learning and knowledge-creation mission of universities on the one hand... and the business and wealth-creation mission of industry on the other. Benefiting thousands of students, SRC has successfully worked across the interface of these complementary missions to create strong partnerships.

From its inception, SRC has clearly understood that to be successful its collaboration must enable industry to fund independent university research while enabling the universities to provide research opportunities for students, many of whom will eventually work in the industry as leading engineers and scientists. This collaboration is unique and vitally important.

In short, SRC helps the best companies in the industry form partnerships with the best universities that, in turn, provide research opportunities and excellent educations for the best students, often leading to exciting careers in the semiconductor industry.

"The SRC-URO program got me involved in research related to both materials science and electrical engineering and helped me find internships at AMD and Texas Instruments. These experiences made me interested in solid state devices. Now, SRC is funding me to get a Ph.D. in solid state electrical engineering."

– Emily Walker, URO Class of 2012, Carnegie Mellon University, SRC Fellow, Class of 2012, University of Texas Austin

GOING GLOBAL

Students around the world benefit as SRC continues its global expansion. Not surprisingly, given its long and growing list of achievements and successes, SRC is not only the envy of other industries… but also the world. Officials in other countries who have observed SRC's many years of effectiveness are seeking help in creating their own models. Abu Dhabi's Advanced Technology Investment Company (ATIC) is one example, and SRC helped start world-class research in semiconductors at universities there. Since 2000, SRC has launched over 80 projects in more than 25 countries beyond the United States – and students are at the center of them all.

TECHCON

Students stand front and center at SRC's TECHCON every year. The conference provides opportunities to mix with representatives from the semiconductor industry's top companies, government representatives, guest speakers and SRC staff. Students remember the lump in their throat when they were session speakers; the tough question from a leading scientist during their poster sessions; meeting someone for the first time from 2,000 miles away who is working on similar research; the thrill of being offered that first career opportunity; and simply the deep satisfaction of being immersed in a sea of like minds of innovation. It's an outstanding experience.

"The chance to network while showing potential employers what I have been able to accomplish already was the most valuable part of the TECHCON experience for me."

– Joe Katz, Purdue University, URO Class of 2012, Stanford University, SRC Fellow 2017

GRADUATE FELLOWS, MASTER'S SCHOLARS BRING DISTINCTION TO SRC AND THE INDUSTRY

The Graduate Fellowship Program (GFP) and the Master's Scholarship Program (MSP) have been fundamental to SRC's numerous successes over the years. These programs provide full funding for doctorate and master's degree study by exceptionally talented students committed to conducting relevant research at prestigious universities and pursuing careers in the semiconductor industry.

By supporting university research that establishes the foundation for the industry and provides the next generation of engineers and scientists, these key SRC programs help member companies maintain leadership roles and marketplace competitiveness around the world.

Highly coveted GFP Fellowships cover all tuition and fees and provide competitive stipends for up to five years of doctoral study. Fellows are encouraged to conduct research leading to novel, high-payoff solutions for technology challenges faced by the semiconductor industry at – and beyond – time horizons established in the International Technology Roadmap for Semiconductors. Upon graduation Fellows are encouraged, but not required, to work within the SRC community of sponsoring companies, affiliated universities or related government agencies.

More than 300 fellowships have been awarded since the program was founded in 1986, and upwards of 60% of those have been hired by SRC industry members and assumed leadership within the industry.

MSP is committed to improving educational opportunities at the master's level for under-represented minority students pursuing research projects in areas meeting challenges faced by SRC sponsoring companies. The program pays full tuition and fees and provides competitive stipends for up to two years of study. It has developed a cadre of the highest quality minority and women candidates for doctoral study and employment at sponsoring companies.

Industry Advisors are at the heart of the MSP. By maintaining close contact with Scholars, they offer mentoring that has proven crucial in ensuring students have successful academic experiences.

Since 1997 when the program was created, more than 100 Master's Scholarships have been awarded, and 80% of those students continued on to a Ph.D. or were hired by member companies.

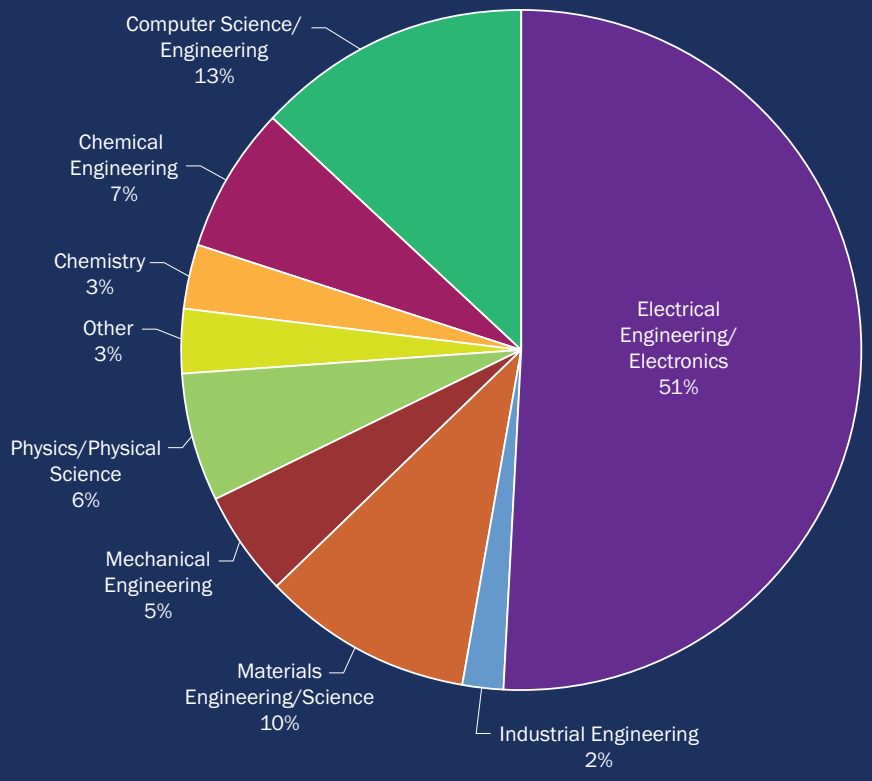
URO PROGRAM FUELS THE NEXT GENERATION

The Undergraduate Research Opportunities (URO) program provides students with valuable research experience, mentoring and contact with industry representatives. Participating undergraduates not only gain confidence in their ability to perform hands-on research, but they also come to appreciate the doors that are opened to those with an advanced degree. The program takes education beyond the classroom to achieve its objectives.

- Rigorous and engaging training for STEM undergraduates
- Increased retention of students interested in STEM majors
- Increased participation of women and under-represented minorities
- Increased numbers of STEM students progressing to graduate school programs

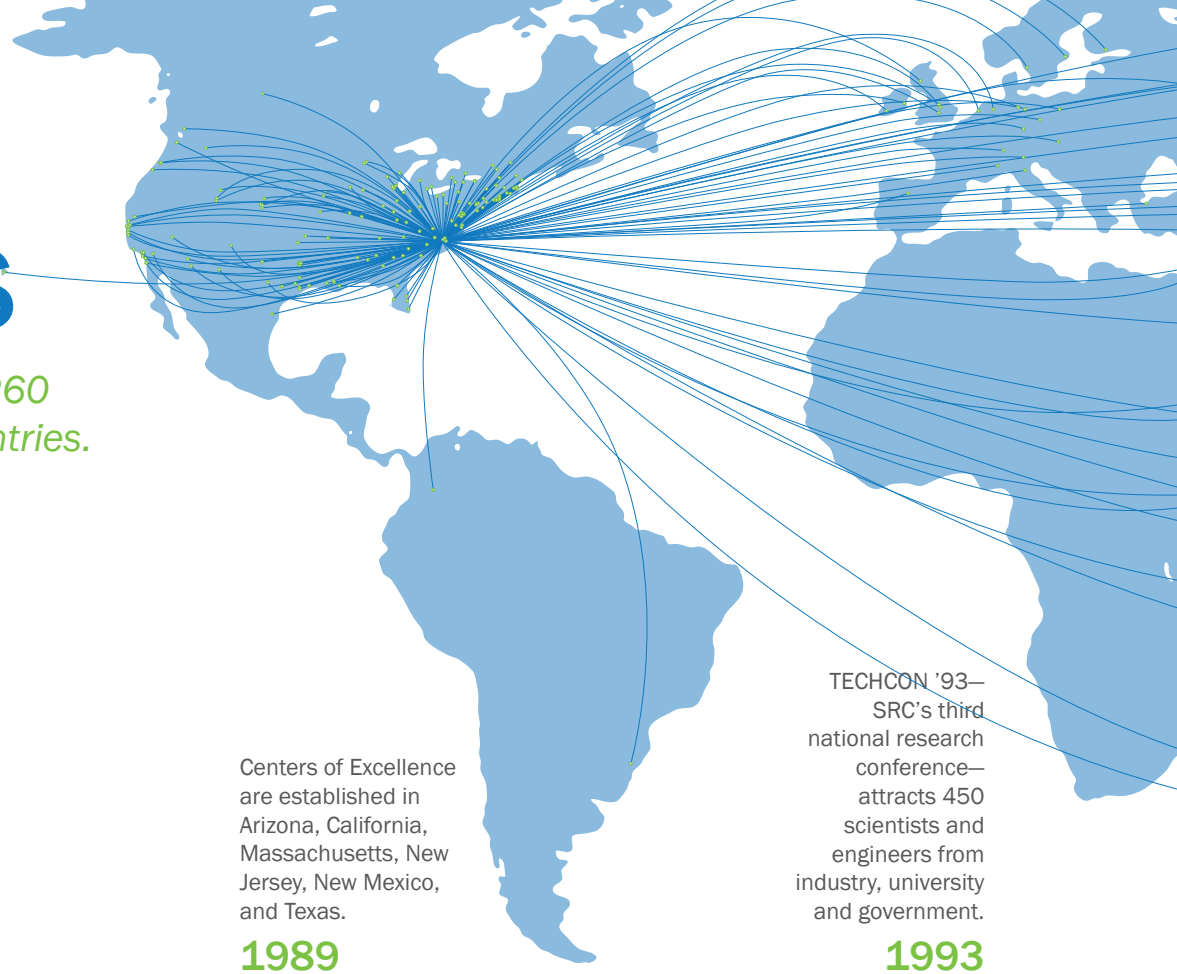
The program achieves its objectives first and foremost by supporting students in research under the guidance of faculty and graduate student mentors. However, several aspects of our program distinguish it from other research programs. First, the program provides funding at the university level, establishing on campus program managers to assist students. Second, our network of universities gives students the opportunity to participate in summer exchange programs, allowing them to acquire new technical skills and broaden their view of the research field. Third, the program also funds workshops and other activities to inform students about graduate school, including identifying programs in their field, how to apply, building a resume, and entering the workforce. Finally, the program provides contact between student and industry experts, exposing them to different career opportunities and preparing them for an advanced degree.

SRC GRADUATES LEAD DISCOVERIES OF HIGH-PAYOFF SOLUTIONS IN DIVERSE DISCIPLINES



Global Partnerships

SRC has developed relationships with more than 260 universities across the globe in more than 25 countries.



SRC MILESTONES

1982
In December 1981 SIA Chair Robert Noyce announced the imminent creation of Semiconductor Research Corporation.

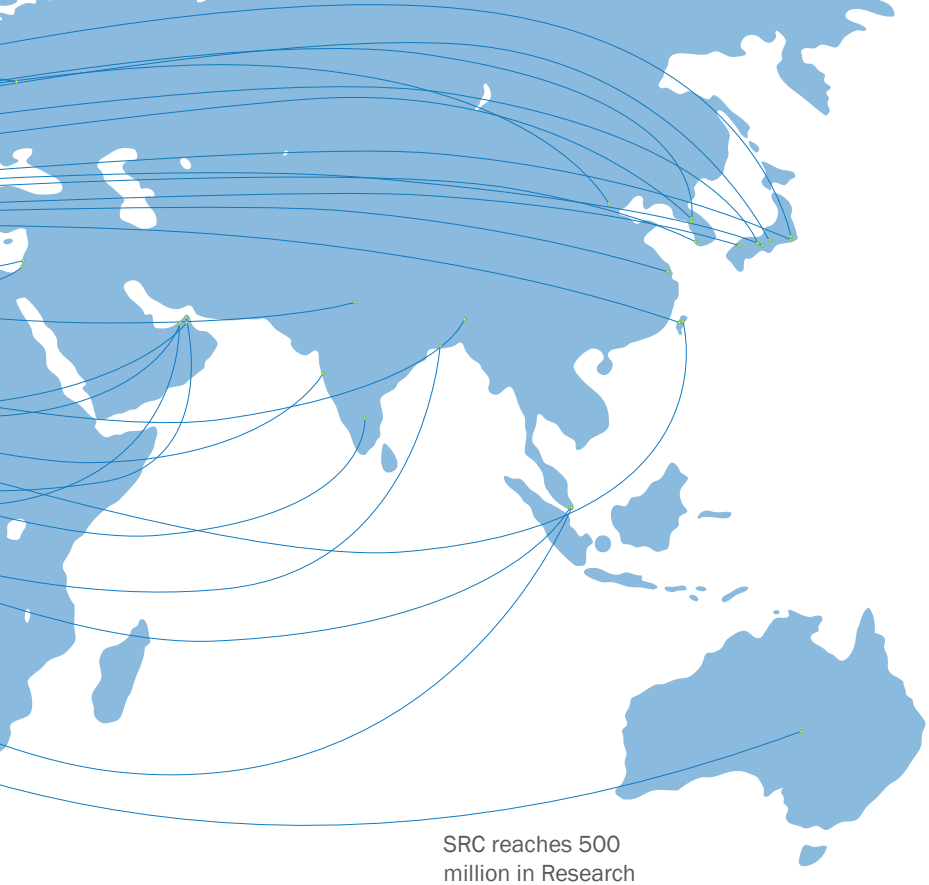
1986
The SRC Fellowship Program begins support in the fall of 1986 for 19 graduate students seeking advanced degrees in microelectronics. The goal of this program is to increase graduate student support in the specific areas of microelectronics that are of most interest to SRC companies.

1988
SRC Competitiveness Foundation created as a subsidiary of SRC (and becomes the SRC Education Alliance - SRCEA - in 1993). Designed to promote a free exchange of technology, SRC holds its first general technical conference, TECHCON '88, in October. The three-day event draws over 650 enthusiastic participants from industry, government and the university community, including many of the graduate students performing research under SRC contracts.

1989
Centers of Excellence are established in Arizona, California, Massachusetts, New Jersey, New Mexico, and Texas.

1992
The National Technology Roadmap for Semiconductors (NTRS) is created in a major industry cooperative effort led by SIA.

1993
TECHCON '93—SRC's third national research conference—attracts 450 scientists and engineers from industry, university and government.



SRC reaches 500 million in Research Funding.

1996

1997

The Focus Center Research Program (FCRP) is established to conduct innovative, multi-university research in semiconductor technology with a horizon of eight-plus years. FCRP targets the intractable challenges in semiconductor-based technology on behalf of its Sponsors, which include the Department of Defense (DARPA), the microelectronics industry and the defense contractor community.

1998

The *National* Technology Roadmap for Semiconductors goes international as the "SIA's" of US, Japan, Europe, and South Korea (and later Taiwan) join forces to update this document. SRC continues to participate in the new International Roadmap for Semiconductors (ITRS).

A program of Undergraduate Research Scholarships is successfully piloted, with nine summer scholarships and two academic year scholarships placed through SRC-funded faculty.

TECHCON 2000, our biennial technical conference is a phenomenal success, showcasing the best of our research and students performing the research. An increased emphasis is placed on universities and students in order to maintain a strong pipeline of M.S. and Ph.D. students; this year a total of 1,091 students are supported by SRC.

2000

SRC welcomes 5,000th student.

2003

2005

Awarded U.S. National Medal of Technology Presidential Citation: "For building the world's largest and most successful university research force to support the semiconductor industry; for proving the concept of collaborative research as the first high-tech research consortium; and for creating the concept and methodology that evolved into the International Technology Roadmap for Semiconductors."

Nearly 1,000 students participated in GRC-funded research and over 500 participated in FCRP-funded research. Of students graduating in 2006, 60% of both GRC and FCRP graduates accepted employment in member organizations or are pursuing advanced degrees.

2006

SRC works to expand the Education Alliance to leverage past successes and broaden its impact, increasing the ability to attract and support a wide diversity of students at various levels of education.

TECHCON 2008 marks the tenth anniversary of the conference and proves to be one of the most successful events to date, with 144 student-presented technical papers and posters representing a broad cross-section of SRC-funded research.

2008

The twelfth TECHCON is held in Austin, Texas and includes 144 student-presented technical papers and posters representing a broad cross-section of SRC-funded research. Total attendance reached 437, including 184 industry participants, three government participants, 12 faculty, 210 students and 28 others, making for outstanding networking and technical exchange.

2010

SRC celebrates 30 years of excellence and reaches over $2 billion in research funding.

2012

2009

The SRC Undergraduate Research Opportunities (URO) program is initiated through the Education Alliance as an innovative and important step in opening doors at the undergraduate level; SRCEA begins focus on undergraduates in science, technology, engineering, and mathematics.

2011

Student participation is soaring with SRC supporting 1,500 advanced-degree students through industry-guided research contracts. In three decades, more than 9,000 students have contributed to SRC research. Approximately 68% of the SRC graduates remain in the SRC community.

Semiconductor Research Corporation

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