Year 3 – Gains in Undergraduate and Master Students

In April of 2021, we announced our Broadening Participation Pledge to “grow our student base, establish a balanced mix of Bachelor’s, Master’s, and Ph.D.-level initiatives, and create a more diverse and inclusive community” throughout the decade. As we reflect on this pledge, it is good to note the strides we have made and the challenges that remain. You can track the progress of SRC’s Research Scholar population table at https://www.src.org/about/broadening-participation/.

As we discussed in a blog series last year, SRC programs prepare ~20% of all semiconductor Ph.D. students in the United States. We aim to amplify our long-standing experience in nurturing Doctoral candidates and restore our traditional emphasis on the education and development of undergraduates and Master’s students. So, we are pleased to report that the overall number of students supported by SRC has grown year-over-year from 1173 to 1501 (+24% increase). With that modest increase in our student count, we see an improvement in the number of Bachelor’s (+8%, +153) and Master’s students (+7%, +135). We attribute this gain to the 2023 new project starts in the JUMP 2.0 and GRC Programs that were shaped by our Broadening Participation Pledge. SRC has placed added emphasis on the creation of opportunities for undergraduates and Master’s level students, and we are realizing some success. While this progress is good, what we cannot do is merely pivot our support from Ph.D. candidates to Bachelor’s and Master’s students! Thankfully, while the percentage of Ph.D. scholars in SRC programs at the end of 2023 was notably lower, the growth in our student count meant we actually increased our annual support by +41 Ph.D. candidates year-over-year.

In short, while we are improving the balance of the degree levels in our portfolio, significantly more funding is needed to grow SRC’s support in all areas and in response to Commerce Secretary Gina Raimondo, who has “called on colleges and universities to triple the number of graduates in semiconductor-related fields.” SRC stands poised and able to easily grow by >3x in response to meet our national, regional, and industry needs.
Not willing to wait and sit idly by, SRC recently launched the **Microelectronics and Advanced Packaging Technologies (MAPT) Scholarship, a crowdfunding campaign.** This scholarship program will provide crucial financial support to students and **foster talent retention within the semiconductor industry.** By investing in the education and development of MAPT scholars, we are empowering students to pursue their academic aspirations and cultivating a pipeline of skilled professionals who can contribute to the continued growth and innovation of our industry. You can learn more at [https://www.src.org/student-center/mapt-scholarship/](https://www.src.org/student-center/mapt-scholarship/). We encourage you to share this campaign within your network and make a donation today!

With every available dollar, we are pouring renewed effort into our **Undergraduate Research Program (URP).** We know from experience that the very process of guiding students through their undergraduate experience is an effective way of preparing talent loyal to the industry. Our Undergrad program is a year-long academic initiative that fosters experiential learning amongst undergraduates, ideally in a cohort setting. The Undergrad program investment not only provides students with a stipend, travel costs, and development funds but also grants them access to SRC’s network of talented peers, professors, and industry experts. Sponsor companies gain access to the students they select and support and also benefit from leveraging their funds with other sponsoring companies, thereby gaining access to the entire pool of URP scholars to meet their recruitment needs. This program is a proven “win-win” for both the students supported and the companies that invest. Companies can get involved by sending an email to [jacqueline.hall@src.org](mailto:jacqueline.hall@src.org) before the May 1 investment deadline.

At SRC, we believe that creating supportive environments and recruiting from a larger pool of schools will help the industry grow, both in overall terms as well as through diversity and inclusion. On a positive note, we are excited to see that the number of students who do not report their gender has dropped from 47% to 24%. This notable year-over-year improvement reflects an increased level of trust and understanding among our community regarding how SRC uses shared data. It also underscores our collective dedication to transparency and accountability with those that we serve.

But, if we consider the SRC Research Scholars as a sample of the students joining the industry, we see little change to the long-term trends in ethnicity, gender, and citizenship. The number of under-represented minorities in our programs has remained near its long-standing level of ~12%. For gender, while reporting
requirements still present a challenge in accurately measuring our status, we do not believe we have significantly veered from the long-standing trend of ~80% men and ~20% women. And, for the education of domestic talent, we remain near the historical range of ~25% U.S. citizens. We believe that realizing gains in these important categories may require targeted mechanisms, such as dedicated scholarships, fellowships, and internships, that we currently do not offer. We plan to add such offerings as our resources grow.

For 2024, we recommit ourselves to fostering an environment where all individuals, regardless of their gender or background, have equal opportunities to contribute to the success of the semiconductor industry. We will develop and foster the MAPT Scholarship and Undergraduate Research Program and work to get participating students hired into our industry or pursuing a next-level degree.

We are also working to secure workforce development funds through the CHIPS 9906 incentives. Workforce development will be a key element of our upcoming CHIPS Manufacturing USA Institute bid to launch the Semiconductor Manufacturing and Research For Twins (SMART) USA Institute. SRC is actively working with numerous companies, universities, and non-profit organizations to create an industry-led, government-enabled partnership that will supercharge semiconductor innovation and the talented workforce it relies upon. Learn more at https://www.src.org/about/smart-usa-institute/ and join us!

In closing, I invite you to join me in reflecting on these updates and exploring ways to help SRC make meaningful gains. Together, we can shape SRC and the semiconductor industry into a beacon of excellence and inclusivity for generations to come.

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