

# 2021 Annual Report



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## Message from the President of The City College of New York



Dear Zahn Innovation Center Supporters,

I am really pleased to introduce you to the first-ever annual report from the Zahn Innovation Center (ZIC) at The City College of New York. Inside these pages, you will read about the exciting and impactful work the ZIC has done over this past year, work that proceeded unabated despite the headwinds of the pandemic and the challenges of delivering what should be an emphatically hands-on program from more of a distance. Along the way, the ZIC staff, with your support, have developed the talents of another generation of young entrepreneurs: in technology, in fields emphasizing social impact and focusing particularly on the development of women's entrepreneurial talents. You'll read about these programs, from which the students greatly benefitted, and I'm gratified for your attention to our program.

I'd like to use my letter, however, to describe the expanding context for innovation and entrepreneurship at CCNY, an expansion that started with the ZIC's example and may well wind up by providing an entirely different context for our work. I call it an innovation ecosystem, and I started reflecting on the need to build one intentionally as the Engineering School neared its 100th anniversary. Despite our precise history of research and discovery on this campus, the basic process that the Zahn Center teaches—the arc from discovery through product development to enterprise activity—has never been part of our campus culture. Why would we not begin investing in a series of enterprises that would do more than teach entrepreneurship at the college—that would provide facilities that support innovation and perhaps even commercialization of our innovation at all levels.

That's the innovation ecosystem—a series of initiatives on campus designed to pull together all levels of entrepreneurial and innovation activity. We have worked over the past few months to form a confederation of the various maker spaces on campus, allowing students, faculty, and staff to move from one to another if their fabrication needs demand. The Masters in Translational Medicine is beginning to move beyond their curricular work to also make a space for the development of biomedical technology. A new Blackstone Capital grant provided the college with more resources designed specifically to coordinate and synergize what might otherwise be scattered innovation efforts. This fall, we launched the President's Innovation Fund, designed to help members of the college community with commercially-viable innovations, develop those innovations, and bring them to market. And, most impressively, we recently completed a grant submission to establish what we're calling the City Collaborative—an off-campus facility that would allow faculty, staff, and students—as well as entrepreneurs from our side of the campus—to develop their life science innovations. In this facility, we will assemble expertise to conduct product development, prototyping, and research essential to move innovations from the research stage to a de-risked, investment-ready standing. It will be our most explicit and advanced attempt to develop the commercial potential of the work that takes place on our campus.

Situated against this backdrop, the ZIC (and the students all of you support) have a robust set of opportunities. The fuller integration of the ZIC into the campus means that students will have access to a far more robust terrain of maker spaces. It means that ideas developed from other innovation sites on campus can be used to underpin an incubator session—or students who leave the ZIC process without an ultimately viable startup project can find employment, and use their ZIC experience, as a member of a product development team working in the City Collaborative.

My point is this: When we moved the Zahn Innovation Center into a more integral relationship with the college, both sides of the equation stood to benefit. On the college side, the idea of expanding innovation on campus, and seriously pursuing commercialization seemed a natural complement to existing and established ZIC activity. For the Zahn Center, closer involvement with the college meant that the ZIC would benefit from the energies of other facilities, supporting programs, and a college determined to make innovation a much broader part of its identity. These are still early days for many of these projects, but we're deeply optimistic about the prospects for our emerging innovation ecosystem, and the Zahn Innovation Center's place within that ecosystem.

Dr. Vince Boudreau  
President

## Message from Interim Executive Director Kesia Hudson



Dear Zahn Innovation Center Community,

The 2020-2021 academic year was marked by extraordinary challenges, not seen on a global scale in over 100 years. Similar to the high education landscape around the country, the Zahn Innovation Center encountered many challenges and rose to the occasion each time because we knew the students were depending on us. Entrepreneurs see opportunities within crises, and we were determined to make this a year that forged a way despite the upheaval and turmoil happening around us.

Each spring we devote our attention to preparing the semi-finalist teams participating in our annual startup competition. In March 2020, our program was just underway when the CCNY campus moved almost 100% of instruction and staff operations to a remote mode. Already equipped with our hybrid teaching model, the Zahn staff deftly navigated these uncharted waters. The Zahn staff's nimbleness allowed for a quick transition to a fully remote program setting with few disruptions for the students.

Recognizing that some of our participants were having challenges adjusting to remote learning with their other classes, we moved our Demo Day and Final Pitch events to September, which gave them more time to acclimate to this new learning style. We also created additional opportunities for the startups to pitch for funding with a showcase in May and a business plan competition, sponsored by BNY Mellon, in August. We are so proud of these founders for persevering through it all.

While it was relatively easy to shift our startup incubator to an online platform, transitioning our MakerLab Apprentice program to a virtual setting was more challenging. By design, the apprentice program is a hands-on experience to give the students the necessary tools and skills for employment. Much to the delight of the apprentices, we worked alongside our Assistant Engineers to offer workshops that simulated in-person training. Upon completion of our program, all twenty-four of our apprentices and assistants earned Six Sigma White Belt Certification, and we also secured long-term internships at Actasys, Inc., and Kinetic, for seven of them.

Each summer we host the Standard Chartered Bossgirls Bootcamp, an experiential learning program for high school students. Over the course of six weeks, the girls learn how to launch a business and present their business plan at the finale. Typically an in-person program, this was the first time it was offered in a virtual setting. Coming from a mix of public and private schools, the five boroughs, Westchester and New Jersey were represented in this cohort. The students' engagement and curiosity led us to pilot an after-school program during the fall and spring semesters. Mikaila Ulmer, CEO, and founder of Me & the Bees Lemonade visited with the girls and discussed her new book, *Bee Fearless*. We offered a variety of workshops, including a financial literacy series. The Bossgirls program has grown so much in popularity that we admitted over 100 students into the 2021 summer program—our largest cohort to date!

Over the course of the year, we were able to bring the CCNY community and new visitors together around entrepreneurship. Being able to connect via videoconferencing has broadened our reach and made our programming more accessible. Our diverse programming offered different options for engagement through activities such as hackathons, workshops about design thinking and artificial intelligence, and special events including a fireside chat with Arlan Hamilton, Founder and Managing Partner at Backstage Capital, and Ramona Ortega, CEO at My Money, My Future.

These are just a few highlights from this year. You will learn about many more in this report. I am excited for you to read about the strides our students have made and the impact the Zahn Center is making within the community. The students' success is due in large part to the dedication and involvement of our affiliates, alumni, and donors who give of their time, and expertise, and philanthropic support. The Zahn staff and I thank you for all that you do. I am proud of what we have achieved together under these trying circumstances. In being able to thrive in the midst of uncertainty and embrace the entrepreneurial spirit, we've created our own limitless possibilities.

Kesia Hudson  
Interim Executive Director



## Welcoming Remarks from Incoming Executive Director Chris Bobko



Dear Zahn Innovation Center Community,

I am incredibly excited to join the team at the Zahn Innovation Center as the new Executive Director. In my new role, I will merge my varied professional experiences in academia and business. Most recently, I served as Chief Engineering Officer at HyperloopTT, a fast-growth high-profile startup where I grew the engineering team, oversaw system architecture development and testing for small-scale and full-scale hyperloop prototypes, and engaged with governments, industrial partners, and financial stakeholders.

Prior to joining HTT, I was a tenured faculty member at North Carolina State University where I had significant teaching and research experience in materials and mechanics for Civil Engineering applications. Through these professional experiences, I have had the great opportunity to work with diverse groups of students, faculty colleagues, engineers, and financiers across a wide variety of disciplines. It is these past experiences that will help me serve the Zahn Innovation Center.

Thanks to the dedication, passion, creativity, and talents of the current ZIC staff, student participants, and the broader community, this report describes tremendous success in a challenging year. As we look to the future, this successful foundation will allow us to build an even better ZIC. I am eager to meet and work with each of you. Together, your input and knowledge will be critical as we develop and implement a strategic plan that allows ZIC to plan for the future while remaining agile and anticipating and responding to new opportunities.

I look forward to helping the Zahn Innovation Center provide opportunities for all CCNY students to develop great ideas, bring them into practice, and serve the local and global community.

With great optimism and enthusiasm for the next steps.

A handwritten signature in black ink, appearing to read "Chris Bobko".

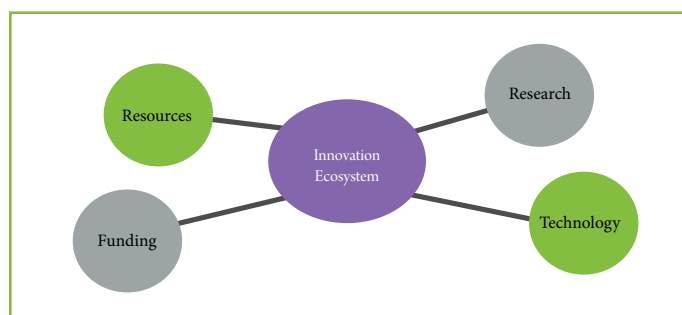
Chris Bobko  
Incoming Executive Director

# The Zahn Innovation Center's Startup Competition

On the evening of May 7th, 2021, the tension built as Zoom screens flashed on numerous computers across New York City and beyond. Eight finalist teams of young entrepreneurs geared up to pitch their startup. The competition consisted of four prize tracks: Zahn Social Impact; Zahn Technology; Standard Chartered Women+Tech; and Kaylie Hardware. The first prize in each group was \$25,000, with the second prize of \$5,000 going to the runner-up.

## "Innovation Ecosystem" Spreading Across CCNY

Kesia Hudson, the former Executive Director of the Center, introduced CCNY President Vince Boudreau, who greeted the Zoom audience and welcomed the startup competitors with enthusiastic comments about the increasing visibility of innovation through technology across the CCNY campus. He said the college was in the process of building problem-solving and innovation skill spaces across campus for the multidisciplinary use of all faculty and students and that the Zahn Center was the "central and identifiable" part of his strategic plan.



## Demo Week and the Final Pitch

The finalists pitching that evening arrived well prepared. The startup class of 2021 began prepping for the competition in February, with enrollment in the Lean Startup Bootcamp (See article: Invaluable Lean Bootcamp Prep in the Annual Report, p. 10). The teams that successfully met all Bootcamp milestones were invited to pitch and showcase their prototypes, for a chance to win the grand prize. The startup competition was a week-long celebration. Demo Week kicked off on May 3rd with a virtual showcase of the semi-finalists' prototypes. The eleven semi-finalist teams also presented their business plans, hoping to secure one of the eight finalist spots. On May 6th, once Demo Day ended, the judges selected the teams moving on to Final Pitch.

Demo Week culminated that Friday evening with our main event, the Final Pitch. With a live audience in attendance, each finalist had four minutes to pitch to the judges their business idea and make the case for winning the grand prize. These entrepreneurs gave it their all, leaving the judges with much to consider. After careful deliberations, they announced the winners.

### Zahn Social Impact Prize

1st place prize of \$25,000 - GoodMD, a web-based health platform connecting you with clinics that can provide the best care at the lowest price.

2nd place prize of \$5,000 - Civic Monitor, a comprehensive data infrastructure for the issue positions and ideas of candidates, to enable African voters to know, compare and interact with their candidates for political office. Civic Monitor was also Awarded the Audience Choice Award, decided on the Pre App during Demo Week by the greater community.

### Standard Chartered Women+Tech Prize

1st place prize of \$25,000 - Skin Releaf, an online platform that provides persons of color access to dermatologists, skin experts, and education to help manage their skin health.

2nd place prize of \$5,000 - Nailierz, an online platform where licensed nail technicians or small businesses go to promote on-demand nail services to clientele within the area, giving the user the ability to find a remote nail service tailored to their personal nail art design desires. Nailierz also took home the Audience Choice Award.

### Zahn Technology Prize

1st place prize of \$25,000 - AlgoRythm, an educational app that aims to simplify computer science concepts for high school students. AlgoRythm also won the Audience Choice Award.

2nd place prize of \$5,000 - Fasfit, a fashion hub that promotes inclusivity and originality through networking and creative services.

### The Harvey Kaylie Prize for Hardware

1st place prize of \$25,000 - Visual, a haptic feedback device to assist visually impaired individuals navigate their surroundings. They also won the Audience Choice Award.

2nd place prize of \$5,000 - Vertibrave, a technological solution to achieve true affirmation of spinal surgical success through real-time tracking.

## Winners' Spotlight

### Women+Tech Winner Camile Delva on a Mission for People of Color



**Camile Delva**, CEO of Skin Releaf, and her team are “on a mission to tackle skin issues for people of color.” The team is made up of Delva, a BioMed major at the Sophie Davis Biomedical Education Program at the CUNY School of Medicine; Marvel Delva, her brother, and a 2020 graduate of The Bernard and Anne Spitzer School of Architecture in UI/UX design, and an alum of the Zahn competition; and Karina Paez-Rojas, a marketing major in The Colin Powell School for Civic and Global Leadership. Delva says she has been able to realize many opportunities that the Zahn Center gave her to present her ideas and test herself in the field of entrepreneurship. She was so confident after winning the \$25,000 prize from Standard Chartered that she found another pitch contest online a week later called Black Connect Fever Pitch for small black-owned businesses and pitched successfully there, winning \$3,000. The team also placed second in the CUNY Public Health Innovation Accelerator Program, securing another \$3,000.

Skin Releaf, with this spelling of relief to symbolize the leaf of healing, is an online mobile platform that provides people of color with much-needed access to dermatologists who specialize in treating skin issues that affect their skin types and to medical information about skin issues that can be trusted as accurate, current, and medically sound. A young woman with a strong drive and sense of herself, Delva says she wanted to develop her own skincare line since she was much younger and dealing with her own skin issues. Now she is planning to get her MD degree to provide a solid

medical and dermatological perspective for Skin Releaf that will build out the business as a remarkable and highly respected source of medical information on skin issues, telemedicine, and product purity for people of color. Her ambition to broaden and enrich the discussion of skin issues for people of color will indeed fill a crucial space in the dermatology field that has never been responsive enough to communities of color’s needs and demands.

#### Amazing Bootcamp Support

Delva said the team found the Lean Startup Bootcamp at the Zahn Center invaluable. The class would meet in the morning, have a lecture and discussion about an assignment and when her team debriefed in the afternoon, they always felt empowered and able to envision how they would move forward.

#### Developing a Skin Care Platform

Currently, Delva and her team are working with three dermatologists at SUNY Downstate Medical Center in Brooklyn who advise them on numerous aspects of dermatology and patient care to enhance the scientific and medical value of their website. When the site is ready for full launch, they will offer fee-based telehealth visits, in-person dermatologist visits, and access to unlimited skin care medical and product information to manage their skin issues. Delva says their major audience is Gen Z and Millennials of color. Upon requesting free membership to the website, a new user will be asked to create a personal profile and a diary of issues and activities they will build over time, and they have access to unlimited skin care education and product development information. For a fee, they will be matched with the appropriate dermatologist for a telehealth visit to receive treatment for their specific skin issues.

Delva is looking forward to getting Skin Releaf up and running and readily acknowledges that the amazing education that the Zahn Innovation Center provided her with has resulted in such meaningful developments in her life. Her world is so full and open to opportunities, and she appears ready to meet all the challenges it may bring.

## Bryan Rivas, A Role Model for The Pursuit of Dreams



**Bryan Rivas**, a Computer Science major in the Grove School of Engineering at CCNY, the first in his family to graduate from college, led the AlgoRythm team in winning the Zahn Technology Track. Rivas describes the startup as an educational software application that aims to simplify computer science concepts for high school and middle school students, especially students of color. The AlgoRythm team, consisting of Rivas, Shahzeb Rizvi, YanWing Tsui, and Judy Wei, came together because they found that they all were interested in exploring ways to bridge the knowledge gap that exists in the computer science field by helping children in middle and high school learn by using computational thinking, one of the key techniques of computer science, and one that can be taught through fun and engaging computer games. This can also help kids develop an engineering mindset based on finding solutions to problems in the same ways computers do.

Rivas says he never had an issue with solving math problems until he came to college and saw that he didn't know how to problem-solve, he was only good at following formulas to get a solution. He became so discouraged that he dropped out for three years. Upon returning to CCNY with a fresh attitude about learning, he was introduced to the concept of computational thinking. This process, which is used to solve a multitude of problems across many disciplines, gave him the key to free his ability to think about the why's and how's of problems. He began to seriously research the core ideas of how people need to think and process new ways of learning to come to solutions, the algorithms of the computer-based world of technology. Rivas said this process of study gave him a whole new way of thinking

that propelled him towards his future career in computer science when he graduates from CCNY at the end of 2021. At that time, with their winnings from the Zahn Tech Prize, he and his team will be able to follow their dream and totally focus on their new startup.

### Engaging the Neurodiverse Community

One of the groups that the AlgoRythm team is interested in working with is the neurodiverse population on the Autism spectrum. Rivas said, "In one of my college classes when I decided to re-enroll, there was a kid who was super bright, but unappreciated. One day our professor gave us an assignment and this kid got very excited and came up with the solution super quick, on the spot. The professor misunderstood his behavior and saw it as him being cocky. I could see that the kid, who was only about 19, was very upset. I talked with him about it and helped him write an email to the professor explaining where he was coming from. I wasn't aware of what people on the Autism spectrum go through till then and he and I became good friends."

Providing neurodiverse youth with support from AlgoRythm's program is one of the areas Rivas says they are anxious to explore. They plan to do some deep research into the ways that this could be beneficial to middle and high school kids on the Autism spectrum. They also are dedicated to increasing the diversity in the field of computer science more broadly, an issue that Rivas addressed first when he began his introduction to AlgoRythm at Final Pitch, as the percentages of the youth of color in the field, and especially girls of color, are disheartening.

### Providing the Ability to Believe in Yourself

The Lean Startup Bootcamp at the Zahn Center provided the AlgoRythm team with the ability to build out their program and truly believe that their ideas were of value, according to Rivas. He said the staff showed them that even if they had no money, their ideas alone were valuable and that they could pursue their dreams and create the product they envisioned. Rivas says that the journey is what is important to his team. They are dedicated to helping young people move ahead in this technology-driven world by engagingly teaching them coding and algorithms.



## Invaluable Lean Bootcamp Prep

The beginning of February is an exciting time at the Zahn Innovation Center as it is the beginning of the weekly Lean Bootcamp Workshops for startup competitors in their annual Startup Competition. Due to the COVID-19 pandemic, this year the Center conducted all of the seminars virtually, instead of using the hybrid model they have done in the past with a mix of webinars and live seminars. Sixty students participated in the Lean Bootcamp for 2021.

The competitors came with ideas for a startup business in one of four funded award tracks: Zahn Social Impact; Zahn Technology; Standard Chartered Women+Tech; and Kaylie Hardware. Many of the ideas reflect a keen desire by the students to give back to their communities, but to be successful they need to learn the basics concepts of entrepreneurship, such as what the “Lean Startup Method” is, what “customer discovery” means, and how to set a strategy to capture their target markets.

Facilitators and staff spend the first three workshops of each month discussing different aspects of startup development. For the fourth weekly session each month, the participants practice their pitches with Zahn Alumni, Industry Mentors, and Standard Chartered mentors.

The teams that successfully meet all the milestone requirements of the program are invited to pitch their startup during Demo Week.

### Target Customers and Stakeholders



The first month of workshops focused the teams on an in-depth exploration of the customers/stakeholders who will use their services and why they need them. They think shrewdly about who they want to reach with their companies and what strategies would work best for conducting productive interviews, learning trends, and evaluating the user-based design of their product. This is where a seasoned facilitator like **Min-Joo Lee** of Johnson & Johnson Designs steps in as a lecturer and strategist with Zahn to guide the discussion about how each startup can deliver a positive customer/patient/client experience. She is a strategist within J&J tasked with developing a deep understanding of the customer. She stresses to the teams the importance of knowing “what are the needs? Customer’s insights? What are their pain points? [I want them

to] really understand the behavioral motivation and then [turn] that knowledge into...how can we deliver a positive patient experience, a consumer experience?”

The exploration of customer needs in the workshops traditionally leads to discussions about how the company can build, iterate, and refine the best design and value proposition to satisfy and grow the customer base. As Lee says, “the key to success for any startup or any pitch is being able to communicate business viability and market viability.”

Since many of the startups in the Zahn Center are social commitment startups, Lee says, “What inspired their product idea, or their company idea, comes from a place of personal experience, which I think is powerful.”

## Defining the Market, MVP Development, and the Business Model

By March, the Bootcamp opened the startups up to learning how to evaluate the market for their product and develop a strategy to capture it and test for the minimum viability product (MVP). This is a process of validated learning about customers with a minimum of effort. They also learned the concepts of UX and UI to further test whether they can successfully validate their customer/stakeholders' appreciation and need for their business.

Creating and defining their business model and how to operate a particular business successfully, (in other words, how to make money), was another subject covered. The teams also learned how to evaluate the income streams they could expect from their business to be sure they were strong enough to sustain the company and allow it to grow.

Each week's session also provided discussion about how to express in explicit, succinct language what they are learning about their startup, what its purpose is, how it can be used positively, how it can provide income for the owners and benefit for the buyer/customer, among other questions. Min-Joo Lee makes a strong point in discussing the workshop learning, "I always say the best teams are the most diverse teams. And so, being able to bring in students from different schools of thought...making sure each team has somebody from legal, one person from medical, one person from engineering. Making sure you do have those diverse thoughts....normally the best teams are the ones that really do have representation from every single corner. Not just demographics and...diversity...[of]...background, but also diversity...[around]...career aspiration and career studies, and normally, those are the teams that win out."

Lee's point about diversity on many levels becomes apparent to some of the startups when they tackle the different workshop lessons. They find that as they move through the Lean Bootcamp and begin to deal with the difficulties of pitching, they need to use a variety of disciplines and complex business ideas within a very short time frame.

## Income Statement, Financial Forecasting, and An Action Plan



During April, the majority of the time was spent on learning how to estimate operating expenses, developing an accurate financial forecast for each startup, and finally creating and presenting an action plan for short-term and long-term success that will attract and create loyal investors and advisors.

**Brandon Shin**, a financial expert, and facilitator from Standard Chartered Bank, one of Zahn's primary sponsors, gave a workshop on financial statements, distinguishing revenues, costs, profits, and losses and how to measure and report them. According to Shin, "as a bank, Standard Chartered is incredibly passionate about helping the next generation of leaders and individuals become financially empowered." He also stays involved with the startups as a mentor throughout the Startup Competition and has been conducting financial workshops for the Bootcamp for seven years.

The startup Bootcamp was so skillfully designed that this year was as successful as pre-pandemic Bootcamps. Over 90 facilitators and mentors were engaged with the program. These subject matter experts bring with them a diverse set of skills and industry backgrounds. They work at companies like Google, 21 Degrees West and Golden Seeds, and are knowledgeable in accounting, market research, design thinking, and prototyping. Like Lee and Shin, many return year after year because they are vested in the students' success.

This intensive experiential program allows the students to develop their business acumen, which will serve them well in the future as entrepreneurs or with other career choices they may make.

## Bossgirls/Entrepreneurs

Bossgirls, a free entrepreneurship summer camp for girls at the Zahn Innovation Center, is catching on. A program that had 20 girls in attendance last summer had close to 80 girls this summer, out of 450 who applied. The program accepts applications from girls attending high school in the Tri-State Area.

Sponsored by Standard Chartered Bank, which also sponsors the Standard Chartered Women in Technology Incubator and a track for the annual Startup Competition, Bossgirls meets four mornings a week for six weeks each summer on CCNY's campus; except for the last two summers, which were virtual, giving more students access to this program.

Standard Chartered is ardent about empowering women and girls in the world of entrepreneurship and innovation. The students work on their new startup ideas and learn skills to build a company from scratch, increase their confidence, master presentation skills, and develop financial savvy that can assist them in doing an income statement or learning a new problem-solving mindset that keeps innovation and fresh ideas as a goal for all kinds of life issues. The students join together in teams to invent new businesses and projects that create change and give back to their communities for the future of the girls who come after them.



### Dynamic Teaching and Standard Chartered Mentors

Kesia Hudson, Interim Executive Director of the Zahn Center, and Katherine Olives, Program Manager, begin the Bossgirls program with a discussion about startup possibilities and open up the students to a rich view of the possible—anything—depending on individual interest. Several students have commented that these first classes provide a strong sense of trust and friendship among the group.

Workshop facilitators and the Zahn team cover the following topics in the classes: Ideation/Design Thinking, Customer Discovery, Research and Interviewing, Business Model Development, Marketing, Competitive Analysis, Financials, UI/UX Design & Prototyping, Presentation Skills, and more.

Once they begin to form teams with similar entrepreneurial goals or ideas, the Standard Chartered mentors, usually two to three per group, join and help to flesh out the ideas. The girls also hear from women entrepreneurs and other facilitators throughout the program who stimulate and provoke new ideas to come to the surface and build confidence.

The Standard Chartered mentors are experts in many fields and have a wealth of resources available to support the startup teams, build their self-esteem, and extend their entrepreneurial skills towards an empowering focus.

## A Pipeline to CCNY: A Tale of Two Bossgirls

**Baishaki Debi** is a rising junior at CCNY majoring in Computer Science and minoring in English. She participated in the Bossgirls program during the summer before her senior year in high school. Currently, she is also studying for her cybersecurity certificate as she says it is her dream to work in the cybersecurity field to help protect people's valuable data and also to help them take control of their digital privacy.

When she was in Bossgirls, Debi said she “collaborated with three other Bossgirls to create a startup called sourCED. We created this startup to tackle the opportunity gap among low-income immigrant students in middle school...and found that many of these students aren't aware of the extra-curricular enrichment opportunities that are available to them. For example, many of the students had never heard of the SHSAT (a test taken by 8th graders seeking admissions to specialized high schools) and thus couldn't utilize the free after-school training schools would provide to help them prepare for the test. If students did hear about the test, it was too late for them to take it or they didn't feel prepared enough.

“The goal of sourCED was to bring awareness to low-income immigrant middle-school students about the various opportunities that were open to them to get involved in. We created a website that would serve as a platform to aggregate and list these opportunities so students can easily access them. The second part of our solution to bringing awareness was to create a mentor/mentee program. We would partner with college/high school students who would serve as mentors to any middle school student looking for guidance. In return for their help, mentors would receive volunteer credits and additional compensation.”

Debi said the most important skills she learned from Bossgirls were, “I had really bad stage fright when I started the program and I still have it to some extent, but Bossgirls helped me to channel all that nervous energy into something more productive.... I was able to deal with my nervousness better before a presentation. The program also helped improve my communication skills through various team meetings and the final demo where I had to communicate our startup idea to a panel of judges from Standard Chartered. I also learned... to write concise emails, which I'm using now on a daily basis.”







**Darshna Baria** is currently a sophomore at CCNY and planning to apply to The Grove School of Engineering to study Environmental Engineering with a minor in Business next year. She was a senior in high school studying engineering when she attended Bossgirls. She came to a City College orientation in 2020 and stopped by the Zahn Center's table. She speaks in glowing terms of learning business concepts and making new lasting, like-minded friends during the experience.

Baria speaks of how much she liked being able to learn new things, and how she was encouraged to think in terms of finding her passion in building things. She said that she formed a team with three other girls to build a startup that would make education more accessible across the world. She was inspired by the humanitarian, Malala Yousadzai, to gather volunteers and travel to Third World countries and tutor young girls. It was suggested that the team should introduce their idea with mentors at Zahn who are constantly impressed by the natural entrepreneurial spirit of the CCNY students.

The team ended up shifting their focus a little closer to home by introducing their program to areas in New York City where the students in lower-income schools are not able to have equal exposure to extra-curricular experiences in learning music, sports, tutoring, and so many other after-school programs that are key to having a fully-rounded experience that broadens their learning and looks good on resumes. That startup served as a great learning experience during Bossgirls, but has been put on hold while Baria finishes college.

Motivating women entrepreneurs who came to speak to the girls struck a chord with Baria, and she commented on being introduced to the story of a 12-year-old girl, Mikaila Ulmer, CEO and Founder of Me & the Bees Lemonade, who started making lemonade when she was four, and was extremely successful selling it to grocery chains. Baria has big plans, a heavy load of coursework, and speaks confidently about coming back to the Zahn Center for the Startup Competition in the future.

Standard Chartered's Bossgirls, powered by the Zahn Innovation Center, is becoming a compelling voice for girls across New York City. The increased interest in attendance at the summer camp reflects an awareness that the fields of technology and science are opening up to girls, and the door needs to be knocked down completely.

There is now a program within the Zahn Innovation Center called Bossgirls Afterschool, which is an online program for Bossgirls alumni consisting of skill-based and professional development workshops, female founder talks, and networking events that happen during the school year, allowing the students to continue their immersion into entrepreneurship and technology.

## Women In Technology Incubator Creates Entrepreneurial Leaders

The Zahn Innovation Center has revitalized the Standard Chartered Women in Technology Incubator to focus with intentional awareness on increasing the number of young women pursuing careers in technology and entrepreneurship, as a part of the bank's Futuremakers initiative, which aims to raise \$50 million by 2023 to increase economic inclusion for young people across the globe. The Women in Technology Incubator encourages and supports women-led ventures and female leaders through a startup competition track for female founders. Standard Chartered also sponsors an elective course at CCNY about entrepreneurship and the little known stories of women entrepreneurs, and Bossgirls, a high school program that exposes girls to entrepreneurship and technology.

The Incubator also formalizes support for women outside of the startup competition with a full spectrum of entrepreneurship workshops, a speaker series, and leadership development events. Also, Standard Chartered continues to provide thought leaders and subject matter experts for entrepreneurs and students across all of Zahn's programs.

### Successful Entrepreneurial Women

Women are coming into their own at the Zahn Center and across the CCNY campus. These are the stories of several women from the Standard Chartered Women in Technology Incubator who flourish as leaders.

#### STEM Hive



**Karla Jacome** '18 and her team won the Standard Chartered Women+Tech4NYC Prize in 2019 with their startup STEM Hive, and have gone on to be enormously successful in promoting their workshops to engage underrepresented middle and high school students in "near-peer mentoring, in-person and online workshops" for careers of the future. They conduct the workshops in either English or Spanish, and have worked with groups as young as 5th graders, up through high schoolers. [www.stemhivenyc.org](http://www.stemhivenyc.org)

Jacome says that "representation in a startup is a jigsaw puzzle where everybody has one piece and through collaboration, they bring the puzzle together and are able to create new and better solutions." Her partners are Carolina Perez, Daniel Gaston, and Veronica Juca, all graduates of CCNY with degrees in STEM fields and interests ranging from climate change, to cybersecurity and robotics.

STEM Hive offers a range of workshops in STEM topics, using their inexpensive STEM kit and a Microbit, which is a miniature computer kit that shows how software and hardware work together. Jacome says a recent middle school class built a miniature robot to use for an environmental project using the Microbit to the students' delight.

Jacome says the mentorship and support of the Zahn team meant the difference between success and failure to STEM Hive as they were building out their startup, and now that they are up and running, Zahn and Standard Chartered are still actively providing support such as information on appropriate grant applications, and contacts with like-minded STEM women's organizations. Currently, Jacome is writing an article about STEM Hive for Standard Chartered's Newsletter about a workshop she recently conducted in Ecuador to showcase their programs there. Three of the team members, including Jacome, are originally from Ecuador.

## Bella Zoia



**Sierra Lattuca** '21 loved to sing and play music since she was very young. She learned audio engineering technology as a student in the Sonic Arts Center at CCNY and recently graduated from CCNY with a B.M. in music and audio technology, and a minor in community change studies from the Colin Powell School for Civic and Global Leadership. She won the Standard Chartered Women+Tech4NYC Prize in 2020 for her startup Bella Zoia, a marketing and production company for change-making nonprofits. [www.bellazoia.com](http://www.bellazoia.com)

Lattuca comments that her experiences with the Zahn Center and the Startup Competition made her feel “like I got an accelerated business degree.” She says the mentorship and support of the staff at the Center was great preparation for her work now with Bella Zoia. Since her graduation from CCNY in January, she has devoted all of her energies to Bella Zoia, and now the company is in full swing with many projects.

Lattuca says Bella Zoia just completed a project with East New York Community Land Trust (CLT), a nonprofit located in Brooklyn that is part of the fight for affordable housing and sustainable development. The East New York CLT believes that decisions about housing and development should be made by and with the community. The project was a PSA to officially introduce their organization to the community. [www.eastnewyorkclt.org](http://www.eastnewyorkclt.org)

The Bella Zoia team is also working on building their own green production house and a studio of equipment. Lattuca says that “a little known fact about the industry is that a large portion of the expenses involved in video production for film, tv, or online viewing comes from gear rentals that can cost upwards of \$1,000 a day.” By building their own studio of equipment, they are able to make an enormous contribution to the nonprofits they work with as their gear is either donated by Bella Zoia or by fellow members of the industry, or purchased using donations made to Bella Zoia, such as “an incredible grant from Standard Chartered or donations from our wonderfully thoughtful community members,” Lattuca adds.

## Blue Generation



**Claudia Solano** '21 became interested in sustainability and plastic pollution while taking a class about social entrepreneurship. “My professor had connected me with an entrepreneur who needed help developing a business plan specifically for a product of hard formed plastic waste. My husband [Nico Maxfield] was finishing a master’s in sustainability at the same time, and when we spoke about this project, we realized that plastic pollution is a huge problem.” She is now getting her master’s in economics, and Maxfield is getting his Ph.D. in environmental science. They created a company, Blue Generation (Blue G), that collects and uses data to track individual disposal of plastic waste. Solano says their knowledge of the problem of pollution convinced them to involve others in their environmental impact studies, including a chemist, another economist, a data scientist, and a software developer, and they are using the concept of big data and business analytics for environmental purposes.

In 2020, they competed in the Zahn Center’s Startup Competition, and eventually came in first place in the Zahn Social Impact Prize. They used the funding to develop their community outreach program to conduct microplastic research on stagnant water pollution in Puerto Rico, Colombia, where Solano hails from, and other Caribbean countries.

During the competition, Blue G developed an environmental fitness app with four services: waste tracking, tips to improve behavior, gamified trophies, and social media connectivity. They have developed a number of Blue G Clubs to train students in sustainability, data analysis, and microplastic pollution in Puerto Rico and Colombia. <https://blueg.org>

As can be seen from these stories, the partnership between the Zahn Center and Standard Chartered creates rich opportunities for women and girls in technology and entrepreneurship. The Standard Chartered Women in Technology Incubator continues to create high impact for the Center.

## Zahn MakerLab Apprentice Program Thrives

Launched in 2017, The MakerLab Apprentice Program allows students to gain hands-on product development experience that will give them skills beneficial for future employment opportunities and career longevity. They are trained in the use of hand tools, design software, and a variety of machinery. The projects that are developed come from both internal and external clients, and range from startup hardware prototypes to creative solutions for everyday problems.

The MakerLab fits seamlessly into the work that the Zahn Center is doing with students who are interested in the exploration of innovation and R&D ideation. The Apprentice Program is that extra step of tactile experience that many of them need to move into careers in engineering fields that require hands-on experience. The program is divided up into four areas of specialty: CAD, manufacturing, electrical, and marketing.

### Seamless Transition During COVID

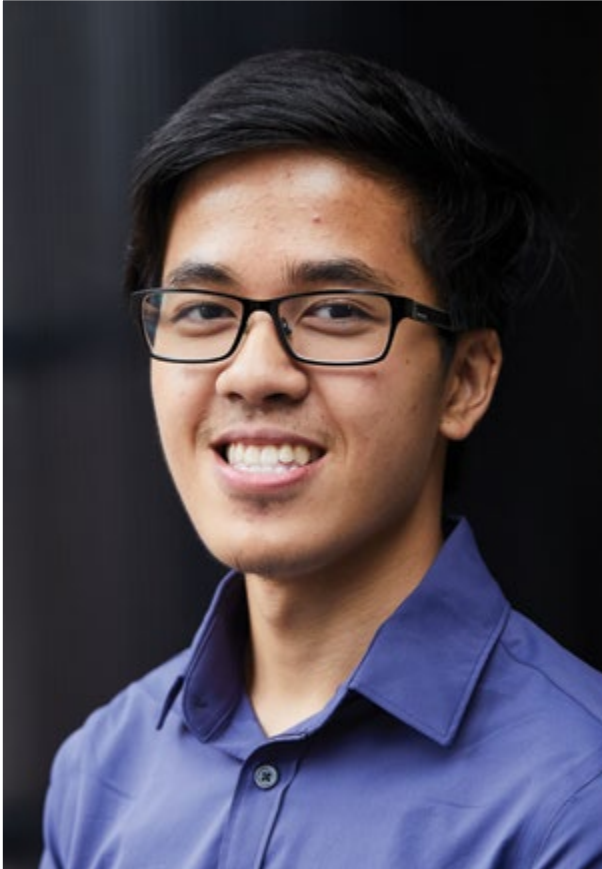
Once the COVID pandemic began, the Apprentice Program had to transition to an online format. This past year, Zahn apprentices worked with Assistant Engineers (apprentices who have advanced through the program to a supervisory level) on simulated in-person projects that they did virtually on their computers. The transition was so successful that all 24 apprentices and Assistant Engineers earned Six Sigma White Belt Certification and seven students were able to secure long-term internships at Actasys, Inc., Kinetic, and Northrup Grumman.

**Salam Elhalabi**, now completing her B.E. in mechanical engineering at The Grove School of Engineering, following her first degree in biomedical engineering, started as an apprentice at the Zahn's MakerLab with two other CCNY students in 2017 and advanced to a Supervising Assistant Electrical Engineer position. She speaks of her excitement when an external client brought a project to the Lab that she was assigned to work on, the prototype of a smart pillbox. The pillbox was to alert the owner to when to take certain pills and when to replace the contents. It was not only for the elderly but for anyone needing to take medication at certain times. The team used an Arduino CPU board for the miniaturized brains (sensors) and built a 3D cellphone case adapter on TinkerCAD, a web-based platform, for the device, and a small clock screen to indicate the time medication is due. Elhalabi says the client was able to get funding for the prototype the team made. Now an alumnus of the program, Elhalabi has been leveraging her knowledge and skills. This past summer she worked on a project using Solidworks to model a cell phone case adapter called Embedded Piezoelectric Sensors in Metal 3D Printed Structures that gave her exactly the experience she needed to prepare for the Arduino Fundamentals certification exam and was paid a good stipend for her work. Her entire engineering pod passed and is officially certified by Arduino as having knowledge of Arduino related electronics, programming and physical computing, a highly valuable achievement. Elhalabi says the Zahn Center "gave me the gift of inspiration and I have passed it on to others, like a gift and a blessing."





## Great Work Opportunities for Budding Entrepreneurs



The opportunities to work on fascinating projects abound at the MakerLab. **Francis Sy** joined the Zahn Center in the second semester of his freshman year at CCNY, and now he is a graduating senior in The Grove School of Engineering. He has benefitted from working as a Supervising Assistant Engineer in computer-aided design for projects devised in-house through the college and also from outside clients. Sy enjoyed working with Wearworks, to build a special smartwatch prototype called Wayband. Designed for blind and visually impaired people, it needed to be equipped with a vibration mechanism to indicate direction. The Wayband vibrates only when the person is going the wrong way. This smartwatch successfully guided a blind runner to complete the NYC marathon.

Sy received a fellowship from the S. Jay Levy Fellowship Program at CCNY to advance his career aspirations of education, training, and mentorship concerning business culture with an emphasis on ethics in professional leadership and professional marketability. He also received a highly sought-after prized internship at Northrup Grumman for summer 2021 and an internship at NASA Kennedy Space Center for fall 2021, which brings him one step closer to his dream of working at NASA in their robotics aerospace program. "The Zahn Center was the defining aspect of my undergraduate experience. I definitely wouldn't be here without the Zahn Center," he states with pride.

CCNY President Vince Boudreau has stated unequivocally that "we are seriously investing in the concept of the innovation ecosystem." He points to the fact that the college is building problem-solving and innovation skill spaces across the campus for the multidisciplinary use of all faculty and students. The Zahn Innovation Center is leading the way by building a base of knowledgeable faculty, students, and staff that will be able to nurture and grow the technology hubs of the future on the CCNY campus.

## Mentorship: An Integral Part of Success

For the Zahn Innovation Center and particularly the Bossgirls and Startup Competition programs, mentorship is an integral component of assisting students in realizing the full potential of their startup goals. From the first stages of a student's concept to create a brand around their idea, mentors provide leadership and guidance at every step of the process, helping these young entrepreneurs throughout the program prepare for a potential future in tech. Zahn mentors say they are constantly impressed with CCNY students' natural entrepreneurial spirit.

Mentors guide students in a step-by-step process, teaching them how to best achieve their goals. The mentors come from diverse knowledge backgrounds—from electrical engineering, to finance and health services—providing students a wide array of resources. Mentors offer office hours and also lead workshops about their areas of expertise.

Students in the Zahn Center's Bossgirls and Startup Competition programs are also offered mentor pairing. Mentors are provided for every team, giving them ample opportunity to work closely with students, creating lifelong impact and forging bonds that will assist these entrepreneurs in their future endeavors. The relationship between the mentors and their students is often organically formed. In many cases students reach out to mentors that most closely align with their goals, creating a synergistic experience for all of those involved.

### Strong Push for Women and Minorities in STEM Work

Many students involved in Zahn's programs are, like the students at CCNY, from underrepresented groups, who benefit from the active encouragement that their mentors use to motivate them to work beyond the expectations of others. With this awareness, the mentors can help their students navigate the often-complicated world of tech, as well as STEM more broadly.



During Bossgirls Bootcamp, mentors meet with their students for a few hours each week. However, the connection does not end there. Mentors are available beyond this time, reviewing emails and documents to help their students along every step of their processes. They are available to answer the most important questions, such as inquiries about the gap in the market and the solutions to bridge it. Students lead the conversation, and mentors ensure that students create novel concepts, as well as learn how to best execute their projects. The mentors support students in thinking laterally and outside the box.

## The Mentors



"There needs to be a push for STEM involvement for people of color and for women, and it needs to start at a young age," says mentor **Art Brody**, President of A.T. Brody & Associates. "It's almost too late to start in college, and I've actually verified that what I observed in the 1950s and 1960s is still going on. By the time young women get to high school, they may lose interest and be shepherded towards non-hard sciences."

"Over the years that I've done the mentoring...[I've guided them through]... different things depending on what the team needs," Brody adds. "It's based on the team's needs and also my understanding of what the ultimate goals of the program are. It could be anything from marketing, sales, to value proposition."



"We're passionate about the kids, about the whole project," says **Martha Adeline**, Director, Financial Institutions Group - Commercial, Corporate, and Institutional Banking at Standard Chartered, a mentor who has been involved with the Zahn Center for four years. "So, what we did was we put in [a call for employee volunteers to mentor on] our [corporate] website and we took care of the scheduling and we also do the mental preparation just to give them a heads up 'This is what to expect, this is what you have to do.'"

"The program really prepares you to be an entrepreneur, which is a very good skill, whether you become an entrepreneur or not," adds Adeline. "The skill of thought is still important for whatever you will pursue in the future."



"When I think about student entrepreneurs from other universities, it seems like many of them only wanted to start a company to put it on their resumes for consulting, investment banking, or large tech company roles," says **Abby Lyall**, Vice President at Big Idea Ventures, in talking about her experiences as a mentor for the Zahn students. "I feel like a lot of the City College entrepreneurs actually wanted their businesses to be careers post-graduation, which always stood out about the Zahn Center students I worked with."



"We give feedback and constructive criticism as they move through," says **Jill Dyer**, Head, FCC Analytics and Change, Americas at Standard Chartered, another mentor. "If you were to see their presentations early on in the program, versus their pitches at the end of Bootcamp, you would really see the difference. The visuals, how they work together as a team, what they're focused on, it's so neat to see, it inspires me."

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*The Zahn Innovation Center is committed to gathering the right mentors and to creating an interactive environment, delivering on both the larger picture as well as the more granular aspects of the students' projects. This means that mentors can provide different perspectives due to their respective fields, including market research, financial or legal aspects. There are no strict rules on how the mentors need to engage their mentees—but mentors' skills often complement one another. Although the programs were forced to transition to a virtual frame following the coronavirus pandemic, the core aspects of mentorship remained the same.*



## The Historic Arc of The Zahn Center Evoked by Its Alums

Joe Borrello, a 2014 graduate of CCNY, speaks with zest about his experiences at the Zahn Innovation Center, starting in his freshman year in 2010, and still ongoing. In high school, he thought about entrepreneurship and the possibilities of becoming an innovator after college. He tested those dreams when he happened upon the Zahn Innovation Center when he started his freshman year and competed in the first Kaylie Prize, as it was then called.

Borrello and four other freshmen made a proof-of-concept design of a more user-friendly electronics Braille display for their project, Dynamic Braille, in the inaugural 2010 competition and succeeded in impressing the judges enough that they tied for first place with a team of graduate students and seniors, whose project was called Stokes Innovation. From that moment, Joe Borrello was hooked. He states that the Zahn Center started the arc of his life up to now. "After that first Kaylie competition, it determines...everything I've done since, through graduation in 2014, my first job, and up to today."

The Center refers to Borrello as the "resident historian," because he's remained involved in the Center since it's beginning over 10 years ago. He is currently working on his Ph.D. in Biomedical Engineering and works at Mt. Sinai Hospital at Sinai BioDesign, a medical device incubator similar to the MakerLab of the Zahn Center. He adds, a bit wistfully, that COVID has changed the flexibility he had to just stop by the Lab or the Center and check out what everybody was doing when he left work at Mt. Sinai. Now there is a more planned relationship with the various teams in the incubator as things are virtual. Despite that, he mentored several of the startup teams for the Final Pitch both in September and May and fully expects to do so again next year. He states unequivocally that, "The Zahn Center is a cornerstone of the campus, the culture, and what people do."





Enzo Ames, class of 2018, competed in the Zahn Tech Track at the Zahn Center and had a different experience. He is a sports enthusiast, especially for soccer, and realized that it is difficult to find local games to play in. It is also difficult for recreational teams to find players at any given moment. He envisioned a central place where players would reach teams directly. Ames, a computer science major at the Grove School, realized there needed to be an app that could provide this information at a moment's notice and decided to create it himself. He asked several other computer science engineers to help him. He says they worked very hard on the app development, went through all the steps, completing Bootcamp, Demo Week, and Final Pitch, but didn't take home first place.

Even so, Ames says that this experience was pivotal to his development as an innovator and software engineer. He explains that there were too many engineers with the same skills involved in the sports app and they needed a diversity of knowledge, creativity, critical thinking, experience, and imagination to get it all right. He realized that "you have to fall in love with the root problem, not focus on the solution."

This experience gave him the impetus to start over and pursue a new startup, Breadcrumb. Breadcrumb is "a platform for honest and comprehensive apartment reviews." The app is a successful tool "for renters by renters" that gives reviews of apartment buildings, units, neighborhoods, brokers, management companies, and landlords written by renters in New York and several other cities. [hibreadcrumb.com](http://hibreadcrumb.com)

Ames speaks passionately about his experience at the Zahn Innovation Center. "Going through the Zahn Center was an amazing experience because I was able to build Breadcrumb. Because of design, I was able to get the guts...the desire to have...an application out there that people can use." He continues, "that light has always been burning...even after I left Zahn. There's a reason why this gets repeated all the time, but you are going to wear many hats, right? You are going to have to design, you are going to have to do logistics...operations...marketing. So be prepared...that's what it takes."

Landing a job at Foursquare, Ames is now in the business of selling location data and has passed Breadcrumb on to an intern to manage for the foreseeable future. But the Zahn Center's teachings remain within him, and he says he will build another startup of his own again.



## The Impact of the Zahn Experience

The entrepreneurial spirit that flourishes throughout the Zahn Center's programs and activities, even during the pandemic, has grown and broadened the thinking of the students who come there to learn how to achieve their dreams. The exchange of information, knowledge, and expertise that is embedded in all of the activities that the Center formulates for their students through workshops, hackathons, fireside chats, the Startup Competition, and more, grows stronger and evolves as the community grows larger and more diverse. The alumni stay involved and remain dedicated to passing on their experiences and knowledge to the newcomers. They all have stories like Joe Borrello and Enzo Ames.

## Deep Dive into Women's Entrepreneurship: Women & Diversity



A class offered each fall semester within the Economics Department of the Colin Powell School for Civic and Global Leadership, is taught by securities-based crowdfunding, P2P online lending and digital banking pioneer, **Kim Wales**. She is an adjunct professor, author, and the Founder and Chief Executive Officer of CrowdBureau Corporation, a research, asset and risk management firm for P2P transactions. Additionally, she is a Director of Investors Bancorp Inc. (Nasdaq: ISBC), and board member to the Zahn Innovation Center, and the Foundation for City College, among others.

Standard Chartered sponsors this elective course, which began in 2015, as part of their initiative with the Zahn Innovation Center, to open up the world of entrepreneurship, technology, and STEM to women and people of diverse backgrounds. The class is cross-listed with the Gender Studies and Black Studies divisions.

This elective class has been instrumental in encouraging students to think of themselves as highly capable entrepreneurs and investors. Offering an historical context that places women and people of diverse backgrounds in entrepreneurship roles dating back to the 1840s, the class amplifies visionaries like Ada Lovelace, the first computer programmer, and Grace Hopper, who invented the first compiler to translate programming code and co-invented COBOL, and Madame C.J. Walker, the “first Black woman millionaire in America,” who made her fortune thanks to her homemade line of hair care products.

Wales provides the building blocks about the technology and financial transformation rapidly reshaping the industry in the United States and around the world. She connects theory in corporate governance, risk management, banking regulations, as well as wealth management, through the readings and a series of workshops. The stark reality is that while women hold the bulk of purchasing power and control an enormous portion of the wealth in America, until recently they have been unable to translate their power into women-led investments and businesses.

Wales offers her students real life stories that exemplify the ways that people who have been marginalized can change their wealth generating trajectory and can, for example, become investors and/or raise capital through equity and debt P2P financing, and securities-based crowdfunding. She illustrates how these groups are positioned to disrupt and transform the financial industry with new innovations.

By opening up a world view of the financial industry and its history going back to the founding of the Securities and Exchange Commission (SEC), the establishment of the World Bank, the International Monetary Fund, and the United Nations, Wales lays the groundwork for the current efforts by countries across the globe to meet the UN's Millennium Development Goals and climate change discussions about environmental and social governance. The interconnectivity of financial markets and individual businesses requires that students who hope to be entrepreneurs must grasp the larger picture before “they can learn about the tools, strategies, and gain the self-confidence needed to launch and grow a new business or reinvigorate an existing business,” says Wales.

Wales offers a thorough and rich discussion of specific readings to engage the students and stimulate their imaginations so they can grasp all of the interconnected behaviors and thought processes that can make or break a business, and they can learn the successful and innovative strategies that women and diverse entrepreneurs need to learn in order to take leadership positions in today's financial market. She uses three prime readings in her class: “The Innovators” by Walter Isaacson; “Outliers” by Malcolm Gladwell; and her book published © 2018 by ABC-CLIO Praeger, “Peer-to-Peer Lending and Equity Crowdfunding: A Guide to the Capital Markets for Job Creators, Investors, and Entrepreneurs.” Standard Chartered's sponsorship of this elective course has proven to be a successful instrument in their playbook to open up educational opportunities for women and people of color to achieve the entrepreneurial and business skills needed to transform the economy with new innovations in the world of entrepreneurship and STEM technology.

## Dedicated Donors of the Zahn Center

Donors of the Zahn Innovation Center remain dedicated to the concepts of entrepreneurship, and particularly to funding programs that push forward entrepreneurship for women and people of color, including support for the summer programs, and support for staff. The donors also bring with them strong personal and intellectual understanding about the ways that financial support can bolster and grow the Zahn Center's programs.

### The Zahn Family



For **Peter Zahn**, dedication to City College and the Zahn Center runs in the family. Peter's father, Irwin, attended City College in the 1940s, and was instrumental in founding the Center. After Irwin created a successful business, he decided to dedicate himself to nurturing entrepreneurship. With this in mind, Irwin founded the Moxie Foundation, which has funded the Zahn Center from its inception.

"While we were in business, we provided opportunities for university students in the form of contests to come up with innovative solutions to engineering challenges," Peter Zahn says. After Irwin sold the company, he wanted to give back, and a natural focus was to get involved with entrepreneurship and innovation in the campus environment."

In 2012, the Zahn family became involved with City College. Although based in San Diego, City College became a natural focus because of Irwin's connection to the institution.

"As I visited the campus and met everyone involved, it turned out to be the most phenomenal place," Peter Zahn says. "The students have such determination, and the faculty is top notch. The administration is strong too, and very involved."

Zahn also gives credit to City College as a co-developer of the Zahn Innovation Center, a true partnership between the Moxie Foundation and the college.

"It's great to see the commitment of the administration and the faculty and the staff," Zahn comments. "Donors have played a huge part as well, including Standard Chartered, which has been a fantastic partner. They've not only contributed funds, but many of their employees are thoroughly engaged with helping and mentoring the students."

Peter Zahn also points to the fact that young people face more challenges these days—including the pace of technological advances accelerating, and the likelihood that students will hold multiple careers. For the family, the Center is not just an educational mission. "The students can benefit by developing skills that entrepreneurs exhibit, like empathy."

"It's about thinking entrepreneurially... as a way of helping them to deal with the challenges that they're going to be facing throughout their lives," Zahn says. "That's one of the things that I love about the Center. Students come in with a variety of life experiences, and an impressive motivation to excel. The staff helps them form ventures and achieve milestones—but that's not all. They're equipping these students to deal with real-life experiences. It's a thrill!"

Peter Zahn applauds President Boudreau's encouragement for the Center to reach across campus, and engage students and teams from many Schools and departments. In fact, the family has worked with the President and his team to support faculty initiatives that incorporate experiential learning in the college's curriculum.

## Standard Chartered



Elaine Chin, Managing Director, Corporate Affairs, Brand & Marketing, Americas at Standard Chartered, a multinational banking and financial services company, saw an opportunity seven years ago. Standard Chartered sought a partnership to expand their impact on youth, particularly young women. The company also wanted to identify fields that had a clear lack of representation of women. Chin and Standard Chartered honed in on New York City, and particularly the tech industry.

“There was a very, very clear lack of gender representation, not only in the industry itself, but in the pipeline leading into the industry,” Chin says. “So, we found the Zahn Center where their model was spot on in terms of college level, the entrepreneurial mindset, as well as the STEM or the technology space. This was born out of that connection of Zahn’s mission to inspire and embed an entrepreneurial mindset.”

With this in mind, Standard Chartered created the Women in Technology Incubator and track where they fund a \$25,000 prize for the winner of the startup competition. Though the program has gone through several iterations, its core mission remains the same. They also have revitalized their Incubator with workshops and events that stimulate current women entrepreneurs.

“The competition was the main part around which all of these things, whether it’s the bootcamp or the Zahn Center itself, fed into the competition,” Chin says. “What is important, what is distinctive about the Women in Technology track, is that in order for students to qualify for it, they had to satisfy certain criteria, the most important of which is, it had to have at least one woman, founder or co-founder. And it had to have women participation at 50 percent of the makeup of the overall team.”

Chin notes the program continues to build, with the tenacious City College students offering a high caliber of talent. “It just continues to reap rewards for us so well,” Chin adds. “What we like to say, funding is what makes everything possible. But really, for us, it is all of the multi-pronged use of this funding that gives us the most rewarding results.”

Standard Chartered also assisted in the funding of the Center itself, a portion of the overall collaboration space, and offering a foundation for several programs. Importantly, Chin points to the fact that Standard Chartered also funds an entrepreneurship elective course at the college, Entrepreneurship: Women & Diversity, that is offered in the fall at the Colin Powell School for Civic and Global Leadership. It is cross-listed with Black Studies and Gender Studies, and taught by Adjunct Professor Kim Wales, a multifaceted financier, entrepreneur, and author, who provides students with a deep dive into women’s entrepreneurship experiences from historical, economic, cultural, and technological perspectives.

Chin also addresses Standard Chartered’s conceptualization and support for Bossgirls, which is a summer camp program for high school girls from the Tri-State Area. The objective for the program closely aligns with their mission. She notes that the mindset was to build a strong pipeline at the college and high school level where these young entrepreneurs can build tools early, implement their education and knowledge, and access resources. This past summer Bossgirls had 450 applicants for their 6-week summer camp.

“The public private partnership is what allows us to form relationships,” Chin adds. “This helps us to throw the net out wide in terms of getting both the objective of women in tech and the Zahn Center out, but also networking, bringing to bear all the networks of the private side, the public side, the public official side, all for a common cause. And we’ve reaped so much from being able to talk about this program, as well as showcase the talent behind the program.”





**Howard Lee Morgan** '65, venture capitalist, angel investor, author, philanthropist, and co-chair of the Zahn Advisory Board, sees funding programs at the Zahn Center as a way to help him envision a strong future for young entrepreneurs. Morgan supports the summer accelerator program, designed to encourage teams of students to produce a minimum number of viable products, strong market research, as well as technical research if necessary.

"I get the psychic rewards seeing young people turning into entrepreneurs and pursuing some of their dreams," says Morgan. "That's the kind of thing I want to help with."

Morgan comments that because many of the students at City College are first-generation college students or immigrants, they better understand the needs of their communities. Indeed, the diversity of students at the Zahn Center helps inform and produce some of the most innovative work at the college.

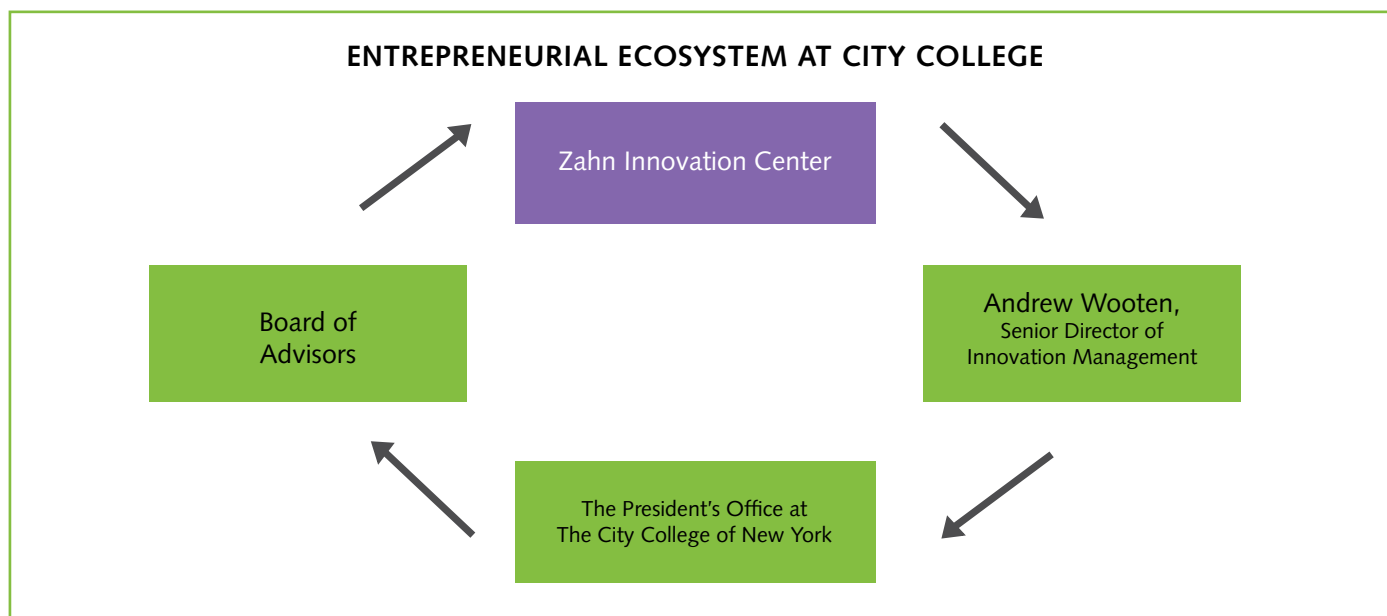
"I remember one of the first groups I saw was one of the most mixed groups I've ever seen; Nigerian, Haitian, a couple of other people from New York, both Latino and African American," Morgan adds. "And they were having their mothers and their mothers' friends cook and then delivering those ethnic meals to the communities. It was terrific. This was pre-COVID. But it actually turned out to work out pretty well, and they kept it going for a number of years. That's not something I would have seen out of Silicon Valley."

Morgan also notes that other students were creating headlights for skateboards, as many kids skateboard at night. Another group's parents worked in construction where they developed back pain. The students developed a belt that allows people to lift heavier objects with less back pain and damage.

Currently, students in the accelerator program are funded through stipends which Morgan provides, allowing them to commit their entire summer to a project. The \$150,000 grant that goes to each summer program also supports staff.

"I'm a City College graduate, the second in my family to go to college," Morgan says. "And City College has the best record of taking people in the lowest quintile of income levels and moving them up. I know firsthand that entrepreneurship is one of the ways that we're going to be able to keep that going, and even more so show people that even though they started in the lowest quintile, if they can take a good idea all the way through, they can then make the money to move themselves up a couple of levels in the economy of this country."

Morgan sees the programs he supports as expanding, and helping develop the ability to create natural applications for the skills the students learn. He also envisions students potentially building an organization of multiple innovative startups, utilizing what they learned about leadership and management at the Zahn Center.



## Advisors Push Zahn Innovators to New Heights

Advisors are an integral part of the Zahn Innovation Center, providing guidance and resources that help push the Center to new heights. They include Emily Susskind and Matthew Washington, who both bring with them their own areas of expertise and resources to further the education of young entrepreneurs at City College. Another advisor is Andrew Wooten, Senior Director of Innovation Management and Business Development at The City College of New York, who is responsible for leading development and execution of CCNY's strategy to maximize the commercial success of innovations developed with resources from CCNY, CUNY, and the Foundation for City College.

**Emily Susskind** is a technology executive, advisor, and Board member with experience across the financial services, information services, entertainment and media, and electronics industries. She is a Board member and Vice Chair of a workforce development and small business incubator organization serving women and immigrants in New York City, and is an active advisor to and investor in early stage companies. For the past five years, she has also worked with budding entrepreneurs at the Zahn Center.

This wide array of tech-related work gives Susskind a unique perspective on the Zahn Center. And although her work there was her first experience with City College, she has always admired the mission of the institution.

"I've certainly, throughout my life, understood the role that City College has played in New York City, and its impact on generations of people who through first rate, public education, were able to significantly change their economic circumstances," Susskind says. "This is the school where an extremely high percentage of people are the first generation in their family to go on to higher education. They are commuters, they are living in all of the boroughs of New York City, and they show a lot of hustle and a lot of grit."

When approached about working with the Zahn Center, Susskind was immediately excited about collaborating with City College. "[I like] ...this idea of allowing students coming from a range of backgrounds to experience entrepreneurship, to learn about building businesses, to form interdisciplinary teams, which I thought was so incredibly important," Susskind states.

Susskind's connection to the Zahn Center includes serving as a judge for Demo Days and at the competition Finals, as well as helping with the summer accelerator program, where startup cohorts practice business plan pitches, a dry run for presenting to investors. Susskind also finds that these interactions lead to informal advisory and mentorship roles, which are very rewarding.

Summarizing her experiences with the Zahn Center, "I think it's an amazing program," she comments. "I think it's an amazing place. Most of all, the thing that just completely astonishes me and fills me with awe and gratitude every time I have an opportunity to interact with them are the students themselves, these startup entrepreneurs. They are remarkable people...gifted, ...focused...optimistic...[and] tenacious."



**Matthew Washington** served as the Deputy Borough President of Manhattan for over five years. Before that, he was the Deputy Director of External Affairs at the Durst Organization, a hundred-year-old family real estate company in New York City, which was part of the development of One World Trade Center. Washington's role with the Borough President of Manhattan's office in particular has made him an active participant with the young entrepreneurs who study at the Zahn Center.

"I have had the pleasure of being the judge for Demo Days," Washington says. "I have also had the opportunity to be an advisor and a mentor for some of the groups that we're moving through."

Washington has also helped as an advocate for resources for the Zahn Center, allocating capital funding to support the MakerLab at the Zahn Center. "I believe we gave half a million dollars to help move the MakerLab forward." He adds, "We so often talk about time, treasure, and talent. I've tried to invest all of those into the Zahn Center because it's really such a special program."

Washington became involved with the Zahn Center after being introduced to the Standard Chartered Women in Tech track. He then helped to select teams to meet with city agencies in New York. One project that Washington particularly makes note of is a road analysis system where an individual would drive and be able to track road conditions, predicting potholes. He was so invested in the idea that he set up a meeting between the young entrepreneurs and the Deputy Commissioner for the Department of Transportation.

"I've really just found a deep appreciation for seeing how we can encourage women to move forward in technology fields and I have participated in--I would guess in the past four years--I think I've participated in every Demo Day," Washington states. "I have gone to speak with students on numerous occasions, I have continued to mentor and I stay in touch with many of the students who I worked with and now consider friends and colleagues and so, I continue to support their work and just try to encourage them."

Additionally, Washington mentored Frip, a startup curating field trips. While the Frip team lacked office space, Washington opened his office to let six members of the team utilize his office all summer.

"I have just been a cheerleader for the entrepreneurs and a mechanism to try to help them connect with the resources that they need," Washington states.

Indeed, Washington sees the opportunity for Zahn's influence to continue growing, helping drive these young entrepreneurs to reach new challenges and even larger accomplishments.

"I am very proud of what has happened and in my relationship with Zahn," Washington states. "I would love to see it grow. I would love to see it bigger and serving more and have more tracks to it and different ideas to see how we make this something that is even bigger than what it is today. How does it grow and how does it expand and how can I help make that happen?"





## In Memory of Irwin Zahn



It is with great sadness that we announce the passing of **Irwin Zahn**, CCNY Class of 1948.

A trailblazer is someone who makes, does, or discovers something new and makes it acceptable or popular. That definition falls short for the man we came to collectively love and call our friend and mentor.

There are stories about what makes someone lucky, and they all come down to the same fact: Luck is made. Luck requires us to take risks and often, luck asks us to seek a new trail when the one before us is blocked by obstacles not of our making. When asked about the first risk Irwin remembered taking, he told the story of having been a young boy working as a delivery runner for a dry cleaning store. He recalled that part of the job required him to pick up garment pins and being inspired to create a magnet system - a prototype he worked on until it was perfected in a way that would improve the user's experience - and the moment that he 'realized that I enjoyed change - not for the sake of change - but in the sense of creating something better.'

From his time as an engineer who loved to make things better for others, to an entrepreneur who sought to create opportunities for anyone of talent to explore the world and their place in it, Irwin Zahn was, yes, a trailblazer, but he was also curious about people and what made them excited. At his alma mater, Irwin established first, the Zahn Innovation Center, the first of its kind on our campus and in later years, the Campus Engagement Network. Both initiatives were the brainchild of someone who wanted to connect the world to ideas, but more importantly, connect people to each other.

Irwin's infectious joy, his sharp eye for what made something of the public good and his ability to find a creative solution for every question changed so much of the campus for the better and his friendship, his passion, as well as his commitment to others will be missed by all who knew him.

- Dee Dee Mozeleski on behalf of The City College of New York





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### LIFETIME DONATIONS \$1,500,000 AND HIGHER

Irwin Zahn and the Moxie Foundation (\$2,300,000)

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The Zahn Innovation Center continues to make every effort to ensure accuracy of our donation records. If you would like to request an update for a future issue of our report, or if you are interested in making a contribution to the Zahn Innovation Center, please feel free to contact Executive Director Chris Bobko at [cbobko@ccny.cuny.edu](mailto:cbobko@ccny.cuny.edu).

## The Zahn Innovation Center Board of Advisors

Our Board of Advisors is comprised of industry experts, investors, entrepreneurs, community leaders, and alumni who help carry out our mission and spread entrepreneurship.

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**Rengarajan Ramesh**

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Entrepreneur and Investor

**Kim Wales**

Founder of CrowdBureau Corporation

**Chris Bobko**

Executive Director, Zahn Innovation Center

## Meet the Zahn Team



**Chris Bobko** is the new (November 2021) Executive Director of the Zahn Innovation Center where he looks forward to merging his academic and startup experience. In his previous position as Chief Engineering Officer at HyperloopTT, Bobko was responsible for developing technological plans, managing engineering projects, and leading collaborations and partnerships with other engineering companies. He also grew his engineering team from two contractors to twelve full-time employees and recruited more than 100 engineering contractors internationally.



**Kesia Hudson** is the former Executive Director of the Zahn Innovation Center, a startup incubator at The City College of New York. She works closely with the students, unlocking their entrepreneurial potential and turning their visions into sustainable business ventures. She is also the founding director of the Standard Chartered Women in Technology Incubator at the Zahn Center, inspiring young women to confidently forge their own paths.

Hudson's journey as an intrapreneur and an entrepreneur informs her approach to teaching and mentoring. She developed innovative solutions for the financial industry and started her entrepreneurial endeavors in the fields of consulting, event planning, and fashion.

Hudson received her B.B.A. degree in Computer and Information Systems Analysis from Baruch College and her M.B.A. in Entrepreneurship from The University of Texas at Austin. She is a Consortium for Graduate Study in Management alumnus.



**Anna Hutcheson**, Program Manager, is a student advocate with over 19 years experience in higher education with a background in admissions, scholarships and financial aid. As one of the Zahn Innovation Center's program managers, she prioritized securing experiential opportunities for students to gain hands-on experiences. Anna created an internship program, placing CCNY students in invaluable internships with social impact startups in the NYC area. She successfully managed the apprentice and mentorship program at the Zahn Center and transferred to a new position in the summer of 2021. Anna has a degree in Computer Information Systems from Bryant University.



**Katherine Olives** designs and manages entrepreneurial programs for early-stage founders, as well as high school students, helping them to understand their market, launch their businesses, and build confidence as future entrepreneurial leaders. She believes that entrepreneurship is key to creating personal wealth and understanding the world analytically, and she enjoys teaching young people the business skills they need to succeed. Olives received her B.A. in English Literature from the University of Scranton. She also holds a Project Management Certification from Google.



**Steven Frank Monzon** is a program and logistics professional with a passion for creating social impact through design thinking, collaboration, community involvement, and the arts with a B.S. in Psychology from the State University of New York at Oneonta College. Working for the Zahn Innovation Center for over six years, Monzon has supported over 175 student-led startup companies striving to achieve their goals through entrepreneurial programming.



## CCNY's Senior Director of Innovation Management and Business Development



**Andrew Wooten** is the Senior Director of Innovation Management and Business Development at The City College of New York. He is the first person to hold this position, as the college is just at the beginning of a full and exciting mission to coordinate the types of innovation programs and maker spaces that will coalesce into a confederation of research, development, and fabrication of innovations ready for market. Wooten is responsible for leading development and execution of CCNY's strategy to maximize the commercial success of innovations developed with resources from CCNY, CUNY, and the Foundation for City College as part of President Vince Boudreau's Innovation Fund, which will be used to raise funding especially for the support of a pipeline for developing commercially viable innovations and bringing them to market.

Wooten says that the Zahn Innovation Center occupies a special niche in this pipeline. It brings this full arc from discovery through product development to enterprise activity into the mix. He believes that better integration and deepening of actual courses and seminars leading to entrepreneurial development in, for example, digital health, therapeutics, or gaming would open up opportunities for the Zahn Center to appeal to a much larger segment of the college population. Wooten articulates that "there has been an absence of real product development, prototyping capabilities...such as the master's in translational medicine, with this bio design methodology...to collaborate with industry to build real products. This is where the context is good. I think this is where we can work together." He stresses that there are a number of programs across campus that involve brainstorming discovery and developmental work, but the key is to open up all the communication channels, including the possibility of partnerships, so that the pipeline to fruition can be straighter and more sustainable.



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