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A LETTER TO THE FRESHMEN

CHAE JEONG (ChE '16) | PRANAV JONEJA (ME '18) | RUCHI PATEL (ChE '18)

To the Class of 2019/20,

Welcome to the Cooper Union and congratulations on the start of a new journey! Your arrival comes at a fortuitous time that coincides with a chance to build The Cooper Union anew. A lot has happened in the recent past: a change in administration, a pledge to reassess the tuition model, and a newfound hope for free tuition. Your professors, alumni, upperclassmen—everyone is working towards community building and we foresee profound discussions taking place in the year to come, all of which you, as students here, will be a part of.

We hope that you involve yourself both in your own educational pursuits and the wider Cooper community. Without a doubt, this school will push you to your limits, but you should not let yourself be discouraged by its testing nature. Instead, test the limits themselves and be willing to take risks. Remember: your heart can sometimes be a great brain, so spend some time (but not a lot) doing things that may seem wasteful. As you strive in your education, do not forget to relax, interact with others, and build on yourself in non-academic ways. If you force yourself to go outside, something wonderful always happens.

You will come to learn that you are surrounded by the most gifted individuals. Learn from each other and grow together. Have faith in yourself and your fellow Cooperites, and you shall see positive change all around you.

With love nonstop,

The Pioneer Editors

NONSTOP COOPER



Photo by Victoria Sobel (Art '16)

Artists, architects, and engineers gather at an event at Nonstop Cooper during the second week of school. Nonstop Cooper is an community residency , a space previously occupied by St. Marks Bookshop, and serves as a workspace for students and teachers alike to host and attend events that are both academically and extracurricularly enriching to the community.

CHANGES MADE ON ADMINISTRATIVE ROLES

DANIEL GALPERIN (ChE '18) | ARNOLD WEY (EE '18) | BRENDA SO (EE '18) | MARY DWYER (ChE '19)

You could say, “It has been a long summer.” In the course of the past three months, several administrators, including now former President Jamshed Bharucha and former Dean of Engineering Teresa Dahlberg, have ended their tenure at The Cooper Union. Richard Stock and Nader Tehrani were appointed as the Acting Dean of Engineering and Dean of Architecture, respectively. Bill Mea, former Vice President of Finance and Administration, was appointed as Acting President, and is to serve until the presidential selection committee decides on a new president. Dean of Students, Christopher Chamberlin, now reports directly to Acting President Mea. Others, such as Dean Baker and Dean O'Donnell will remain at Cooper, but have had a change in responsibility.

Former President Jamshed Bharucha announced his resignation on June 10, 2015. The Board of Trustee's decision to not renew his contract came partway through his term. The nonrenewal and his subsequent resignation came at a critical moment in the Attorney General's investigation.

A defining moment of Bharucha's time at Cooper came when he made the announcement that charging tuition would be unavoidable. Following community backlash and the 65-day occupation of the President's office by student protesters, his continued insistence that tuition was unavoidable made him unpopular among students, faculty, and alumni.

Some people applaud his frankness regarding Cooper's fiscal situation, which his predecessor Campbell hid with accounting tricks and misrepresentations of Cooper Union's finances. Others continue to criticize Bharucha for his administration's failures in oversight and management of proposed revenue generating programs.

Following the nonrenewal of his contract by the Board of Trustees, Bharucha announced the decision to step down from his position as President of the Cooper Union, a year before his contract would have expired. He will be taking a post as a Visiting Scholar at the Graduate School of Education at Harvard University.

As Jamshed Bharucha stepped down, William 'Bill' Mea, former Vice President of Finance and Administration, was appointed Acting President. Mea began his career in higher education at Philadelphia University, eventually holding the title of Assistant Vice President for Business and Finance. He joined Cooper as Vice President of Finance and Administration in September 2014 and was appointed Acting President in July 2015.

On the subject of Cooper's financial issues, Mea said that “One of the real roots is that we spend more money than we earn,” and right now “the goal is to become operationally adequate so we can at least break even and spend no more than we earn.” As to whether Cooper could buy and use real estate

for much needed revenue, Mea states, “I don't think that's [buying real estate] short term. I think we need to get to the point where we are living within our means... and then we'll see where we'll go.” When asked about whether tuition is included as revenue for Cooper, he responded, “The numbers I put together, the budget and the future projections, include tuition for now.”

In response to the strained relationship between students and administration, he said that, “There's deep caring, even within the administration, for this place. Everybody I meet wants this place to succeed. Sometimes the views on how to do that might be different.” In his interim role as Acting President, one of his goals is to “deliver to the community a new president, with the trust partially rebuilt, the healing at least partially done.”

Mea sees his role as an opportunity to have the administration invariably follow through on its word to the community and to build a foundation of trust for the President that follows him. In addition, Mea is also looking forward to “a really great year where we celebrate the faculty, celebrate the students and return to the core roots of who we are.”

Former Dean of Engineering and Chief Academic Officer Teresa Dahlberg submitted her resignation on May 4, 2015 and left The Cooper Union on June 30, 2015. Formerly the Associate Dean of the College of Computing and Informatics at the

University of North Carolina at Charlotte, Dahlberg was hired with tenure and took on her duties at The Cooper Union in August 2013.

At Cooper, Dahlberg's most notable work was the attempted establishment of the Computer Science (CS) program. The CS program did not come to fruition due to opposition from the student body, faculty, and ultimately intervention from the Office of the Attorney General.

Dahlberg also led in the publication of the Minority Report, a report that formally refuted the suggestions made by the Working Group to find an alternative to implementing tuition. The Working Group was a group of students, faculty and administrators who came together to propose alternative strategies to establish financial stability at Cooper Union. The Minority Report, in which Dahlberg was one of four authors, claimed that the Working Group's Report did not “constitute a cohesive, well-considered, implementable plan.”

She is also credited by former President Jamshed Bharucha for increasing the applicant pool of the class of 2019 by 67% compared to the previous year, and 33% larger than ever in the history of The Cooper Union.

After almost two years of service to The Cooper Union, Dahlberg will begin a new role as Dean of the College of Engineering and Computer Science at Syracuse University

as of August 1, 2015. Cooper's new Acting Dean of Engineering is Richard Stock, former President of the Cooper Union Federation of College Teachers (CUFCT).

Dr. Bonnie John (ME '77) resigned from her position as Director of Computation and Innovation after taking on the role in December 2014. She originally accepted the position in order to provide insight and advice on the Computer Science program in the works.

As the CS program's questionable academic rigor raised concerns in the community, John stepped down, remaining as director of the NYC Summer@Cooper program, which offers participants experience with IBM Watson, developing business ideas that use Watson's artificial intelligence and natural language processing capabilities.

Stephen Baker, formerly the Vice President of both Student Affairs and Community Relations as well as Dean of Athletics, has also seen a change in responsibilities under Acting President Mea. As of August 14, 2015 Baker remains the Vice President of Community Relations as well as Dean of Athletics, but is no longer Vice President of Student Affairs.

When asked what his plans were moving forward in light of this change, Baker responded: “I intend on continuing to focus on the students and remaining peripatetic in my work with students, alumni

and the Cooper community.”

Christopher Chamberlin, who joined the Cooper community in 2013 as Director of Residence Life and the Associate Dean of Student Affairs, was named Dean of Students in 2014. As of August 14, 2015, all of the responsibilities of the Vice President of Student Affairs have been allocated to Christopher Chamberlin as the Dean of Students.

Although his title has not changed, Dean Chamberlin now reports directly to Acting President Bill Mea. Mea commented, “Elevating the Dean of Students to report directly to the President, in both in real terms and symbolic terms, allows us to focus on our students and our faculty [which is the main goal of the administration].” Chamberlin substantiated this point by saying, “Having a direct reporting structure is a signifier of how important student affairs is to the institution. It ensures the student's voice can be heard.”

Elizabeth O'Donnell, Associate Dean of Architecture for the past eleven years, became Acting Dean of Architecture on August 1, 2012 as Former Dean Vidler began a nine-month sabbatical and stepped down from deanship on June 30, 2013. Dean O'Donnell remained Acting Dean until the appointment of Nader Tehrani as Dean of Architecture in July 2015. O'Donnell has returned to her position as Associate Dean of Architecture and continues to teach courses in the School of Architecture. ♦

INTERVIEW WITH ACTING DEAN STOCK

PRANAV JONEJA (ME'18) | KRISHNA THIYAGARAJAN (EE'18)

The Cooper Pioneer *sat down with Richard Stock, the recently-appointed Acting Dean of Engineering to ask him questions about the current situation with the administration.*

The Cooper Pioneer: How were you asked to be Dean? Who specifically asked you to take the position?

Richard Stock: In May of last year, I was meeting with Bill Mea and Peter Buckley on a number of issues, including faculty union business. Bill Mea asked me if I would consider taking over as Acting Dean if the situation were to arise. We had a long discussion and at the end, I decided that if asked, I would consider it. But I would not apply or seek it out. If the job came along and I took it, I would step down from the leadership of the union and the chairmanship of chemical engineering. It would otherwise be nonsense to hold both titles: Acting Dean and President of the Faculty Union. That would be a conflict of interest. In early August, Bill Mea asked me and I agreed. About a week later, announcements were made to set the start date as August 10.

TCP: So what was happening from May until August?

RS: People had asked me before but no one was certain exactly how things were going to pan out. Jamshed Bharucha and Teresa Dahlberg left at the end of June, and after that, Bill Mea was just getting his ducks in a row through July. One of the actions Bill took, which in my opinion speaks to his understanding of transparency, was that he spoke to the faculty and staff, both in the engineering school and at other schools, asking for their ideas about who could be Acting Dean. He did a lot of legwork before he made his decision. It was a long, but straightforward process.

TCP: What is happening to your position as the President of the faculty union (Cooper Union Federation of College Teachers, CUUCT) and your position as Chairman of Chemical Engineering?

RS: Peter Buckley was the Vice President of CUUCT, so he's now stepping into the presidency of CUUCT. At the end of last year, I had one more term of my chairman position, so Irv Brazinsky is going to step in and finish my term. The chemical engineering department is pretty lean at the moment because Professor Daniel Lepek is on sabbatical. In that regard, having Brazinsky chair the department is the most pragmatic thing to do, as he has so much experience.

TCP: How have things been for you so far in your position as Dean of Engineering?

RS: Thankfully, I'm still teaching one course every semester. Right now, it's Senior Chemical Engineering Design, which is a fun course to teach. So far, I would

say being Dean is a torrent of emails. (During the hour-long interview, the writers counted at least two dozen audible email notifications from Dean Stock's computer). It seems that everybody wants to keep me in the loop, so I get all the emails. There are a lot of things that I still need to learn. I'm not rushing at it. I'd much rather be able to understand it and do it right, than mess it up.

There is a lot of technology and databases, such as WebAdvisor, that I now have elevated access to, but I really haven't had time to play with it. My view of administration is that, while it's important to ensure the bureaucratic system is operating correctly, it's so much more critical to interact with people. I'll eventually get up to speed with technology.

You know, it's funny: since I was conferred the position, virtually everybody has been saying to me "Congratulations! ...Or should I say condolences?" And I tell them, I don't have an answer...yet.

More seriously though, both Bill Mea and I have the word "Acting" in our titles. In other words, we find ourselves in a situation where the previous people in these positions are gone and we're in a bit of a mess. What this really means, to a certain extent, is that I've been presented with a shovel and people are looking to me and saying, "Okay, dig us out of this mess!" That's really what I'm trying to do. I'm trying to establish a period of stability in the Engineering school and I want to refocus everybody on just excellence in engineering education. I want to achieve that and improve it more in the future.

Right now, I don't want to get into the discussion of whether Cooper should or should not charge tuition. Down the road that's going to be sorted out and mechanisms are being put in place to do that. One of the best things that we can do as an engineering school, regardless of whether we charge or don't charge, is to do as well of a job as we possibly can.

As a school, I think that we have been confused about our governance and how we operate. Frankly speaking, I think that confusion has been fostered deliberately in the past and I want to get that clarified. I want to clarify how the committees work, who they answer to, and determine their composition, whether they involve administrators, faculty and/or students. Above all, we're doing it in a way that is transparent. For example, we're making sure meetings are documented, where it is appropriate, and that people know about them.

TCP: What about closed votes? (Closed or anonymous votes are a situation where individual votes are not recorded.)

RS: In the past, closed votes arose in situations in which there is perhaps some controversy, like the curriculum or faculty tenure committees. My understanding of Robert's Rules of Order is that if a staff member sets a closed vote in motion, there is no discussion. You just vote as to whether you will have a closed vote, and then simply have a closed vote.

TCP: What tasks do you find most difficult as Dean?

RS: I was surprised at the number of deep individual issues that sometimes occur in a student's life. Until now, I wasn't



Photo by Winter Leng (ChE '18)

entirely aware of the ways in which Cooper Union as an institution can and does provide support, for example through people in student support roles, like Chris Chamberlin. We need to rally around and make the situation supportive, perhaps by proposing a year off, or with advice to do this or that, because these issues can be deeply challenging to the student.

I find the depth of discussion among the administration and faculty very surprising. It's all guided by the question "What's the best thing that we could do for that student?" Even in the turmoil that has gone on over the last few years, everybody has worked hard to make sure that the education is still good, and that students are supported throughout their time here. That is one of the key, enduring aspects of Cooper Union. Everyone wants the students who come here to succeed in this environment. Sometimes that's difficult, but I love the way people rally around to make it happen.

TCP: This seems to tie into the Academic Standards Committee (ASC). Do you still serve on that?

RS: No. Before the fall of 2014, Brazinsky was on the curriculum committee and I was on the ASC. We swapped for purely political reasons. The chairmanship of the curriculum committee is rotated among the different departments, and at this time, it was about to be transferred to the chemical engineering department. At the time, Brazinsky was not as aware of the issues that were going on in the school as I was, so we decided to swap. That means Brazinsky was on the ASC last year, while I was appointed chair of the curriculum committee.

Among the reasons for the

cult. It frequently involves all sorts of things that happened outside the academic sphere.

Occasionally, there will be a request for us to consider something. ASC, for example, has to sign off on everyone who is graduating. Occasionally, we get a senior who is finishing up in the fall semester. We might conduct an online discussion and vote on whether the person graduates or not.

TCP: What is happening with the search for the future dean?

RS: At the moment, there isn't one. The Board of Trustees is gearing up and working out the details of how it wants to do the presidential search. The concept is that it would be better to appoint a new president, and then, after the proper search and appointment, give the new president the opportunity to run his or her own search for the dean. Assuming the presidential search goes well, I will be in this position for two years.

TCP: Is there any chance that Acting President Mea might stay as the permanent president?

RS: As far as I know, there is nothing to preclude him from putting his name in the hat to be considered. However, I'm not sure whether he's thinking along those lines. We haven't had that discussion.

President Mea has been at Cooper Union for only a year. He's looking into the future, but he's cautiously taking it a day at a time. So, nothing can be concluded at this time.

TCP: Please comment on the recent legal settlement reached between the Board of Trustees and the Committee to Save Cooper Union.

RS: In my opinion, it is a very good thing. If you read the document published by the Office of the Attorney General (OAG), it is making Cooper Union do things and I don't see any of that as bad for Cooper Union.

The representation of different constituencies on the Board: though some of them are non-voting, at least it opens up communication that has not been open before. The faculty members, for example, are observers and they're essentially there to talk if they're asked. Still, they can at least report non-confidential information back to their constituencies.

Whenever I've had a conversation with the member of the Board in the past, it was always the case that I was telling them something that they didn't know. I have observed that one of the central reasons has been misinformation, or even no information, getting to the Board. I think opening up those pathways of communica-

tions with the board is valuable. I think the fixing the governance issue is valuable. I think the financial focus is very valuable.

I'm convinced we can operate within our means. We should maintain a student population of 950. Our aim is to do those things as an undergraduate school better than anyone else does. I think we can do it within our means.

Having third party oversight prescribed by the Attorney General in the form of the Financial Monitor is a valuable thing. We have demonstrated in the past that we need guidance. That may make some people uncomfortable, but the record states that quite clearly.

No one wants heads to roll; no one is going to go to jail over this. Still, the fact that a group of people was courageous enough to bring the lawsuit is highly appreciable. The fact that this piqued the state's attorney general was essential as well. The involvement of his office has been immensely valuable.

I will go on the record to state the first time I was phoned by the office of the AG was in September of last year. The attorney general had enough circumstantial evidence from his investigation, without doing any depositions or subpoenas. If he had gone through depositions, information damaging to the Cooper Union's reputation would have been released. We are fortunate that this step was not necessary.

Following the Attorney General's release of the documents on September 2, people began asking me, "Where are we now?" And to that I reply, "Imagine you're in a swamp and you're up to your hips in some muddy, slimy, stinky water. You're surrounded by mist and you have no idea which direction to go in. The mist lifts and in the distance you see hard ground. Now, you know where you've got to go. In order to get there, you still have to wade through all the grime. There are still a lot of things that we have to do. There are still financial issues that we have to solve. And governance issues that we have to solve. It's especially important to get governance right in an academic setting. We are nearing a solution, but we still have to do work to achieve it.

TCP: What role did the faculty union play in the Attorney General's investigation?

RS: We worked very hard to keep the faculty union out of it. If the union got involved, we would taint the lawsuit from the point of view of the petitioners. Additionally, we would have damaged the union.

Besides, the issues they were bringing up in the lawsuit were not primarily issues of labor. Simply put, it wasn't the union's business. ♦

COOPER TAKES ON THE WORLD: SUMMER ABROAD PROGRAMS

MONICA CHEN (CE '18) | ROBERT GODKIN (ChE '18)

Every year, students take advantage of opportunities at Cooper to study abroad, and partake in research with international universities. This past spring and summer, Cooper Union students traveled all over the globe to

lating scripts for Spanish or English videos; he wrote code in C and C++ for their professional development.

“The bustling cities can be chaotic to people who have never

ized that once you start working in industry, you really don’t get months off where you can travel and experience a new culture.” DiBattista and Mone worked on a research paper concerning the status of plug-in electric vehicles

the liveliness of the city.

Yeeho Song (ME '17) traveled to Germany this past summer to work on a hands-on approach to 3D heat transfer coefficients in a chemical reactor. Driven by

scientific and engineering advances in Europe, especially regarding how they occurred and why they occurred in such a way,” added Song.

Finally, Cooper’s summer abroad

town in Southern Iceland known for its abundance of hot springs and natural geysers, and the second month in Reykjavik, Iceland’s capital. When asked about cultural differences in Iceland, Romaniya Voloshchuk



Photo provided by Monica Chen (CE '18)

study in Germany, Iceland, India, and Spain. Summer abroad programs in Germany, Iceland, and Spain allow students to earn up to six credits of independent study, while the semester abroad option in India offers a full semester’s course load.

Cooper’s partnership with the Indian Institute of Technology Bombay has seen many students take courses in India over an entire semester. This past spring, Jean-Dominique Bonnet (CE '16) traveled and studied in Mumbai, formerly known as Bombay. With Professor Kanan Moudgalya in the Chemical Engineering department, Jean contributed to the government sponsored Spoken Tutorial Project by teaching computer skills, recording audio clips, and trans-

strayed from tour groups before, but they also offer a world you would never get close to touching from this side of the globe,” said Bonnet. “The most interesting thing I did was learn to travel and backpack around cities by myself, which of course provided its own adventures.” Bonnet described his travels in great detail, and highly recommended that future students take the opportunity to travel and study in such a richly cultured country.

Sohan Mone (CE '16), John DiBattista (CE '16), Peter Wang (CE '16), and Lee Lopez (ME '16) worked on several projects in their time in Spain. When asked why he chose to go to Spain, Mone said “It was a last-minute decision. A week before the application deadline, I real-

(PEV) in the United States. “We looked at everything from the impact of PEVs on America’s energy grid to public charging infrastructure, as well as incentives and barriers to adoption,” said Mone.

Wang and Lopez worked on nanotubes in a chemistry lab. “We worked with our supervisor and a PhD student to better disperse the nanotubes in solvents and composites and to improve the composites’ mechanical properties,” said Wang. “The cultural experience was amazing and more than I could have wished for. Spain’s culture is so diverse, and each of its seventeen autonomous communities is like a different country in its culture,” said Wang, who came for the research but stayed for



Photo provided by Sohan Mone (CE '16)

his interest and curiosity in German engineering, Song used this opportunity to learn and understand the mechanisms and processes behind German engineering. In addition, Song was also inspired by Germany’s economic boom following the nation’s reunification. “Coming from a divided nation, I was curious about the causes of Germany’s unique history, as well as the effects within the field of engineering,” stated Song.

Despite his long hours in the process engineering lab, Song also took the opportunity to explore the culture and traditions in Germany. “My experience in Germany boosted my understanding about the political situation in Europe, historical events, and major

program in Iceland, led by Professor Robert Dell, allowed students to study geothermal engineering. This past summer, eight students traveled to Iceland to study sustainable methods of reusing waste geothermal water and steam to generate electricity with a thermoelectric generator, and to use these methods to improve outdoor agricultural production with heated gardens. Students collaborated with mentors from the Agricultural University of Iceland and Keiler Institute of Technology to attribute to Professor Dell’s research with geothermal heated gardens to increase agricultural yield due to Iceland’s frigid climate and inadequate farming conditions.

The students spent the first month in Hveragerdi, a small

(ME '17) commented, “I found it inspiring that a lot of people went outside in the rain to do community service by tending to trees and flowers growing on the sides of the roads. I also noticed that the generally unpredictable weather meant that people in Iceland are more adaptable than we are to sudden changes in the weather—they work outside in the rain, fix their cars at midnight when it’s perfectly light outside, dress their kids in bright buffs and generally never complain about the weather.” There’s quite a contrast between our lifestyles to those of native Icelanders, but that should only be a reason to motivate more students to meet the people, experience culture, and explore sites that Iceland has to offer. ♦

CSCU BOARD OF TRUSTEES SETTLE LITIGATION SIGN, CONSENT DECREE

PRANAV JONEJA (ME '18)

On September 2, 2015, the Office of the Attorney General (OAG) filed papers at the Supreme Court of the State of New York announcing that the Board of Trustees (BoT) and the Committee to Save Cooper Union (CSCU) have reached a legal settlement. The litigation, originally levied in May 2014 by five petitioners “sought an injunction against charging tuition.”

The five petitioners are: Adrian Jovanovic, an alumnus of the engineering school; Mike Essl, a faculty member of the school of art; Toby Cumberbatch, a faculty member of the school of engineering; Claire Kleinman, a current student in the art school; and Isabella Pezzulo, an accepted student who “had to decline her spot because of the decision to charge tuition.”

The respondents include Cooper Union’s Board of Trustees at the time. Among them are Jamshed Bharucha, former President of The Cooper Union, and five other Trustees who resigned from their roles before the lawsuit was: Mark Epstein, former Chairman

of the BoT; Francois de Menil; Catharine Hill; Monica Vachher and Daniel Libeskind.

Documents published by the Attorney General’s office provide a comprehensive investigation of financial mismanagement, a detailed account of inadequate oversight, and a categorical record of failures to do contingency planning.

The Pioneer has summarized the Attorney General’s findings:

1. In 1998, Cooper Union negotiated a deal to lease the land under the Chrysler Building to Tishman Speyer. The deal includes a provision to “reset the rent in 2018 based on an [updated] valuation of the property;
2. President Campbell’s administration took the decision to take on a \$175 million loan in 2006, secured by a mortgage on the Chrysler property. The loan was intended to finance the construction of the New Academic Building, provide liquidity to Cooper Union’s investment pool, and other immediate expenses. While

making the decision, there is no evidence that the Board took into account conflicts of interest, the real feasibility of implementing cost-cutting measures, or the significant disadvantages of the loan deal offered by MetLife. These include budgetary constraints of spending one-fifth of Cooper’s annual budget for the annual debt service payments of \$10-15 million;

3. President Campbell and Mark Epstein “misinformed the community, [despite having] sufficient information to know the truth of the school’s increasingly dire [financial] situation;”
4. Though the financial crisis was acknowledged upon President Bharucha’s arrival, the problems persisted. The root causes were his administration’s reliance “on unsupported assumptions” for budgeting, “over-centralization of management and the failure to communicate with non-administrative constituencies.” Moreover, in conjunction with the BoT, he announced the decision to charge tuition in 2013;

5. In response, “students began an occupation of President Bharucha’s office to protest the decision to impose tuition.” “The occupation ended when President Bharucha and the Board agreed to the formation of a ‘Working Group’ that would be charged with exploring alternatives to tuition.” “The Working Group was deprived of the time and resources to offer comprehensive, responsible alternatives tuition.” Moreover, Former Engineering Dean Teresa Dahlberg led in the publication of a “minority report in response to the Working Group”, which “served to alienate the wider community from the administration.” Ironically, “while deeming the Working Group’s [proposals] to be unreliable, the Board failed to subject President Bharucha’s proposals, including the Financial Stability Plan, to rigorous analysis.”

Following the investigative findings, the attorney general made use of his right to intervene pursuant to the laws of the State of New York to ensure the proper administration of “Peter Cooper’s irreplaceable gift to the peo-

ple of New York.” In fulfilling his duty as *parens patriae* (legal protector of citizens unable to protect themselves), the attorney general prescribed a Consent Decree, a document outlining changes to be made to the bylaws and operations of The Cooper Union’s administration.

The provisions in the Consent Decree were summarized by the Committee to Save Cooper Union:

1. Cooper Union’s Board of Trustees, together with the community, will work to return Cooper Union to a high-quality, sustainable, tuition-free model as soon as practical. A special committee of the Board will be dedicated to development of a strategic plan to return the school to its traditional tuition-free policy;
2. Alignment of the trust and charter of the school, through the *cy pres* petition, to reflect the evolution of the institution into its modern form and provide for judicial oversight of the effort to return to a full tuition scholarship model;

3. Expansion of the Board to include student trustees (2), additional alumni trustees (2), and faculty and staff representatives (6);

4. Establishment of the Council of the Associates of Cooper Union—comprised of the alumni, student, and faculty trustees—with the charge to develop a full plan and proposal for The Associates of Cooper Union;

5. Appointment of an independent financial monitor who will be responsible for evaluating and reporting on the financial management of Cooper Union, including compliance with the Consent Decree;
6. Transparent disclosure of Board materials, budget documents, and investment results;
7. Formation of a board committee to further reform the school’s governance; and
8. An inclusive search committee to identify the next full-term president. ♦

INTERVIEW WITH JESSICA MARSHALL, STUDENT REP. TO BOARD OF TRUSTEES

ANUSHREE SREEDHAR (ChE '18)

Welcome Jessica Marshall (EE '17) as she joins Devora Najjar (ChE '16) as the new Student Representative to the Board of Trustees. In light of the events of the summer, Jessica agreed to sit down with The Pioneer in order to discuss the future relations that students will have with the Board of Trustees.

The Cooper Pioneer: What is the role of student representative to the Board?

Jessica Marshall: The purpose of the student representative to the board is to act as a liaison between the students and the Board. Basically, I am to express things that the administration might not know. For example, the sentiments when we were about to be charged an 'overload fee' for registering for more than 19.5 credits. Yes, it's talking to students and getting their opinions, but it is also informing them.

I like to think I have a 'bigger picture view' than most students and keeping that bigger picture to myself would be counterproductive. At a school this small, there should be no reason for any misinformation. It's my dream to have a centralized location where people can go and ask a question at any time of any day and have it answered in an unbiased way. That is what I see the role as: informing both sides. To quote Devora Najjar, "I don't in any way see this as being a position above students."

It's scary because once this year is over, the people who have experienced the occupation [of the President's office] will be gone. People who experienced the lock-in in Peter Cooper's suite will be gone. People who experienced the building of the NAB (New Academic Building) are already gone.

Besides my own efforts, I think Nonstop Cooper is doing a lot, too. But you have to take the initiative to go there.

TCP: What are some things that you have already done since assuming this role?

JM: I haven't really done much yet; I just started in June.

I found out a couple of weeks ago that I will be on the Presidential Search Committee, alongside alumni, trustees, and faculty representatives. In addition, I'm hosting a pre-presidential search forum in the Nonstop Cooper space next Friday. I'm bringing trustees there for students to meet.

TCP: The Board went through some notable changes this summer. In what ways will that impact the future of this school?

JM: Five Trustees resigned from their roles before my first meeting with the Board. They are Mark Epstein, Francois de Meuil, Catharine Hill (President of Vassar College), Monica Vach-

her, and Daniel Libeskind.

It seems that everyone who stayed on the Board has at least expressed interest in fixing the school. There are no more Jamshed Bharucha supporters. There are very few people stuck in the past since most of them



Photo by Sage Gu (CE '19)

are looking for ways to solve the ridiculous financial mess we got ourselves into.

TCP: What are some of your goals as Student Trustee?

JM: I want everyone to like each other. I know it still seems that when I'm in Trustee meetings and I talk about students, or when I'm in student meetings and talk about the Trustees, that there's still some animosity. It's very easy to blame a group of people from either side, or to have a certain view of them that isn't completely true. It's getting better, but the average student still doesn't know who the people on the Board even are. And the same goes for the Board understanding students.

Part of what I want to do, like I'm doing next Friday, is to bring Trustees to campus and bring students to the Trustees.

TCP: Both you and Devora Najjar are engineering students. Student Trustees are supposed to represent the entire student body. In what way do you represent artists and architects?

JM: Being an RA has given me the opportunity to get to know students in my year and the years below me, regardless of what school they are in. I also bridge that gap by hanging out in studio a lot. Moreover, I go to microdances a lot, which is predominantly attended by students in the art school. I make myself visible and known to students of other schools because you can't do your job successfully if you

are only representing half the school. I talk to a lot of people.

We actually tried really hard for them to add two more students so that we could get participation from all three. However, Kevin Slavin and Richard Lincer said there would be too many cooks

in one kitchen. This is why I encourage artists and architects to run for the position next spring because now we have a vote and we can do things. Please run!

TCP:What are you most looking forward to in your role as Student Trustee? How do you see the role changing over time?

JM: If you read the Attorney General's consent decree, it outlines how the Student Representative position is being phased out at the next board meeting on September 16. They are going to pass a bunch of new bylaws that will increase the number of alumni and student trustees. I'm going to be a full-fledged student trustee with a vote.

They're also going to pick another student trustee from the two candidates who ran against me last spring. One of us will have a one-year term, while the other a two-year term. From then onwards, elections will proceed as they have in the past: students vote on nominees and the three candidates with the greatest number of votes will be interviewed by the Board. From those, the Board will select one to become a student trustee. Elections will be staggered such that each student trustee will serve a two-year term, overlapping the previous ones. It's kind of happening right now with Devora and myself, where she is the old hat and I'm learning from her before her term ends in December 2015.

Student trustees will truly be part of the Board, with access to ex-

ecutive sessions and membership on the Governance, Free Education, and Presidential Search Committees. The role of the Free Education Committee in particular is to propose a strategic plan to return Cooper to being free. Basically, on January 15 of every year, starting in 2016,

the committee is to present to the Board the possibility of being free again. However, this won't happen for a long time because our finances are still pretty bad. (Read the Attorney General's cross petition and consent decree for more background.)

TCP: Why did you want to take on this role?

JM: I didn't. I didn't want to do it. This is going to sound awful, but when it came up second semester last year, my first thought was, "No, it's a huge responsibility that I don't think I could take on. It's such a big role to represent the community." I spoke to some art students who seemed disenchanted with everything. Everyone who I thought would

meetings and had never spoken with professors about things. People who didn't understand how hard previous students fought for this role. Basically, I wanted to run with enough other people who cared so that no matter which of the three the Board chose, it would be someone who would do it for the right reasons.

Devora has often said, "It's the person in the role who makes it." It's important that the person in this role pushes the boundaries that Devora has set and try to make it something more than it already is. A lot of this is really time sensitive. That's the thing with Cooper. Nothing is ever stable. If I never email a Trustee or

ASK RUCHI

RUCHI PATEL (ChE '18)

This is an advice column and people are supposed to ask me questions to which I offer questionable advice. But I don't have any questions because this is the first issue of the year! To ask questions, please reach out to me at pio-neer@cooper.edu with the subject line "Asking Ruchi."

Meanwhile, I'll offer some thoughts without your asking.

If you are a freshman:

Please don't follow me around. I'm just trying to have lunch in a public space. Really, I can't help you with your EID 101 troubles. And I definitely can't relate to them. Why do you

run didn't want to run.

I saw a lot of people wanting this position for wrong reasons. Unfortunately, a lot of people realized it is a great thing to put on your résumé. People who had never attended student council meetings or gone to Free Cooper

never talk to anyone, then the boundaries will shrink back and I would be reducing the power of the students.

That being said, I do think that our next student trustee should not be an engineer.

TCP: How do you think this "turnover," both of administration and settlement of litigation, will impact Cooper Union's standing?

JM: It's definitely positive. Mea manages our finances, and now he is in charge of the entire administration. Somehow, he still finds time to meet with students. I've said this before: the fact that we consider that so rare at Cooper is indicative of where we were in the past. We have seen a lot of positive change with the fact that Acting President Mea has met with students on all sides of the opinion spectrum. If you email him, he will set up a meeting with you. In fact, he's going to be at Nonstop Cooper on Wednesday, September 16.

But he's got a lot on his plate. I also think that (and this was echoed at a Nonstop Cooper meeting) while it's great that the administration is doing all these wonderful things, this is what they should have been doing all along.

Up until this point there has been a lot of pointing fingers, and playing the blame game... it's been a culture of infighting. My hope is that we can end that this year and focus on the bigger problem of our finances.

It's like we are in a sinking ship and everyone has a bucket. The water is filling the ship, but instead of bailing the boat, last year we were splashing each other. You can splash all you want, but you are still going down together. Now that some people have jumped off the boat, let's start bailing ourselves out together.

Please join Jess and members

ASK RUCHI

RUCHI PATEL (ChE '18)

need help with EID 101? Stop. Oh my god, stop!

By the way, *what are those?*

If you are a sophomore:

Why are you complaining about homework? You're the first and maybe last class to pay tuition. You got betrayed by this school. Don't do homework if you don't want to. Don't even go to class. No one has the right to demand anything from you. Honestly, you're paying some good bucks, so spend your time here focusing on you. Be a better person. Volunteer in nursing homes. Read poetry for your soul. Don't give into the scam of a discounted education!

If you are a junior:

I get it. You guys are doing grown-up things like "internships." Whatever. I'm still never going to forget that time you hit someone with a chair for a pack of Sour Patch Kids. Or when you wrote fanfiction supplemented with anime drawings and posted them on a blog called "Engineering Is My Passion." Yeah, alright. Grown-ups.

If you are a senior:

OH MY GOD. I'LL MISS YOU SO MUCH! The Cooper Union is nothing without you. Okay, great talking to you! Bye, now. BYE! ♦

INTERVIEW WITH NADER TEHRANI, NEW DEAN OF ARCHITECTURE

ANTHONY PASSALACQUA (ME'18)

The Cooper Pioneer *sat down with Nader Tehrani, the new Dean of Architecture to ask him questions about the current situation with the administration.*

The Cooper Pioneer: Where are you from? What can you tell us about you?

Nader Tehrani: I am from Iran. I was born in London, grew up in Pakistan, South Africa, Iran, Italy, England and, of course, the U.S. So I come from a heterogeneous background. I've been teaching for more than twenty-five years, in a variety of institutions including the Rhode Island School of Design (RISD), Harvard University, Massachusetts Institute of Technology (MIT), and Georgia Institute of Technology. The Cooper Union has always been among the best in American education, so I knew this was an opportunity I should not miss.

TCP: When did you realize that you would dedicate yourself to architecture professionally?

NT: I knew I was headed this way in high school, after it became intuitively clear that I was not targeting a future in business or in medicine, for instance. I took a course in art and architectural history with a great teacher named Blanche Hoar, who situated the cultural and social backdrop of architecture. For me, that was fascinating, and he encouraged me to apply to RISD.

A short visit to RISD struck a real chord for me because I witnessed a different form of scholarship there than I had seen anywhere else. You essentially see students playing and I couldn't imagine that that could be my future workplace. Right from there, I was hooked.

TCP: Where were you educated?

NT: I attended RISD from 1981 until 1986. After that, I went to the Architectural Association in London for their History and Theory program, a one-year post graduate program. Following that, I got my Master of Architecture in Urban Design (MAUD) from Harvard's Graduate School of Design.

TCP: When did you start teaching?

NT: I started teaching in 1992, at Northeastern University. I graduated from Harvard in 1991, and then RISD the following year, so it just sort of incrementally grew out of that first step. I wasn't planning on being a teacher; I thought it was an exciting step to remain a student. It was an extension of my education.

TCP: I am aware you founded an architecture firm, *Office dA*.

Can you tell me about that?

NT: *Office dA* really is an extension of thinking, exploration, and experimentation. At the time I launched my practice as well as my teaching career, the two worlds were seen as very far apart. Practitioners criticized academia for being too insular, and academia thought that the world of practice was too conservative. Meanwhile, there was something in the academic realm that we found was really lacking: a focus on materiality. There was a lack of knowledge about the built environment, and a lack of speculation and theorization of the building industry.

Our early work, both academic and practical, was focused on innovative ways of conceptualizing the means and methods of fabrication. We were looking at radicalizing standard means of construction with new geometries and new structural systems. These became something that we could import back into schools, not as conservatism, but to change the pedagogy of the time.

TCP: Speaking of pedagogy, can you comment on the work of former Dean Hejduk at Cooper Union? What do you think of the pedagogy established by him almost fifty years ago?

NT: The legacy of Cooper is defined by Hejduk in many ways. It is like asking me how I am going to step into Hejduk's shoes, and if you knew Hejduk, you would understand that he was a giant. If I were to occupy his shoes, I would have to dive in there with my whole body. If that metaphor holds, I would say that this is the challenge that I am up against right now.

Hejduk's work as a citizen, as a designer, as an architect, and as a pedagogue was so overwhelming, and so dedicated, that he was not only a beacon just for Cooper, but he represented something we strive for. Our eyes were on Cooper from RISD, and we understood the significance of his commitment from afar. The reason I came to Cooper, in part, was because this is the one place that the discipline of research: of form, of space and of materiality through construction, remains intact, despite the noise that comes from everything around us.

At the same time, I find many aspects of thinking that emerged through the pedagogy of Hejduk can be translated into current terms. Hejduk operated in a world of representation, but he teased it out

through construction. We can translate that by extending it one step further into the building industry. Hejduk produced poetic constructions, beckoning us to examine our notion of convention, and we can do that through new leads and methods of exploration.

TCP: How were you asked to be Dean? Who specifically asked you to take the position?

NT: Broadly speaking it was a two-year process. I was contacted on two occasions, and I politely declined on both occasions. I was contacted a third time on a more personal basis, and encouraged to talk and to listen. After a productive and engaging discussion with Elizabeth O'Donnell, I had a turning point. Rather quickly after that I had a discussion with the committee, an open and candid discussion. That led to a subsequent meeting with the then president Jamshed Bharucha.



Photo by Simon Shao (ME '19)

I was aware of the controversies in the air at the time. I was candid with him and he was equally candid with me. We had further in depth discussion, and that led me to the cabinet. That process took us from October through February, and after that is history.

TCP: If there is one thing that convinced you to come to Cooper what would that be?

NT: I have no experience being a dean. It was the opportunity of doing something familiar and taking a big risk. It was taking on an adventure that the stability of my former life could not offer. It offered a space of uncertainty and I think that is the best place to be. In a way, it's like becoming a student again.

TCP: How has it been transitioning to Cooper Union?

NT: I started on July 1, 2015, so I spent the first two months essentially getting my computer and getting situated. Elizabeth O'Donnell has been central to the mentorship process. It's been a time of homework.

At the same time, I've been

meeting with the individual faculty members, getting to know their agenda and their research. This is what I think I will be doing for the next two or three months: listening to how the school operates. After that point, we will come together to imagine how we will script a future of targeted agendas, while also maintaining the powerful legacy of the school.

TCP: With the industry digitizing, is there a need to change the relatively analog methods at The Cooper Union? If so, in what way(s)?

NT: We spoke about this in the faculty meeting today. At Cooper, making is a source of inquiry and the production of knowledge. Understanding the instrumentality of tools is what's important, and understanding the ideas that form architecture is part of the intellectual project.

and at the scale of geography, of programs that manage cities and regions, you begin to realize the traditional scope that define architectural studies has had a predefined length both macroscopic and microscopic. "How do we redefine the lens of Cooper with respect to a shift in media?" is our challenge.

The second is, of course, in redefining our boundaries we come to terms with the fact that what

The shift from analog to digital should not be scandalous. In fact, at Cooper, it should be relatively seamless. Everything built digitally has many analog interfaces, and vice versa. If anything, my agenda for Cooper will be to find creative ways in which the digital may become the repository and source for research, for creative ways to think about form, space, and materiality, for engaging the construction industry, and most of all to think creatively about those tools, and think of them as intellectual, not technical tools. The transitions must be complex, it must be critical, and it should pose a cultural benefit. We're not in it as a technical school.

TCP: What specifically would you like to see added to the Architecture computer lab?

NT: This is not a discussion of the computer lab, per se. If you think about it, there is a symbiotic relationship between the generation of form and the output of form through fabrication.

Whichever way we do it, we're looking at a dual platform through which we're produc-

ing things. On the one hand is the representational world, which remains very powerful in helping you think through drawing. On the other hand, there's the parametric world, a world of scripting and code, where data is numerically controlled in order to produce unprecedented iterations of formal solutions and ways of engaging a problem. We will begin to invest in discrete hardware that prompts good questions. The larger issue that remains is how to make digitization fundamental to Cooper, not as the support, but as the core of its intellectual project to speculate on making things.

TCP: What are the immediate challenges faced by the school of architecture?

NT: The school of architecture has a great opportunity in redefining the boundaries of the discipline. Both on the molecular scale of material sciences and at the scale of geography, of programs that manage cities and regions, you begin to realize the traditional scope that define architectural studies has had a predefined length both macroscopic and microscopic. "How do we redefine the lens of Cooper with respect to a shift in media?" is our challenge.

The second is, of course, in redefining our boundaries we come to terms with the fact that what

we previously thought was the center of architectural studies is maybe peripheral. "How can architects become better engineers, artists, activists, urbanists?" This is open for recalibration. We have the opportunity where architecture, art, and engineering at Cooper can step into the frontline of how we redefine the culture of design in much broader terms. It's the possibility to make designers out of engineers, and to demonstrate how metrics are liberating for a designer.

TCP: What are the immediate challenges faced by students upon graduating?

NT: They're going to enter a workforce that is fundamentally different from my generation. Architecture is not just a practice—it's a way of thinking. Architects are directors; they synthesize many fragments of information to produce unexpected and unprecedented alliances. One can do that not only in designing a car, a sophisticated piece of furniture, a room, or a building, but also a block or a city. I believe that the students today will come out equipped with an interface on the environment at large that is much more complex and powerful

than when I entered the practice decades ago.

All of this access to software and information has democratized the general public's access to design. Part of their challenge is how to translate the significance of design to the broader audience, and raise the stakes: that the idea of architecture is the synthesis and integration of it as a performance. A materially and spatially smart piece of work is one with a layered narrative that synthesizes all of the fields that characterize architecture.

TCP: Characterizing the field of architecture as a "synthesis" speaks to the schools of Cooper needing to come together more. In what ways would you like to see greater cooperation within Cooper?

NT: This is something I think that we can handle from above and below. I think the deans need to come together and collectively imagine where we can institute intellectual collegiality. From the grassroots level, from the trenches, all it takes is a student who is interested... an engineer who is interested in design, or an architect who is interested in the behavior of materials and geometries. Braiding those two together, one can imagine a joint course that spans boundaries.

Those begin to plant seeds, so that the marginal courses of today become the legacy courses of tomorrow. When we look back on today's questions in twenty years, the notion of such strict disciplinary compartmentalization will be humorous.

TCP: Do you intend also to step into a teaching role while you are the dean of the school?

NT: I am here to teach. I am not teaching this semester, but I will be on all of the reviews of the other faculty, and I will contribute to some lectures here and there. Starting next semester I will be teaching studio probably every semester. I also hope to contribute to courses on tectonics, the theory of construction, or other courses dealing with the contemporary history of architecture. We will see how it balances with my administrative work as we move forward.

TCP: To cap it off, what do you like to do for fun in your personal time?

NT: I don't know how humorous this is, but unfortunately I'm an athlete: I run, I bike, I swim. Sadly, I am very injured right now, so I'm hobbling. I do a lot of that, just hobbling around.

I love the movies and I love travel. With travelling, I can double-dip. It's a good way to not only study architecture, but also to taste foods of different cultures, which is another hobby of mine. ♡

SUMMER EXPERIENCES: CLAIRE KLEINMAN (Art '18)

KEVIN SHENG (EE '18)

The Cooper Pioneer interviewed current students from the art, architecture, and engineering schools about their summer experiences. The interviews will be published as a series. We hope they will serve to highlight the diverse achievements of our student body.

Here is our interview with Claire Kleinman (Art '18).

The Cooper Pioneer: Where did you visit this summer?

Claire Kleinman: This summer I visited Israel,



Photo provided by Claire Kleinman (Art '18)

then China, and then the West coast.

TCP: What made you want to travel to these places?

CK: It was mostly about spending time with my sister; we traveled together for the majority of the summer. The opportunities to visit these particular places sort of arose and we figured that if we didn't go now we might never go.

TCP: What surprised you the most about the places you visited?

CK: I find the similarities always shocking, like when I meet someone and they remind me of someone from back home and there's the realization that there are connections to be had everywhere. I noticed similar dynamics in groups of friends I met abroad that reminded me of my friends here.

TCP: What were the biggest cultural differences between NYC and the places you visited, and what was the most difficult adjustment you had to make?

CK: Language barriers are tough. Not being able to communicate verbally is always hard, but nonverbal communication is sometimes more rewarding—when you can be understood or understand without sharing the same language. Also, not being able to

drink the tap water is hard, although tea is great!

TCP: What were your most memorable experiences?

CK: I love swimming, so any body of water was super great. When I was out in Northern California I camped by rivers the majority of the time. Sometimes I would get there at night and wake up next to these amazing watering holes. I also climbed a couple of mountains: one in Shangri-La and one in Humboldt County.

of China. I think I had a parasite but our neighbors really helped me out by getting antibiotics, and my sister carried soup from a temple 40 minutes away by foot. She's great!

At the Salton Sea, I got a fish bone stuck in my foot, which later got infected. I did pull the bone out several weeks later and it was really satisfying. I also got my tragus pierced my first day a few hours after I got to LA from Hong Kong. That also got infected. Infections are not fun.

I also loved the desert in Joshua Tree National Park, although it was like 114 degrees. We had to sneak into the Ace Hotel pool in Palm Springs like four times a day just to survive. The big fat seals in Trinidad, California also deserve an honorable mention.

The history in Israel is incredibly dense, so visiting each place was always a really significant experience. You can feel the centuries of historical narrative in each space like layers of rock under your feet. It's really embedded.

Toy factory outlets in Shenzhen...literally paradise. I also really enjoyed taking the overnight train to visit my friend, Fan-Fan, at her family's ceramic factory. Her grandpa was a master ceramist, so seeing his work both in his home and at the city's museum was super special. Also triplet pandas in Guangzhou...so damn cute!

TCP: Did you have any particularly scary situations or difficulties while abroad?

CK: I held a lot of stray kitties that stayed around the hostel in Eilat, Israel. I'm pretty sure they gave me fleas because I had hundreds of itchy bites on my legs when I was there.

I also got really sick in Dali, located in the Yunnan province

My sister and I ended up splitting up in LA. I canceled my flight home and bought a bus ticket to San Francisco. I didn't have a phone with me or any way of telling the time so the eight-hour bus ride was pretty nerve-racking. I was really betting on this kid picking me up at the bus stop or else I'd be stranded in California with no money! But he did and I ended up staying out there for another three weeks.

TCP: What do you feel was your biggest takeaway from the experience?

CK: I feel like you're not really a New Yorker unless you are constantly complaining about how you need to get out of the city. I was raised in NYC and I used to think that everyone in the world wanted to be here, but traveling and seeing how other people live around the world and how proud they are of their customs and heritage is really eye-opening.

I think I'd like to get closer and have more exposure to nature and places with natural beauty. Also, seeing the art around the world and how it's rooted in religion and location and tradition is amazing. So, so cool. Honestly, I might just peace out to the desert till Cooper is free again. Bye! ♦

SUMMER EXPERIENCES: STELLA BLUE PORGUNZOLO (Arch '20)

MONICA ABDALLAH (ChE '17)

The Cooper Pioneer: Can you tell me about a summer experience you have had?

Stella Blue Porzungolo: The summer before my senior year, I took an internship at BAE Systems. It is a once British-owned, now American, global company that produces specialized, high grade military weapons and does scientific research. The internship, called Women in Technology, helped gear young women into working in STEM fields.

mechanical engineer might and tested materials to produce the watch. These were the same materials that are used for hip or

TCP: What was the most interesting part of the internship?

SBP: I didn't particularly like any section of the internship more than the other, because I know I don't want to be an engineer. It helped me understand my passion for architectural design and differentiate my interests. But at BAE Systems, I particularly enjoyed the mechanical engineering.

TCP: So it solidified your choice to study architecture?

SBP: It didn't solidify. It just made other less desired, but viable, career options crumble in my forefront.

TCP: Last question: Is there anything you learned that you are bringing with you to Cooper?

SBP: Collaboration is important. Talking is important. Critique is important. But motivation is key. ♦



Photo by Monica Abdallah (ChE '17)

TCP: What work did you do while you were there?

SBP: I had two specific roles, one in software and one in mechanical engineering. Our main collaborative project was to hypothetically design and start to process thoughts, ideas, and rough detailing of a military watch. We looked at it through the lenses that someone as a

knee replacements. Similar materials that one would find in the medical field are used in designing tools for the military. We also completed a software engineering section in which we learned the basic coding and scripts to build the technical mechanisms of the military watch. We really got a full-rounded experience of the STEM fields.

A DAY IN THE LIFE OF RIO SANTEL

ANTHONY PASSALACQUA (ME '18)

It's common knowledge at this point that this year's lauded winners of Invention Factory are Ruchi Patel (ChE '18) and Giovanni Sanchez (ME '18). Their "SutureSelf," a device to quickly and easily stitch up large wounds, has the potential to legitimately help many people and become a staple of the medical field.

have different jobs. They've split their duties evenly, both playing to their strengths in order to increase their chances. Ruchi works on slideshows and presentations, handling the upfront. Without her, the idea would surely be half-baked, and it probably still wouldn't be patented. Giovanni, meanwhile, handles the lion's share of design, making sure all the pieces move as they should.

mering away at their computers to get the work done.

One can imagine as Giovanni struggles to figure out the mechanical movements that their device needs to make, through painful trial and error and at least a few eureka moments. Meanwhile, Ruchi agonizes over wording, making sure that the idea is clear, presentable, and something



Photo by Anushree Sreedhar (ChE '18)

This article isn't about that. Information on SutureSelf is floating around in many places, and that will be left as an exercise for the reader. Instead, we take you into a regular day of the first-place winners of Invention Factory 2015.

Giovanni wakes up early, far earlier than he'd like to, and a few blocks away Ruchi Patel does the same. After completing their morning routines, they head out to the NAB and prepare themselves mentally for another busy day.

Walking into the third floor physics lab, Ruchi and Giovanni

A self-proclaimed "dynamic duo," Giovanni and Ruchi both have their hands full. They've named their workspace "Rio Santel Intensive Care Unit" and have Wiz Khalifa's *Work Hard Play Hard* lyrics posted on the table as motivational excerpts. Needles, thin threads, and empty energy drink cans are scattered over the table. Happily for them, a midday respite comes in the form of free food, although many days they skip lunch in the chaos of getting something to just work already! After chowing down—quickly—they're immediately back to work, ham-

that people want in their hands, and they want it yesterday.

As the day ends, for Ruchi and Giovanni in the wee hours of the morning, the sleepy pair stumble back to their respective apartments and collapse in bed, preparing themselves for the day ahead, to do it all over again. According to them? Worth it.

For more information on SutureSelf and other projects from this summer's Invention Factory, see here: <http://cooper.edu/engineering/news/sutureself-takes-top-prize-2015-invention-factory>. ♦