

# The Pioneer

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Photo Credit: Jenna Lee (ME '15)

## INTERVIEW WITH DR. DAHLBERG, DEAN OF ENGINEERING

SAIMON SHARIF (ChE '15) & CAROLINE YU (EE '15)

**Editor's Note:** The unedited version of this interview was incorrectly published. Please view the corrected version here: <http://pioneer.cooper.edu/interview-dr-dahlberg-dean-engineering/>

**TCP:** Do you mind giving some background on your education and past job experiences?

**TD:** Sure! I have a Bachelor of Science in Electrical Engineering. After that, I went to work for IBM as a hardware and software development engineer for 10 years. During that time, I took time off to get a Master's and PhD in computer engineering. I loved my years in product development and shortly after getting the PhD I switched to a faculty position. I've had a faculty position both in a computer and electrical department in a college of engineering. In the last dozen years, I've been in a computer science department in a college of computing and informatics.

**TCP:** What prompted you to move into an administrative role from a teaching role?

**TD:** I've actually been in an administrative role for a number of years. I've been at UNC Charlotte for many years – it was a teaching and a research university. So, in addition to teaching classes, I had to build a funded research program. In so doing that, I started a research center, which was kind of unusual, called the Diversity in Information Technology Institute. That was how to do research and how to improve computing education and how to get different kinds of people into wanting to major in computing. I've been managing a research center – I had also been an associate dean in computer and informatics for two years. I had

oversight for all of our undergraduate programs across the college. We had about 1400 students – about 1000 were undergraduate students and the rest were graduate students. Another program I started that evolved into a non-profit organization – the STARS Alliance computer core, which I'm the CEO of. I've done a lot with teaching in my career and curriculum development and research. To me, seeking a dean position is the next challenge because I really liked running a research center and I want to lead a college – in this case a school.

**TCP:** Why did you choose to pursue electrical and specifically computer engineering?

**TD:** I actually started out as a music therapy major. I went to a very small college and I was encouraged by my high school teacher to pursue music. I didn't want to do performance, so I focused on music therapy, which back in the 1980s was a very new field, using music and musical instruments and looking at peoples' interactions with music. I was this music therapy major in an all-girls Pittsburg college. I also loved math. I really missed math. I ended up being the girl in dorm who always helped everyone with their math problems even though I didn't have to take any math courses. After the first year I was kind of conflicted and wanted to change majors. It was a friend's father who said, "Why don't you try engineering? It's math-based." So it was a leap of faith. I changed my major. I've taken lots of risks in my life – like coming here. I look at the options and then I go with my gut. When I entered engineering, it was general engineering. I didn't have to declare the

first year. I took the typical survey class that goes through all the different kinds of engineering majors, and electrical seemed to be the one I least understood because it was more abstract. But it seemed more mathematical. It, again, was a leap of faith.

**TCP:** Do you enjoy teaching, conducting research, or managing the most?

**TD:** I enjoy them all at different points in my career. One of the things I love about being a professor – and I'm always telling students to think about the professoriate as a career – you really can evolve your world and change what you do over time. I'm the kind of person where I really like something when I'm at the edge of confidence because I want to feel challenged and feel a little bit scared: "Oh I have to learn this. I have to figure out how to do it." Once I get really good at something it gets a little bit boring. When I was in product development, it was really cool for 5 years – brand new environment. Working with all these other people, I was so intimidated by more experienced people. After a few years it was "I could do this" then it was "I could do this in my sleep". I couldn't see another 25 years – it would have been different if it was a startup – something that's constantly changing. I loved teaching when it was brand new. I still love teaching but I really loved it and it was all consumed in the early years. I loved getting started when doing research. At first I focused on wireless networking as my research area and building that up. Then I went to Broadening Participating in Computing. When you're teaching you're helping develop another person and convey information. When you're doing research, you're doing the work yourself. Then you're building a team and building bridges between people. Then as an administrator you're helping to facilitate other people. You're putting the team together – I like to solve problems.

**TCP:** What attracted you to Cooper

Union?

**TD:** I was on the job market looking for a dean position. I have to admit I was looking for positions in a university that was like the one I was from – large, public, and national research because that's what I knew best. I saw the Cooper ad and said, "No." And didn't apply and then the search firm contacted me and said, "Why don't you look at this." And I was like "No" – there was no computing science in there, it's too small. And then she convinced me to go to the first interview. They call it an airport interview. It's not in the airport but you have to fly in and talk for an hour and half and then you fly out. I got really intrigued during that because there was something special about The Cooper Union – that came through in that interview and then in subsequent interviews. I understood the situation – I read the papers. My colleagues were like "Are you crazy?!" People were sending me links online. I'm very much an optimist. I just don't let problems deter me. It's like "Well, there's a challenge." I'll tell you what I really love about this college. It's a very close and intimate atmosphere. The students are very, very high quality but nice people. I liked the fact that there's this place that's only engineering, art and architecture. I was in a bigger school that had engineering, art and architecture and a lot of other stuff. But it's the fact that it was just engineering, art and architecture sitting in New York City. A cultural rich place made me feel like there are these opportunities to enhance something that's already unique – that has interdisciplinary collaborations. I was really excited about that. It's a high risk-high reward position. I can come here and they could close engineering and I'm out of a job. But if we succeed – if Cooper Union succeeds – not just the engineering school – the whole school

and getting through the financial crisis. I feel like the decisions we're making over the next year or two will set the course of the institution for the next 100 years. I feel optimistic. If I didn't I wouldn't have come, right? We can make it clear to the outside world how amazing this place is. Then the win is – that the hard reward is – that I would have been able to be part of this rejuvenation of this institution.

**TCP:** What has surprised you the most since coming to Cooper?

**TD:** I think what surprises me the most is the really close faculty-student relation. Faculty had told me about it. I didn't realize how close that was. When I talk to faculty, even the faculty that might be frustrated and disenchanted by everything that's been happening, it didn't matter how unhappy they were about whatever they were telling me. When they start talking about the students, it changes. Their eyes light up. There's passionate stories about specific students and specific projects. I have never seen faculty so passionate about teaching. From the students' point of view, the students are wicked smart but, again, very nice people. The students really seem to enjoy the interaction with the faculty.

**TCP:** What are your main goals as the new Dean of Engineering?

**TD:** I feel like since I've been here, I've continued to discover hidden gems. I think that the Cooper Union has way more to offer than what is visible to the outside world. I feel like because maybe people have thought that the fact that the full-tuition scholarships have been the

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## FREE COOPER UNION GENERAL MEETING

JOSEPH T. COLONEL (EE '15)

Folks who walked into the Rose Auditorium for Free Cooper Union's General Meeting this past Wednesday were greeted by a half dozen stacks of miniature crimson manila envelopes vaguely reminiscent of the packets given and received on Chinese New Year. Unlike their Chinese counterparts, which typically contain money to usher in a new year filled with prosperity and good luck, these manila envelopes contained contents that outlined exactly why the Cooper Union projects a \$16,000,000 deficit this school year, one bound to be fraught with tension, unease, and unrest. These "disorientation packets" contained a timeline outlining Cooper's financial history, a reader describing Free Cooper Union's demands and principles, and a zine containing five articles and a 990 form detailing the compensation of Cooper's ten highest paid employees.

The meeting began at 9:15 PM with Casey Gollan (Art '13) addressing the nearly full Rose Auditorium on the creation of Free Cooper Union and its actions up until this past summer. Vincent Hui (A '15) went on to describe the occupation of the president's office and the press it generated. Afterward Anna Vila (Art '15) described summer activities associated with Free Cooper Union separate from the occupation, including workshops in Wisconsin about student power. The night concluded with a Q&A session moderated by Harrison Cullen (BSE '15).

A recording of the event can be found on Free Cooper Union's ustream account, on Free Cooper Union's Facebook timeline, or at [bit.ly/183n8jw](http://bit.ly/183n8jw)

(continued from front)

thing to draw in the best students, that there wasn't a need to promote these other great things about the college. But, they can be promoted. They need to be promoted. I'm very much in learning and listening mode but a key goal of mine is to find all these special things about Cooper Union as well as work with faculty and students to identify new ways to enhance our curriculum and enhance how relevant we are to New York City in solving the global and regional issues within engineering education and make that visible to two constituencies – to possible incoming students and then to other places (whether it's companies or graduate or professional schools).

**TCP:** How do you like living in NYC? Is this your first time living here?

**TD:** Absolutely. Yes it's my first time living here. I love it. It's very cool. It's very different for me. I've always lived in suburban neighborhoods so for me. I left my big house in Charlotte. I left my car. I arrived. I'm very close to the college. I'm on foot – living in an apartment – and I love it! It's a completely different lifestyle. There's so many things going on in the city. I figured out how to use the subway and it's really cool. I think it'll be a long time before it wears off.

**TCP:** What are some of your hobbies?

**TD:** I have had hobbies over the years. I work like a manic. I spent a lot of time with my daughter, Kristen, who's 15. I have a 22 year old son but only my daughter is still living at home and our dog Clyde, and my husband Brian. But I also like to run and weightlift because those are my stress relieving. I like to read and listen to music.

**TCP:** Where do you think Cooper Union's engineering school stands in terms of academic competitiveness with other engineering schools?

**TD:** I think that the engineering school's curriculum is highly competitive. In particular, it's very rigorous. It seems to be very project oriented which I think is great. There's a lot of opportunities for unique experiential learning – like Invention Factory, internships, research experiences – lots of competitions. There's a rich experience for the students. My goals are taking a look at the national and regional landscape for engineering – what is needed for the 21st century engineer and I think we can do some tweaks. New York City has set this aggressive goal to be the East Coast Silicon Valley and there's a lot of startups and technology. Even though we're small and there's lots of big players in the city, I think we have

an opportunity to create a niche and a unique contribution. Ten years from now, when we look back, when NY reaches its goal, Cooper Union should be a player in that.

**TCP:** What advice do you have for Cooper students or faculty?

**TD:** The advice I have for Cooper Union students is to stay optimistic. This is a great place to be. It's going to continue to be a great place. I think students come here thinking I have to do well in class and I'm told students take a lot of credits. That's terrific. You should also have fun – I have to remind myself of that. We tend to be all 'Type A' people. Work all the time. Set the goal. Reach the goal. It also matters to do fun things. Look at your educational experience – not only what happens in the classroom but also what happens out of the classroom. I mean out of the classroom in a number of ways. First, competitions and research experiences, going to lectures and seminars. Those you should do. But also, it's really cool that we're here in this city with art and architecture. So go to lectures and performances and art exhibits and things that stretch your comfort zone because that's what's unique about going to this institution. My advice for faculty is to stay positive and work with me to transform the engineering school.

feel sorry for is the first person I see because I might be thinking about something else for 2 hours while driving in. I plan my day, but I also have to be flexible. It adds another dimension to the students and myself sharing something that's going to make this place better.

**TCP:** How do you like the role so far?

**DB:** I'm enjoying every minute of it because I think there's a level of energy - everyone is wishing me well and encouraging me - and there's an energy of the incoming students that is just remarkable.

**TCP:** Any interesting stories?

**DB:** Look at what happened at Cape Cod. You look at everything we introduce: are we professors? coaches? administrators? friends? What goes on up there, the dynamic of what goes on up there [...] I think everybody felt they were more committed to what they were doing and more committed to helping me and helping us. I saw something I hadn't seen since I was a little kid up in Cape Cod:

One squirrel is up in a tree. The squirrel is out at the end of the tree. Now their food is free - they're not going to the supermarket, but they have to get it seasonal. So one of them instead of taking individual acorns, this squirrel got creative and started shaking the branch. And then the nuts would fall down to the ground. So that to me is a Cooper Union story, in the sense that the Cooper Union person realizes where he/she is: they have to be efficient, then they have to take those nuts and bury them and prepare for exams or the future. The other squirrels going around picking up nuts from the ground. The Cooper Union squirrel is taking care of business.

**TCP:** The email we all received stated you "will take on the leadership responsibility for Student Services in the interim." Do you know if the administration is actively searching for a permanent dean?

**DB:** I think that the position is gonna be now called Student Affairs. I think what they are pursuing is having me fill that administrative position. The first thing we did was to elevate Chris Chamberlin to the Associate Dean position. And I don't think there's too many people walking around with 3 Dean titles and I don't want to be greedy.

**TCP:** They built you this office in 3C [in the dorms]. How was that move?

**DB:** The move was to save money

in 30 Cooper: they are condensing six floors to four. So we were selected to come over here. Financial Aid is being put in with Admissions, which most schools do. So that's going to free up some floors. So they asked us - Career Services, Athletics - to come over here in the dorms to have one office. They're going next door with the residential offices, and they put me over here in 3C. But originally [former] Dean Lemiesz selected this place for me, she selected this spot. This move was taking place before she left. Now we have to figure out the office space, figure out how public it's going to be, how private it's going to be, so students will have access and [so that] it's not geographically ugly over at 30 Cooper Square. We're going to be amongst the students.

I was originally in the Foundation Building. When they renovated in '72 I went to the Engineering Building. From the engineering I went to the Hewitt Building for about 20 years. From the Hewitt Building I went to 30 Cooper Square. So this is the 5th place we've been to.

*“I am extremely optimistic in the school's ability and the student's ability to improve the product, to raise the interest, and also to keep the level of intensity, creativity, and excellence that we always have.”*

**TCP:** What is next for the future of Cooper?

**DB:** It's going to be a transition that has never been experienced before at Cooper Union. I am extremely optimistic in the school's ability and the student's ability to improve the product, to raise the interest, and also to keep the level of intensity, creativity, and excellence that we always have. I think that we want to encourage the excellence of the students and continue to maintain the integrity of the institution.

I think I'm known for saving money and raising money. That's one of my major functions. Also we raise awareness and raise integrity of the things we get associated with. With the changes that are going to affect incoming students, it's incumbent for us to maintain that integrity. I just found out we are the Number One rated school for Regional Colleges (North) in US News. That's definitely because of my new promotion!



## INTERVIEW WITH DEAN BAKER

MATTHEW LEE (ME '15)

*This past Tuesday, the Cooper Pioneer (TCP) sat down with Dean Baker (DB) to discuss his new role as Dean of Student Affairs.*

**TCP:** How many years have you been at Cooper?

**DB:** This is the start of my 48th academic year.

**TCP:** Please describe how you were informed of your new position as Dean of Student Affairs?

**DB:** During the process after Dean Lemiesz, the administration talked to me about assuming the responsibilities. It was very recent.

**TCP:** Were you previously aware you may be chosen? Have you ever asked for the position?

**DB:** No.

**TCP:** A lot of us at Cooper have many things to manage. What do you

specifically do to stay sane while running both the athletics program as Dean of Athletics, and acting as Dean of Student Affairs? Any time management tips?

**DB:** The most important ingredient is the dedication and the relationship with the students, the second thing is the commitment to the school, and the third thing is that as a Cooper Union person you don't rely so much on sleep. I think the passion that all of us have, the initiatives that we all want to take, the creative juices we all have all blends together. There's 24 hours in a day, and some people know how to manage their time better than others. At Cooper Union you have the time to not only focus but you have the time to be creative, and that's unlike any other school in the world and I think that's the blend of it. There's always time to do things.

**TCP:** With your added responsibilities do you feel you have less time for anything else in the day?

**DB:** I make time. I'm thinking about the students, I'm thinking about the school. If I commute 5 hours a day, I'm thinking about who I'm going to see; the person I

## KenKen

MARCUS MICHELEN (BSE '14)

KenKen is a Japanese paper puzzle by Tetsuya Miyamoto much like Sudoku, only it involves both math and logic. It roughly translates to “cleverness-cleverness.”

**Instructions:** Like Sudoku, each row and column must contain the numbers from 1 to 5. The number in the upper-left corner of the bolded shape made up of squares is the number you need to get by using the operation next to the number. For example, the “20x” rectangle in the bottom left corner can be filled in with a 5, 4 or a 4, 5.

This puzzle contains only one solution, which will be released in the next issue.

9+			360x		1
13+			4-		
11+		16+		16x	5
					36x
	45x	5			
				24x	

## Cryptoquote

MARCUS MICHELEN (BSE '14)

A Cryptoquote is an encoded quote. It is encoded such that each and every occurrence of a letter is substituted with a different letter of the alphabet. Using clues such as frequency of occurrence and placement, the original quote can be found. For instance, the word XBDIKCXXBZ could be deciphered to reveal the word LONGFELLOW.

“VOQ EDWWNHVLDS DZ VOQ IQBV  
VOLSMB MLXQB WL BQ VD VOQ RDWBV.”

- KUXLK ONAQ

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