

## Interview with Nava Setter

As the recipient of the AVS Excellence in Leadership Recognition, Nava Setter, opens her interview with some commentary on being a role model:

“When appointed as a professor 24 year ago, I realized this came with academic as well as personal expectations to “inspire: others.

As a woman engineer, there has also always been a “role model” expectation. How can an ordinary person who is reasonable, honest, and not inclined to illusions realistically fulfill these expectations? I do attribute to myself another role—to serve as a successful example proving that ordinary people can accomplish their dreams. One does not have to be an exceptional person in order to have fulfilling life. What matters is to have dreams and the desire and persistence to realize them. I still have to keep reminding this myself too: There are still many dreams to fulfill.”

**Q: Tell us how you have become a materials engineer?**

A: I always had a clear vision on what I am going to be, but this vision still keeps evolving: At the age of 12, I wanted to be a teacher in a detention center for youth in social difficulty. I had this desire, based on own experience, that with appropriate guidance one can become self-motivated to acquire knowledge and that self-teaching is the most interesting way to study.

This plan was replaced by a new one when I moved to secondary school and started reading regularly the daily newspapers; then I wanted to become a secret agent, to help bring home to Israel Jews who were held in prisons in Syria and Iraq. Then it was time to select the study stream for high school. I chose the physics/mathematics orientation because I considered it more challenging than humanities studies. I believe seeing it as more challenging stemmed from the fact that only very few girls took it (embedded gender bias...no doubt). When university time arrived, my heart wanted physics but my mind told me to be pragmatic; to do interesting physics one would need to do first a Ph.D., and I doubted my capacity for this. An engineer could practice her profession without advanced degree. It was the idea of being able to design large structures that made me chose Civil Engineering. Already during my Masters studies I realized that understanding the meaning of things and turning this understanding into something useful is what really drives me. I asked myself what makes matter stick together into a solid—and studied cements towards improving their mechanical behavior.



Later on, during my Ph.D. studies, I turned my interest into electrical properties of matter –for the simple reason that it is easier to measure precisely electrical properties, as the available equipment for electrical measurement are very sensitive. After completion of my studies, moving between various departments and faculties (civil engineering, physics, chemistry, and solid state science) and some work in R&D in a research institute, I was appointed professor of materials engineering, and found that this profession matched perfectly my background and interests.

I am entirely fascinated by this profession: It is so broad, encompasses really everything ‘material’, from ‘bio’ to ‘energy’ and from ‘nano’ to large structures, from the fundamental to the applied, including physics, chemistry, and every branch of engineering, an ideal profession for individualists. I like also the complex name “materials science and engineering,” which for me represents the development of understanding of nature (science) and the making something useful out of it (engineering).

**Q: Describe a typical day in your life?**

A: The alarm clock rings at 05:30. Typically I spend the first 40 minutes in bed hearing the clock ringing once every 10 minutes and telling myself it is only a dream. Then, being late 40 minutes, I take a quick shower and rush to the university. At 07:00 I open the cafeteria and enjoy uninterrupted 2-3 hours of work, reading, writing, and thinking, formulating questions and trying to develop the way to answer them. Then I go to my office and do practical tasks, budgets, letters, reviews, recommendations, organizational issues, etc.

I also make the nth plan how to clean up my table and tidy my office in the very near future. Then I teach or prepare lectures. In the afternoon I meet my students and postdocs and admire them. Usually this is the time of the day in which I learn most. I also try to understand who is in need of encouragement and do so, perhaps not enough. At 17:00 it becomes quiet again, so I spend some 3 more hours, usually writing proposals or reports and then drive home listening to the Swiss Italian channel (you do not need to understand Italian to listen to this station; it usually deals with football or astrology; it must be exciting). At home I take a carrot and chocolate pudding, and go upstairs for another attempt to work seriously for 3 hours or else prepare talks. Around midnight I usually decide to concentrate on a single problem while lying down and closing my eyes. The alarm clock starts ringing again at 05:30.

**Q: Choose one word you feel explains you best.**

A: Commitment. Only recently I have realized that it is a very strong sense of commitment that drives me to invest a lot of energy even in tasks I find boring. If I said I’d do something, I cannot even imagine not doing it—I can’t help it.

**Q: What is your favorite part of your job?**

A: Like many academics, I am fortunate to have an interesting job with freedom to fill it with content to my liking. Everything is great, but there are some special moments. Above all are the moments, pretty rare in my case, when I arrive to a new deep understanding or to prove a non-trivial hypothesis. Another special moment is when a well-accepted lecture is over; this must be a similar feeling to that of actors after a good performance. I am always so hungry at these moments and go immediately for a huge sandwich and if in the evening a large glass of wine is irresistible.

**Q: Favorite quote?**

A: There are many quotes and poems which display an essential truth in concise or poetic ways and by which I am touched and inspired. A poem that comes to my mind in this very moment is Ithaka by Constantine P. Kavafy, telling that the road is not less important than the final destination.

“When you set out for Ithaka Ask that your way be long, full of adventure, full of instruction...”

**Q: If you could leave one piece of advice for our future generations, whether it is science related or not, what would it be?**

A: On my 50<sup>th</sup> birthday I've asked myself what I am missing in life, and embarked on an entirely new road that resulted in the creation of a high school in a remote, rural location, a school which is now, since several years, one of the top schools in science and humanities in Tanzania. My idea was to enable talented youth to reach their full potential with the perspective that they will soon after contribute to improving life conditions of their fellow people (and by this my small contribution will be amplified).

The satisfaction is enormous when I see these wonderful youngsters flourish and remember that I contributed a little to this. It also empowers me constantly, as I know I am capable to restart at zero again and accomplish my goals. During the many years I have been visiting the school I always felt that I get In return much more than I give. Humbling.

It is still a very difficult project, though. Briefly, based on this, I recommend with a strong conviction that you do not hesitate to embark on a new project you dream of: Do it carefully but boldly. Everything you want to achieve can be accomplished if you are ambitious and persistent. And even if it won't end exactly the way you have planned it initially, it will lead you to interesting and fruitful experiences... but then .....Constantine P. Kavafy, quoted above, has already said it long ago ... And in much more powerful words.