

# Duets in Engineering



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A duet is a composition for two voices or instruments. And just as a musical composer weaves melodies and shades of tones to create a melodious whole, these academic couples work to combine their professional and private lives to achieve a harmonious result. Unlike musical harmony, the harmony of two demanding scientific careers lacks fixed and clear contours, and searching for harmony is not always a straightforward endeavor.

-Marta Vohlídalová  
Prague, 2011

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# Ozkan

Umit

*Professor in Chemical and  
Biomolecular Engineering*

Erdal

*Professor in Food, Agriculture,  
and Biological Engineering*

## **Introduction:**

**Umit Ozkan:** My title is College of Engineering, distinguished professor and my discipline is Chemical and Biomolecular engineering. I am a pure bred chemical engineer with all three degrees in chemical engineering; I got my B.S. and Master's degrees in Turkey in Chemical Engineering; then I came to the US and got my Ph.D. at Iowa State University and I started in a faculty position here at OSU in January 1985.

**Erdal Ozkan:** Hi, I am Erdal Ozkan, and I am a professor in the department of Food, Agriculture, and Biological Engineering at OSU.

## **Professional journey:**

**UO:** My professional journey started in Turkey. I was born and raised in Turkey.

**EO:** I was also born in Turkey, got my BS degree in agricultural engineering in the eastern part of Turkey, and I came to the United States for both my master's and Ph.D. degrees in agricultural engineering from the University of Missouri at Columbia.

## **Experience at Ohio State:**

**UO:** I have been at Ohio State University for the last 27 years and few months. When I started looking for faculty positions, we were already one year into our marriage, and so I limited my search to universities that had both strong chemical engineering and agricultural departments. So, it limited the choice quite a bit. To begin with, it was a sacrifice from my part; but again, my spouse was already a tenured associate professor at Iowa State and he was willing to give up his tenure position if we were to be able to find a job together. I was hired first at OSU, and one





interesting feature to that was I was the first woman hired into this department. At that time, there were really few women faculty in chemical engineering in the entire country - may be less than ten. And for 19 years, I continued to be the only female faculty member in the department.

**EO:** I was hired 10 months after Umit was hired. There was a special arrangement for me and for my position, just because Umit was here; but I went through regular interview process, and I was offered the job almost 26 years ago. My position was not open when she moved to Ohio State. There was a glimmer of hope that there would be something coming up. We took a chance.

### **Is it easier for women now?**

**UO:** I am not sure. But many institutions have become more sensitized to gender issues, and dual career couples, than before. When I was hired, it was not that usual. But it is a challenge. Both parties must be willing to be patient and try to work at it - sometimes sacrifice. It usually works out, but it also needs a strong marriage. Sometimes it is difficult. We were separated close to one year. So, you need patience, perseverance, and sacrifice.

### **Career path:**

**UO:** I was the only woman in the department, but I got a tenure-track position - eventually promoted to a full professor position. Then I became the Associate Dean for Research in the College of Engineering and I served in that role for five years. It was an interesting opportunity - a learning experience. I worked closely with the overall research enterprise of the College; but one part of me always wanted to maintain my research program and still continue teaching. After the end of 5 years, I came back to the department - full time.

### **Where did you two meet?**

**UO:** We met in Ames, Iowa. Erdal was already in a faculty position there, and I went to Iowa State as a Ph.D. student. I was offered a graduate research associate position in Ames laboratory, which is a US Department of Energy lab associated with Iowa

State University. So, that's how we met. We were good friends for several years, probably three years; and towards the end of the third year, we became closer friends. We got married maybe one year after I graduated with my Ph.D. We had a wedding in Turkey. We were good friends first, even before we started dating; and it is wonderful if your marriage is based on strong friendship. And he is still my best friend. (Laughs and they look at each other.)

**EO:** It was a great friendship we had.

**Best part of your work:**

**UO:** Working with students, whether undergraduate or graduate students. Working with students in the laboratory. I think teaching is the most gratifying part of being a faculty member. And, also research. It keeps you up-to-date. It keeps you fresh. You are always learning new things, discovering new things, always working in different areas. That's very exciting. Working with young people - they are always full of new energy and enthusiasm, which is often contagious.

**EO:** This is not an eight to five job. Sometimes, we do feel that it would be better if it were an eight to five job. Sometimes we do have long working hours, deadlines; but this is an exciting environment. We're always learning new things. Every day is different. OSU is a vibrant learning community. You are always with young people, and you emotionally stay young. They give you the positive view of life.

There are always interesting things going on in the university environment; lectures, seminars, art, etc. Meeting with colleagues - intelligent people - you always learn new things from them. The best part for me in our College of Food, Agricultural and Environmental Sciences is that most faculty have outreach education responsibilities. What we call Extension Education. We have to deal with problems of the rural folks in Ohio - they are our students as well. We go to rural areas and educate farmers and try to solve their problems. We have to come up with solutions instantly. It is interesting to interact with them. They have different experiences in life, a different vision of life. Going out from my office, and talking to real people, dealing with real problems, and they do have real problems. When we go out of our office we wear a different hat. We try to talk in a language that they understand - no technical jargon. Sometimes three and four of our faculty go together. It is wonderful, sharing our knowledge with them. I try to give them the best information available. I talk about pesticide and spray technology so that they can put it in use the next day.

**Ohio State as an institution for couples:**

**UO:** It is such a wonderful institution. It has such a huge depth and breath, huge scope for personal and professional growth. It really has been a great work place for me as an individual, and for us as a couple. I really have no complaints. It is a demanding job, working hours are really long; but that's the life style

choice we made, and then you don't mind the hard work.

**EO:** All our colleagues - our graduate students, faculty, staff - we have mutual respect for each other - for what we do and what they do. The administration over the years is trying to make this University a compelling place for us to come. The administration is also helping us to come to the university to work, trying to make it even a better place to work - for minorities and for females, putting an extra effort to make this place really a good place for them to work.

**UO:** The number of female employees is growing in faculty positions compared to when I was hired. Diversity is good for any institution, because everybody has something different to offer, and contribute. In that regard, things are changing in a positive direction. Are we there yet? I don't think so. We need to do more. I think we need to encourage our female undergraduate students more to go for graduate education, take research seriously, even at early levels, maybe from high school, or even elementary, to encourage them to take interest in science and technology; we have to tap this natural resource. We need to grow the pool as a country to increase the number of female scientists and researchers.

### **Pros and cons:**

**UO:** We both feel loyal to Ohio State. Being able to share that loyalty is wonderful. We both take great pride in that - the great tradition Ohio State has. I can't see any cons. Some of the pros we have already discussed. And whatever difference we can make through our work here, through teaching, research, or outreach programs that Erdal does, I think that is wonderful.

**EO:** No cons I can think of. Pros, I think we can come to work in the same vehicle, and that gives us an extra opportunity to discuss things.

**UO:** We can't do that everyday, only if our schedules match. We make a small effort to shrink our carbon footprint.

**EO:** Yes, and also we get the opportunity to meet each other's colleagues, and our colleagues also get the opportunity to interact through us at different functions. That's how we expand our circle of friends. We attend each other's social functions. We can go to events on the university campus together. Sometimes when I forget, she reminds me. Some events escape her eyes, I remind her.

### **Family:**

**UO:** Flexibility is the key; if our schedule matches then we have dinner together. That's wonderful; but if one of us has to stay back for work, or stay



late, that's also okay. So, with the flexibility - the understanding that we both are in very demanding careers - that helps. I think we understand each other's demands.

**EO:** Everything is equal, but we try to balance. Somedays I may be able to pitch in on more of the housework - some days she may do that. But having similar kinds of jobs, both professionals, academic, we understand each other better, what we go through in the university environment.

**UO:** We don't have rigid roles that you may find in more traditional marriages - we share responsibilities. It all works out in the end as long as you recognize that it is an equal partnership relationship. Mutual respect and trust, and love are important.

#### **Their cat:**

The name of our cat is Pepper. We are fortunate enough to find cat - loving people who are willing to take care of the cat when we both travel; but

that's something we always keep in mind before we schedule our trips.

#### **Have similar jobs enriched you as a couple?**

**UO:** We speak the same language. It is easy to speak to each other, relate to each other's problems. Even though we are in different disciplines, we can still relate to each other. It is really enriching.

**EO:** When some interesting concepts develop, maybe in her lab or mine, when we come back home, share the details with each other, we both are able to understand what that means, and we have greater appreciation, and respect for each other's works, accomplishments. We are both very supportive of each other's careers.

Columbus is exceptional in terms of its location. Other big agricultural schools are all located in remote areas. Columbus is a vibrant city where we can attend many cultural events. Ohio State is a great workplace. We feel so lucky. We both love our departments and the University.

“*At that time, there were really few women faculty in chemical engineering in the entire country, maybe less than ten. And for 19 years, I continued to be the only female faculty member in the department.*”

# Wyslouzil & Kochanek

Barbara

*Professor in Chemical and Biomolecular Engineering, Professor in Chemistry and Biochemistry*

Chris

*Ohio Eminent Scholar and Professor in Astronomy*

## Introduction:

**Barbara Wyslouzil:** Hi, I am Barbara Wyslouzil. I am a full professor in Chemical and Biomolecular Engineering and also in Chemistry and Biochemistry.

**Chris Kochanek:** Hi, I am Chris Kochanek, a professor of Astronomy. I also have the additional odd title of Ohio Eminent Scholar.

## Professional journey:

**BW:** I am Canadian and I did my undergraduate at Queens University in Kingston Ontario. When I graduated, I started working in Alberta for the Alberta Research Council. While I was there, I got a Master's degree at the University of Alberta. Then, after about six and half years, I went to do my Ph.D. at Caltech in Chemical Engineering. After that, I

did two years of contract research in the Boston area, followed by 10 years at Worcester Polytechnic Institute, which is a small private engineering school in Worcester Massachusetts. I've been here [at Ohio State] since 2003.

**CK:** I got my undergraduate degree from Cornell University, majoring in physics and mathematics. I started doing research in astrophysics as an undergraduate, and then joined Caltech as a Ph.D. student in physics. I continued doing research in astrophysics, but kept becoming more astronomical. After that, I did my post doc at Berkeley, and then joined Harvard University as a junior faculty in astronomy. I stayed there for almost seven years, and then I became a federal research scientist for the Smithsonian Astrophysical Observatory. In 2003, I came to Ohio State for the current position.



**On hiring:**

**CK:** It was challenging. I was not entirely happy while working in the Smithsonian. I was looking for places to go, and the opportunity came with this position at Ohio State, and that worked out well. I applied and I was hired first. The position was a Chaired Position in Astronomy, Ohio Eminent Scholar and when it was clear that they were going to hire me, it was also made clear they had to find two jobs, and we proceeded from there.

**Was the process easy?**

**BW:** (laughs) No. The original offer to Chris came around Thanksgiving, and we had our final offer letters in June. So, it took almost eight months, and we finally signed the offer letter in late July or early August. It was challenging because I have an "academic brother" in the Chemical Engineering department. On paper you could say that we are in the same research area. That was the biggest hurdle that I had to overcome, even though he is a theorist and I am experimentalist. Fortunately, someone in my current department knew our advisor, and my advisor was able to convince the department that we were very different people; that our research areas were different. It was challenging. Nothing happens quickly at OSU. But eventually, things worked out.

**How did you meet?**

**BW:** We met in graduate school through mutual friends playing softball - pretending to play softball (laughs). We were friends for a while, and then he left to do a post-doc at Berkeley, while I finished at Caltech. So we were in separate cities for two years. When it came time to find real job, I took the contract research position in Boston because, otherwise he would have gone to Harvard. I would have gone to University of Toronto, and we'd still not be in the same city - so that was not as an option.

It is a constant battle for couples in academia to find a place in a same city. The advantage of Ohio State is that it is a huge university, and you can apply to diverse fields at the same university. Whereas other universities are either really strong in engineering, or in science. It is hard to find schools that do both. Columbus is also not as isolated as some other university towns, which is great.

**What do you enjoy most about your job?**

**CK:** Grading (both laugh).

**BW:** No, don't believe that one - that's probably what we enjoy the least.

**CK:** Where else do you get a job to figure out how the universe works?

**BW:** I guess we both are very interested in doing research and working with graduate students and post-docs.

That's probably where we get our satisfaction. Teaching is fun. Non-major courses are more fun, although right now I am teaching a specialty course in my subject area - that's really nice too.

#### **Anything you enjoy specifically about OSU:**

**CK:** I don't know, I can't think about anything specific about OSU.

**BW:** I think, one good thing about OSU is that it is so large and diverse, and you find people working in other fields, other areas. So we have the opportunity to collaborate with them, which is very useful.

#### **OSU as a workplace:**

**BW:** Although, we are working in different fields - two different departments - it's very convenient that we work across the street from each other. It's a lot better than when we used to live in Massachusetts where we were 50 miles apart. We live nearby, so it is very easy for us to even go home if we need something or are dealing with family issues. I used to drive 90 miles a day and spend 2 hours in the car. I don't have to do that anymore.

When we moved to Columbus, our son was already going to school and we didn't have to look for day care - so we don't have any idea about OSU day care. I must say, it is very easy and convenient to live here. We are in a good school district, we are pretty



happy about that. Although we never had to deal with child care issues in Columbus, I know other people who have used the OSU child care system. Some of them are frustrated with that, but it wasn't an issue for us - we were beyond that stage. We used some of the other facilities, like summer camps and things like that. But, after few years, our son completely hated any summer camp. It was not just OSU, he wanted to be at home.

#### **Pros and cons:**

**BW:** There are several pros. OSU is a big place. We have the opportunity to meet people with diverse interests and skills. It is a great opportunity to meet these people with different skills - you get enriched by that. On a personal level, Chris and I have the same vacation schedules - that is convenient. We

understand each other's job a lot better - the stress related to trying to get proposals funded, trying to write proposals, trying to develop new courses, etc. Although, we work in different fields, we've acknowledged each other in our papers. We share editing skills, share our ideas and we sometimes have good useful discussions about our work at home. We have never written a paper together, but who knows, maybe in the future.

**CK:** It would be difficult for her to reproduce my experimental conditions. Don't know about the cons, maybe paying for two OSU parking passes.

**BW:** Our offices are so close, but we hardly see each other. However, it is great - I can always come here (to his office) if I run out of money (laughs). We go out for lunch once in a while, or if we feel like it, we can meet for a cup of coffee. We go to each other's holiday parties which give us the opportunity to meet each other's colleagues.

### **Managing home and work:**

**BW:** He cooks. I don't think I am allowed to cook on weekdays - cooking is his relaxation. I bake, and prepare Sunday morning breakfast. I think it's really a matter of sharing responsibilities. I deal more with scheduling related to our son and his activities, and Chris deals more with stuff at the house. So, what do I do? (laughs). We pay people to clean and cut our grass. It's just not worth it to argue over who is going to clean the house, or to cut the grass.

When we have to travel, we make sure we don't double book, but there have been times when both of us had to be out of town. During that time our parents came and stayed at our house - we have never abandoned our son (laughs). Now he is getting older and would probably like that...it is mostly coordination.

**How does your son deal with your work pressure?**

**BW:** Well there was always someone at home. But, he is better with it now because actually he's probably gone from the house as much as we are. He's in high school and most of the days, he has after school activities. I remember, when we moved to Columbus, almost nine years ago. That quarter was fine, but the next quarter both of us were teaching, teaching new topics. That was one time when he was really unhappy and he acted out in school a little bit. Once we knew the reason, we made an

effort to spend more time with him - not to work during weekends, to put him in after-school activities, etc. Small tricks are important - like knowing each other's deadlines, when the proposals are due, more coordination, trying to make weekends free, not to be grumpy at home.

**Has being a dual-career engineering/science couple enriched you in any way?**

**CK:** It is always great to have a partner who also understands and appreciates your work.

**BW:** I agree.

