

Dae Wook Kim, PhD, 2009

What influenced your decision to attend graduate school at OSC?

In 2005, professor Jim Burge invited me to OSC as a visiting scholar. (At the time, I was working toward a MS degree in astronomy at Yonsei University in South Korea.) While at OSC, I joined a camping trip to the Large Binocular Telescope (LBT) site on Mt. Graham. I was impressed with the incredible power and potential of optics and the community at OSC, who were developing and assembling the 'largest' single optical camera system on Earth. During my time as a visiting scholar, I also saw two 8.4m in diameter telescope mirrors being assembled in front of my eyes. Optics became my passion and my life, and in 2006 I enrolled in graduate school at OSC.



Dae Wook Kim and Dean James Wyant

What do you wish you would have known your first day of graduate school? Was there anything you wish you had done to prepare more for graduate school?

If I could go back to the day before the first day of graduate school at OSC, I would sleep more! I didn't realize the number of classes and hands-on labs or the unbelievable amount of homework required. Those first two years, I never slept enough—but, that was also the most dedicated and focused time in my academic life so far.

Which classes did you find most enjoyable? Which ones did you find most difficult?

OPTI 501, Electromagnetic Waves, taught by professor Masud Mansuripur was my favorite. The flow of his lectures; his direct and simple approaches to the theoretical equations, his use of clear drawings to help us visualize complex concepts; and the exciting way he handled student's questions became the reference and model for my teaching today. Of course, it was also one of the most challenging classes and the homework and exams were one of the reasons for my lack of sleep!

Was there an individual (professor, advisor, staff, friend, family member) who played a particularly important role in your education?

Professor Jim Burge has been, still is, and always will be my academic father. I joined his Large Optics Fabrication and Testing (LOFT) group in 2005 as a visiting scholar. I became a research assistant in his group in 2006. He has trusted, taught and enabled me in every possible way. I am even continuing the LOFT group today. Having a good and truthful mentor is critical, and I was lucky to meet Jim.

What was your research while attending OSC?

One of my main research topics was large optics fabrication process modeling, simulation and optimization. One interesting outcome was the invention of a non-Newtonian polishing lap (aka the Silly-Putty tool), which was used for the first 8.4m Giant Magellan Telescope (GMT) primary mirror fabrication.

What was the cost of rent in Tucson while you were in school?

The apartment rent was between \$600 - \$800/month for my family.

If you owned a car during graduate school, what year and model was it?

My first car, a 1988 Ford Escort, was given to me for free by my friend who was leaving Tucson after graduation. He planned to 'wreck' it originally, but I asked him to give it to me instead. It was a fully 'mechanical' car with lots of miles, no electronics, no power windows, no A/C and manual shift. During the monsoon season in Tucson, when the roads were flooded, my Escort was literally 90% floating on the water!

What was your favorite restaurant/student hangout near campus?

I really miss Bookend Café, which was right next to the Main UA Library. It had a nice sandwich option with a classic and cozy style—not as fancy as the Starbucks that took its place—but unique. I used to grab a quick lunch with a cup of coffee, and sit and chat with my classmates and lab partners at the outside tables.

What did you do for fun during your time in graduate school?

My wife, Heeyoung, and me—along with our sons Aiden and Daniel—took lots of road trips. We have visited almost all of the states and many national parks. There are so many good memories with my family on the road.

What was most memorable about your commencement ceremony?

I graduated in 2009 when Jim Wyant was dean of OSC. Jim was the one who let me take (audit) my very first optics class, OPTI 513R Optical Testing, when I was a visiting scholar. His 8 a.m. class in the Harvill Building added to my sleepless nights. I began my academic journey with Jim as a visiting student, and I was so happy to complete my journey with Jim hooding me at my PhD commencement ceremony. I even had my wife film the event!

Small, but personally meaningful things sometimes matter a great deal. I am now teaching the OPTI 513R course at 8 a.m. in the morning, and contributing to our grad students' sleepless nights. What a life!

At the time of your graduation, what were the most sought-after jobs/most popular industries/most popular companies?

It was an exciting time for energetic IT companies who were in their prime. Google X lab was on my list and I considered joining them.

What was your first job after graduation?

After graduating with my PhD in 2009, I started as a Research Scientist at OSC, working on large optics manufacturing and testing projects. I found the one-of-a-kind scientific impacts and optics technologies fascinating and, most of all, I loved to interact, study and research with students.

What was the most significant world event during your time in graduate school. How were you affected by this event?

My most significant personal 'world' event during my time in graduate school was the birth of our two sons. My family was my 'world' when I was a student (still is). ☺ Aiden was born in 2007 when I was preparing for the Prelim exam. Daniel was born in 2008 when I was writing my PhD dissertation, and preparing for my defense. Wow! It was an exciting, yet challenging time. Somehow, Heeyoung and I survived!

Was there a campus or community event in Tucson that was especially important to you?

The OSC camping trip to the LBT site on Mt. Graham is still my favorite OSC event. It brings our OSC community and their families together in one of Tucson's most beautiful nature settings.

What advice would you give to this year's graduating class?

Your life is good. Optics is beautiful. Shape your own happy and thankful life, full of vivid and colorful spectrums.