

Dr. Alexander Raymond Small – 1977 – 2024, by Donn Silberman

Dr. Alexander Raymond Small was a professor of physics and astronomy, starting in 2007 and department chair starting in 2021, at the California State University – Pomona, or more affectionately known as “Cal Poly Pomona.” “Poly” is short for ‘polytechnic,’ which according to Wikipedia “*is an educational institution that primarily focuses on vocational education, applied sciences, and career pathways.*” I mention this because it is a starting point for me to talk about my dear friend Alex. Many of our mutual friends and colleagues are also involved with studying and teaching physics, astronomy, optics and other related sciences, engineering and technical endeavors. I’ll come back to these thoughts in just a minute.

Alex was born about 47 years ago to Ann Thompson and Patrick Small in Milwaukee WI. From the age of about 12 to 16 he delivered newspapers for the Milwaukee Journal. During his final year in Milwaukee, he was employed at the West Allis Memorial Hospital as a Dietary Worker. He would carry his interests in healthcare and news throughout his life. Someone must have told Alex, “Go west young man” as many from the Midwest did. So, he applied to study physics at the University of Southern California and was admitted and studied there from 1994 through 1998.

It was during his time at USC that he met and became friends with Bob Cartland, who wrote a beautiful summary of Alex’s professional life when the Optical Society of Southern California presented Alex with a Lifetime Achievement Award on September 11th last year. During Bob’s and Alex’s time together at USC, (and I quote from Bob’s summary), they “*both were members of Prof. Madhukar’s research group. They also both served as alter servers for the USC Catholic Community and on the USC Student Senate. Alex was the President of the Society of Physics Students and Bob was President of the USC Student Chapter of OSA (the Optical Society of America, now known as Optica). As a young man, Alex shared his wisdom and advice navigating USC bureaucracy and taking our leadership positions in stride.*”

Alex married Adrienne Kelly on June 28, 2003, who remained his constant companion and partner for the rest of his journey. I can’t imagine what that was like, so I’ll move on to other topics !!

Alex had many other aspects to his life and seemed to merge them effortlessly. He wrote science fiction for fun and to the delight of readers. One such article was published in “Nature,” a very well-respected science journal, first published in 1869. In “Don’t feed the physicists,” published in June 2023, Alex wrote, “*In the beginning there was light. It’s in the basic universe starter kit, so atoms can exchange energy. You also need a sun, of course. A simple sun, without details, suffices for basic biology. Plants don’t need realistic solar structure; they just need it to glow.*” And at the end of the article he added in a section called, “The story behind the story,” “*What if God is a programmer? That’s basically the simulation hypothesis: physics is inherently mathematical because the universe is a calculation running on a computer.*”

On February 23, 2024, Alex’s article titled, “Whom would Jesus cancel?” was published by Inside Higher Ed. Here Alex spoke to the very serious matter of academic freedom that involved the firing of an instructor from the Catholic University of America. And in my opinion, even more important than academic freedom in general, this article spoke about the issue of abortion as an example of two sides of many issues. The concept of listening to others speak about their perspectives of an issue and seeking to understand different points of view seems essential and was one of Alex’s greatest abilities. In the article, Alex quoted from a song he learned in Franciscan elementary school;

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“Oh, Master, grant that I may never seek,
So much to be consoled as to console,
To be understood, as to understand,
To be loved as to love with all my soul.”

Alex went on to say, “I venture that many religious conservatives would endorse my reproach of left-wing students who shout down right-wing speakers, and I hope they see similar value in intellectual diversity that embraces left-wing views, even views sharply contradicting Church teaching. Those teachings should help us navigate a wide world, not isolate us from fellow humans.”

Alex and I came at life from two sides of the same coin. Alex was an academic, I was more of an industrial guy. Alex was a bit center left, I was a bit center right. I was raised Jewish, Alex was a practicing Catholic. But we shared much more from both sides of life’s spectrum.

We were both staunch and active supporters and participants in the Optical Society of Southern California. I founded an Optical Engineering and Instrument Design program at UC Irvine, to help train future employees for industry. Alex set up the *“Visiting Lecturer in Industrial Science”* program at Cal Poly Pomona so that *“Every physics and astronomy student should be able to learn industry-relevant science from the people who make it happen.”* We were both Fellows and Past Presidents of the OSSC and Alex committed to be a multi-year Treasurer, and I committed to be a multi-year Secretary in order to find ways and means to sustain the OSSC through its next generation of leaders. Even though Alex’s multi-year commitment got cut short, one of his many excellent former students (and there are many), Steven Dang, has stepped up to fulfill Alex’s role and is doing a fabulous job.

There is so much that Alex wanted to do in his life; so we who survive him will endeavor to continue his efforts to make this place better for as many people as possible. That is what Alex wanted.

I have created a webpage on my website in his memory, with links to some of his writings and this eulogy. There is a link to that webpage of the OSSC website on Alex’s Bio page.