

ENGINEERING ALUMNI ASSOCIATION

School of Engineering, San Jose State University, San Jose, California 95192

August 1, 1991

Dr. Joseph D. Andrade Jr.
Dept. of Bioengineering
University of Utah
Salt Lake City, Utah 84112

Dear Joseph:

In my letter of March 14 to Engineering's distinguished graduates, I detailed out intent of having a chapter in the School's History Book devoted to our 26 "achievers" thus far identified.


A follow-up letter of May 14 emphasized our desire to have more personalized bio sketches than the wording of the cold citations, with some mention of family, home area(s), non-work activities and hobbies, etc. Copies of material submitted by Don Beall, CEO and Chairman of Rockwell, and Bill Nix, Professor at Stanford University, were sent as examples.

We have received bios and photos from about half of the recipients. To add to those, one from Phillip Allen, Professor at Georgia Tech, is enclosed.

My letter of May 14 mentioned a request date of September 1. Shall we move that date back to September 16, with the understanding that in the absence of a bio and photo we will be left with the only alternative of listing but the name and the citation as printed at the time of the award. But we would much prefer to have photos and brief personalized biographical sketches for all.

If I don't hear from you by about September 1, I may just try contacting you by phone.

Thank you for your cooperation,


Norm Gunderson
Dean Emeritus, 1955-70
Chair, Engineering History Book Committee

enclosure

Personalized Biography of Joseph D. Andrade

I transferred to the then San Jose State College in the Fall of 1963 after spending two plus years as a physics/math major at Berkeley. As an electrical engineering major at San Jose I was required to take a course on Materials Science, which fortunately was taught by Zuhair Monir in the College's new Materials Science and Engineering Department. This was a required course which I felt I had little interest in, fortunately it was required. The instructor was superb and it changed my life. About halfway through the course I realized that materials science was the major I had been looking for, combining physics, engineering, and chemistry. I immediately switched majors and graduated from San Jose in Materials Science in 1965.

I went to the University of Denver as a graduate student in the then Department of Metallurgy. At the time I finished in very early 1969 it was the Department of Metallurgy and Materials Science. While at Denver, thanks to a fascinating ceramist named Jerry Plunkett, and an equally interesting polymer materials fellow named Paul Perdecki, I got involved in biomaterials and bioengineering. That led to a Ph.D. Thesis dealing with protein adsorption at polymer surfaces.

In 1969 I joined the faculty of the University of Utah in the new Department of Materials Science and Engineering, and also in the College of Medicine's Division of Artificial Organs. During my 22 plus years at Utah I have risen through the ranks, served as Chairman of the Department of Bioengineering for two terms (6 years total), and as Dean of the College of Engineering (1983-87).

My work has always been focused on materials and medicine, particularly their surface properties and characteristics. We made a strong commitment in the area of surface characterization and surface modification many years ago, and have developed methods, techniques, and approaches which are now relatively standard in the biomaterials community.

About ten years ago the work focused on understanding the mechanisms of protein adsorption at solid/liquid interfaces, which began a real love affair with the structure of protein macromolecules. My activities now are devoted to looking to proteins as molecular machines and developing applications for thin films of proteins and related molecules.

Very recently I have become very interested in the issue of science education for the general public, and established the Center for Integrated Science Education at the University of Utah. The Center's focus is to try to teach science concepts in an integrated fashion to non-science majors, particularly to elementary teachers and journalists. I feel strongly that the two most important professions in our society are elementary school teaching, because they indeed teach and mold the next generation upon which our future depends, and journalists and mass communication professionals, because they are the individuals who mold and inform the present generation upon which current society depends. Yet, these are the two professions which are normally ignored and given a fairly low priority in most universities. I am very concerned with encouraging scientists and engineers to get involved with social and related issues and to assume their responsibility in society and government.

In looking at the past 25 plus years I can say that my experience at San Jose State was a very pleasant and successful one and provided excellent preparation for my professional career.