History of an ASEE Fellow

**Dr. Gerald S. Jakubowski**

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**Birthplace:** Toledo, Ohio

**Birthdate:** November 22, 1949

**Family:**

It was my grandparents on both the paternal and maternal sides that immigrated to the United States from Poland in the very early 1900’s. They all settled in the Polish neighborhood in Toledo, Ohio what the Polish called “Lagrinka” - the area along both sides of Lagrange Street in North Toledo.

My father was born in 1909. His father (i.e., my paternal grandfather) died when he was four; his mother died when he was 12. He was an orphan on his own from a very early age living on his own, which meant he only had a fourth or fifth grade education. My mother was born 1910. She had a more traditional childhood in comparison to my father. She had a ninth grade education. So both my mom and dad lived through the difficult depression years.

I was born November 22, 1949 - a “Baby Boomer” - the youngest of three children. We lived in a North Toledo neighborhood just one block away from where my father lived as a child. The house was a very small bungalow consisting of a living room, dining room, kitchen, two bedrooms, basement and a tiny bathroom that had only a tub, no shower. The attic was converted into a bedroom, but it was only about 10 feet wide and, because of the sloping roofline, it was only six feet high at the peak with walls only four feet high. Basically, it was a very modest house in a “blue collar” neighborhood.

My mother was a “stay-at-home” mom. My father owned a bar - “Chet’s Tavern.” Although my father was not highly educated as mentioned above, he was a very smart guy. He could design, make and fix things. Of course, I always had to be his helper. He would always say to me: “Jerry, you’re going to be an engineer.” So, when it came time for me to go to college, there was no question as to what career I was going to pursue. I was the first in my family to graduate from college.

I am an amateur genealogist and have written a book on my ancestors and the family tree. I could go on and on, but I believe the above provides the salient facts for the purpose of this document.

**Education:**

My education took place in Toledo, Ohio. I attended St. Vincent de Paul Elementary School where I graduated in 1963 followed by Central Catholic High School where I graduated in 1967.

When it came time for college, there was no choice! Most high school grads at that time selected the local university, which meant the University of Toledo where I started in the Community and Technical (ComTech) College in 1967. Furthermore, there was no choice regarding a major as stated above – it had to be engineering.

However, the Vietnam War was at its peak at that time. It was felt that the then current draft system along with draft deferments was unfair and a new lottery system for selecting recruits was enacted with no deferments allowed whatsoever.

The first lottery was held December 1969 and my birthdate gave me #9. I was an engineering student at the time (I transferred from (ComTech) to Engineering), but with a low number there was no question about me getting drafted. I, therefore, joined the Army Reserves instead, which amounted to six months active duty and five and a half years active reserves.

I left for active duty at Fort Leonard Wood, Missouri on January 6, 1971, which meant that I had to drop out of school. When I returned from active duty, I found a full-time engineering job as an Assistant Plant Engineer at the Interlake, Inc. – an Iron and Steel Company; an engineering job without a degree, but with a starting salary higher than most engineers holding a degree at the time - $800 per month! I will discuss more about this later; let me return to the education part.

My plan was to work full-time during the day and complete my engineering degree by going to school part-time in the evenings. When I realized it was going to take me a long time, I started taking more and more classes during the evenings, which eventually got to the point where I was working full-time during the day and attending classes full-time at night - it nearly killed me! I eventually graduated August 1974 with my Bachelor of Science Degree in Mechanical Engineering. It took me seven years instead of the normal four.

I really enjoyed the last year and a half of college. Things were falling into place and making sense. So, I decided to pursue a Master’s Degree, but I could no longer work full-time and take classes in the evenings. I quit work, got a teaching assistantship with a small stipend and attended college full-time. I really enjoyed the teaching part of my assistantship. So, I decided to pursue a PhD. I eventually obtained my MSME degree March 1976 and my PhD in Engineering Science August 1978.

I should also mention I got married 1972 and had a son born 1976. As you can see, I took a very non-traditional path for my education, but it was an interesting one nonetheless.

**Employment:**

As stated above, when I returned from Army active duty, I found a full-time engineering job as an Assistant Plant Engineer at the Interlake, Inc. – an Iron and Steel Company. The plant had two blast furnaces that converted iron ore into 20-pound and 40-pound “pigs” – the end product. The plant also had coke ovens that converted coal into coke that was used for the smelting process in the blast furnaces. It was an antiquated plant that required real “seat-of-the-pants” engineering. It was also dirty job and dangerous one as well. I ended my employment there August 1974 to attend school full-time to pursue my Master’s Degree. Shortly after I left (December 1974), there was an explosion at the coke ovens that killed several people and I knew each and every one of them!

While pursuing my Master’s and PhD degrees, I was asked to work as an Administrative Assistant for the Dean’s Office as part of my assistantship. This gave me my first taste of university administration, which will become important for my future career.

After completing my PhD, I went the educational route. I was an Assistant Professor of Mechanical Engineering at the University of South Alabama in Mobile, Alabama from 1978 until 1979. I really enjoyed teaching and living there. However, the Dean who I worked for as an Administrative Assistant at the University of Toledo (UT) asked me if I would be interested in returning to UT to work 2/3 time in mechanical engineering and 1/3 time the Dean’s Office. I accepted and returned to UT fall 1979. I conducted my research, published papers and got tenured in the mechanical engineering department. I also obtained additional valuable university administrative experience while working in the Dean’s Office, which allowed me to become full-time Assistant Dean of Engineering in 1986 when the then Assistant Dean retired. From there, it was a matter of moving up the administrative ladder, which includes the following positions:

Associate Dean of Engineering and Professor of Mechanical Engineering

Memphis State University (now University of Memphis), Memphis, TN

1988-1989

Interim Dean of Engineering and Professor of Mechanical Engineering

Memphis State University (now University of Memphis), Memphis, TN

1989-1990

Dean of the College of Science and Engineering and Professor of Mechanical Engineering

Loyola Marymount University, Los Angeles, CA

1990-2004

Vice President of Arizona State University (ASU); in Tempe, Arizona and

Provost of ASU’s Polytechnic Campus; Mesa, Arizona

2004–2006

President, Rose-Hulman Institute of Technology

Rose-Hulman Institute of Technology, Terre Haute, IN

2006-2009

Provost and Vice President for Academic Affairs

The California Maritime Academy, Vallejo, CA

2009-2014

Let me say a few words about each of the above positions. When I went to Memphis State as Associate Dean, I was in charge of engineering research and graduate studies. The Dean of Engineering was asked to step down during my first year there and I was asked to serve as Interim Dean. I could have stayed as Dean, but I was also offered the position of Dean of the College of Science and Engineering at Loyola Marymount University (LMU) in Los Angeles. Since it was always a goal of mine to live in California, I accepted that position.

Working at LMU and living in LA was quite the experience. My primary responsibilities were to: expand the physical plant of the college, renovate antiquated labs, launch new programs, increase the level of scholarship, research and consulting conducted by faculty within the college and, above all else, to raise funds to accomplish the above. All goals were achieved. However, being in a lofty position at a prestigious university brought numerous opportunities to attend special events, black-tie dinners and to meet celebrities and influential persons. There are simply too many things to tell, so I will mention just a few of my most memorable experiences that include:

* Meeting movie and television celebrities such as: Bob Newhart, Goldie Hawn, Roger Moore, Dustin Hoffman, Mel Gibson and Henry Winkler;
* Attending several “Friendly Sons of St. Patrick ‘Black-Tie Men Only’ Dinners” at the Beverly Hilton Hotel;
* Attending LMU’s Annual Hal Roach Dinner and Awards Ceremony and meeting movie and TV personalities including Hal Roach himself;
* Having a behind the scenes tour of the Ronald Regan Library; and
* Sitting in the owner’s box in Dodger Stadium and meeting the O’Malley family (owners of the Dodgers), Vin Scully (the voice of the Dodgers for 67 years) and Hall of Famer Don Drysdale.

The Academic Vice President at LMU told me I was ready to become a Vice President and he advised me to move on, which took me to Arizona State University (ASU) where I was Vice President of ASU in Tempe, AZ and Provost of ASU’s Polytechnic Campus in Mesa, AZ. The job required me to be on both campuses almost daily. It was quite the experience to work with the renowned president, Dr. Michael Crow. My role at the Mesa campus was to convert it into the “polytechnic” branch of the university. It required me to be on the “stump tour” to explain what a “polytechnic” is, to win over the surrounding communities and politicians, and to convince legislators to provide funds for the campus. I was successful on all fronts.

I was happy at ASU and would have enjoyed staying there. However, I was nominated for the President’s position at Rose-Hulman (R-H) Institute of Technology in Terre Haute, IN which I pursued and was offered the position. Rose-Hulman was ranked – and still is ranked – as the best undergraduate engineering college in the country. The school was well known and highly regarded not only in Indiana, but also throughout the country. Therefore, this was a very prestigious position that brought somewhat of a local celebrity status to wife and and me. The job involved numerous trips: to meet alumni and raise funds; to Washington, D.C. to meet senators, representatives and lobbyists; to Germany and Japan to visit sister institutions. It also required service on a number of community boards including the Chamber of Commerce, the United Way and the Swope Art Museum. It was the best of times and the worst of times. The long hours and stress were taking a toll on my health. I decided it was time to move on. In 2009, I submitted my resignation from R-H and took the job as Provost and Vice President for Academic Affairs at the California Maritime (Cal Maritime) Academy in Vallejo, California. (Incidentally, the person who replaced me died of a heart attack in my former office at the age of 57 after just two and a half years on the job!)

Cal Maritime is one of 23 campuses that comprise the California State University System. It is also one of six state-supported maritime universities in the country. Although I did not have any maritime experience, the President hired me because of my vast higher education experiences; he wanted me to change the image of Cal Maritime from being a perceived vocational school to being a university. I had to learn an entire new area, i.e., the maritime industry, which I did not even know existed, and about he rigorous training required to work on ships. All students are “cadets” and wear uniforms. There are mandatory formations, uniform inspections and random drug testing. The academy had its own training ship – “The Golden Bear.” I was able to see first-hand the training that takes place on the ship. I flew to Japan and traveled on the Bear from Japan to Guam and Saipan and watched the cadets learn how to operate the ship both as deck mates and engineers. I have to say that I am extremely impressed with the quality of education that every cadet receives from any maritime institution by the time they graduate. Not only do they have to be technically proficient, but also they have to have leadership skills well beyond what other college graduates receive. The engineers in particular have to know every piece of equipment on the ship and be able to diagnose problems and make repairs. After all, when you are in the middle of the ocean and a problem occurs, you can’t call “AAA!” It was quite the experience working at Cal Maritime and also in an area that most engineering educators no nothing about. I stayed there for five years and retired August 2014.

Yes, I moved around a bit and had experiences in both industry and academe, but mostly in academe. It was quite the career!

**Research and Scholarship**

My area of specialization within mechanical engineering was the thermal-fluid sciences. More specifically, I had teaching and research interests in thermodynamics, fluid mechanics, heat transfer and energy. I conducted research in the areas of wind energy, pump cavitation and Laser Doppler Velocimetry including conducting research at the NASA-Lewis Research Center in Cleveland, Ohio. Funded research involved federal and industrial sources including NASA, Giant Products and Teledyne - CAE. Numerous technical papers were published in journals and/or presented at conferences; several company and consulting reports were also written. In addition to technical research, there was pedagogical research, which resulted in numerous conference presentations at ASEE, ASME and SAE.

**Philosophy of Engineering Education**

I do not know if this qualifies as engineering education philosophy, but three things come to mind. First, I struggled as an engineering student – what was obvious to others was not obvious to me. Therefore, when started teaching I could relate and identify with my students who were struggling and I always endeavored to simplify things to help them better understand the material. Many times I would say myself: “Why wasn’t it told to me like this when I was a student.” Second, I discovered that I learned better by doing and solving lots of problems. So, I always encouraged my students to practice, practice, practice. The more problems you work, the easier it becomes. Third, I would tell my struggling students that it takes “stick-to-it-tive-ness” – don’t give up; hang in there; it will eventually sink in. Through my teaching and advising, I know there was a few students who normally would have quit who persevered, graduated and became successful engineers.

**ASEE Activities**

In addition to serving as National President of ASEE in 2001 and serving on its Board of Directors from 1994 until 1996 and again from 1998 until 2003, other positions I held include:

* National Immediate Past President (2002)
* Vice President of Member Affairs and First Vice President (1998-2000)
* Chair of Council of Sections, Zone IV (1994-1996)
* Graduate Studies Division: Program Chair (1991-1992), Vice Chair (1992-1993) and Chair (1993-1994)
* Mechanical Engineering Division: Secretary (1986-1987), Program Chair (1987-1988), and Chair (1988-1989)
* New Engineering Educator Committee: Chair (1985-1986) and Committee Member (1982-1988)
* Annual Conference Planning Committee (1986-1990)
* Wickenden Award Selection Committee (1984, 1985)
* Membership Policy Committee (1985-1986)
* Publications Committee (1985-1988)
* Pacific Southwest Section: Treasurer (1991-1992), Vice Chair (1992-1993), and Chair (1993-1994)
* North Central Section: Treasurer (1983-1985), Vice Chair (1985-1986), and Chair (1987-1989)
* The University of Toledo Campus Representative (1981-1988)

I am also very proud to say that attended every ASEE Annual Conference from 1979 through 2008.

**Other Professional Activities**

In addition to ASEE, I was active in several other professional organizations including the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET), the American Society of Mechanical Engineers (ASME) and the Society of Automotive Engineers (SAE). I held numerous positions in these societies at the national and regional levels including serving:

* On the EAC for ten years, and its Executive Committee for seven years including Chair of the Commission;
* As a mechanical engineering program evaluator for the EAC of ABET;
* On the Board of Trustees of the SAE Education Foundation;
* On the Board of Directors of the Triangle Fraternity Education Foundation;
* On the Board of Directors of SAE (two three-year terms);
* On the Council on Education for ASME;
* On the Board of Directors of the Institute for the Advancement of Engineering (IAE);
* On the National Council of Triangle Fraternity, including two terms as National President, a fraternity of engineers, architects and scientists;
* As President of IAE and President of the IAE College of Fellows;
* As an evaluator for The Higher Learning Commission of the North Central Association of Colleges and Schools.

Other society memberships besides the ones mentioned above include:

* National Society of Professional Engineers (NSPE)
* Tau Beta Pi - National Engineering Honorary Fraternity
* Pi Tau Sigma - National Mechanical Engineering Honorary Fraternity
* Sigma Xi - Scientific Research Society
* Alpha Sigma Nu - National Jesuit Honor Society
* Phi Kappa Phi - National Honorary
* Blue Key - National Honorary
* Order of Omega - National Honorary

I am also a Fellow Member of the American Society of Mechanical Engineers.