

Jason Brown

Graduated: 1987

Degree: BS in Materials Science

If you owned a Compaq computer in the early to the mid 90's, Jason Brown played a part in the circuitry of that computer. If you drive a vehicle today that has an Antilock Braking System or ABS, Jason had a hand in the making of the circuits that make this system work. Coming from a family of medical professionals, his Dad a Psychologist, Mom a Physical Therapist, sister a Doctor of Veterinary Medicine, and brother an MD., Jason graduated from Rice with a degree in Materials Science. At Rice, he was a member of the "MOB" and was an avid Rice sports fan. Here is a little about Jason's career since graduating from Rice.

What was the deciding factor that made you to come to Rice when you could have gone to any school you wanted to?

Simply; Rice just felt right. I remember from my early high school years, I loved everything about Rice. The intelligent, off-the-wall, sense of humor of the students, the beauty of the campus, the professors I met on the tours, the stellar reputation, and the small class size. I'm also a sports guy. My first Rice student experience was in 1980 watching an inspired Rice football team beat a bowl-bound UH team, after that I was hooked. I still attend as many Rice games as I can in all sports.

Coming from a family of medical professionals, you chose a career in engineering knowing very well you could have made a better living in the medical field.

No doubt about it. After my freshman year, I had a 3.7 GPA as a pre-med chemistry major. The medical path was set, then it hit me; I am squeamish, can't stand the sight of blood and guts, I didn't even like biology in high school. No branch of the medical field appealed to me. On one of my tours to Rice, Dr. Rex McClellan set fire to one side of a space shuttle tile and the other side remained at room temperature. That was material science and that's what appealed to me.

When you were in high school you were in the marching band. Coming to Rice, you joined the "MOB", Rice's version of a marching band. Tell us about the adjustment you had to make and what it was like being a part of the "MOB"?

Even though I knew what I was getting into, it was quite a transition coming from a drum and bugle corps style band like in high school. At one of our early rehearsals in my freshman year, I suggested to the other snare drummers that we try to match our drum rolls. From the sections reaction, I thought I was going to be hog tied by the other drummers. It was the closest I have ever been to getting kicked out of the band. Something funny that year, one of the drummers started playing the drums a week before the season began. I always had to look over to see if he was playing with drum sticks or beer cans.

In the past we've talked about the work you did at Compaq Computers. When did you work there and tell us a little bit about what you did.

I worked at Compaq during the laptop explosion in the late 80's and early 90's. They couldn't hire people quick enough. Raises were double-digit, soft drinks were free, and some even said it rained gum drops in building 6. The first job at Compaq was in failure analysis. I performed construction analysis on semiconductor chips and helped determine if the devices were built to standards that were good enough to be in Compaq computers. We would cross-section a semiconductor, put it under a scanning electron microscope and image the circuitry at 20,000X magnification. We were able to identify every element in the construction, the organic and inorganic make-up, and quantitatively assess many aspects of the construction integrity. We

could also look for contaminants at concentrations as low as 1 ppb (part-per-billion). I also got to work in a secret R&D lab developing the first piezoelectric (PZT) ink jet printer. This was quite an improvement from the dot matrix printers being used at the time. That by far was the most interesting job I ever had.

You left Compaq and went to work for Texas Instruments. What do you do there that has so much to do with the ABS Braking System on cars today?

I went to work for TI in 2008. Currently, my group at TI ensures that the semiconductors that control your anti-lock braking performance and airbag deployment are the very best quality and reliability possible. We work directly with the TI factories and subcontractors around the globe to insure zero defects on the safety-critical components.

Knowing the parts you are involved with in the manufacturing of, people depend on their brakes for stopping and failure could cause severe accidents if they fail. Do you ever feel any pressure from your job because of the consequences'?

Yes, even though there are back-up systems if the chip fails, I still feel quite a bit of pressure to make sure we are as close to perfect quality as possible. Our components can be found in several brands and models today.

What advice would you give to anyone wanting to come to Rice? Would you encourage them to be an engineer or take another career path?

I am one of Rice's biggest advocates, but Rice is not for everyone, my advice varies with the individual. In high school a Rice prospect needs to keep their grades up, maybe play a musical instrument, speak a foreign language, and most important, get involved with helping others. I admire the Rice Student Athletes. They get no breaks and have to maintain a balance between competing in Div. I sports while simultaneously taking on the monumentally challenging academics at Rice. N. D. Kalu and James Casey are two Rice athletics that I have met after their graduation; and both are truly great Ambassadors of Rice and the City of Houston.

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