



Careers in Science: Clayton Randall Ruszkowski, Mechanical Engineer



«««« By Stan Taylor

Stan Taylor is a retired elementary school teacher. He currently does science workshops for Scientists in School and is a member of the *Crucible* and *Elements* Editorial Committee (CEEC).



Connection: Grades 6, 9 and 12 astronomy.

Clayton Randall Ruszkowski was born in Prince Albert, Saskatchewan. He graduated from the University of Saskatchewan (2008), earning his degree in Mechanical Engineering.

Clayton loves to solve problems. “When I was a kid my father helped mold me into being an independent thinker. I was encouraged to fix and solve problems related to the farm, construction and the logging industry. Since our family business is involved in all three, I had hands-on experience operating and fixing heavy equipment at an early age. For example when a piece of equipment such as the tractor would break down my father would help me, but not until I had at least attempted to figure out what went wrong. This process has stuck with me and has enabled me to tackle larger scale engineering projects such as the space elevator competition.”

Clayton has served as the President/Team Leader of the University of Saskatchewan Space Design Team for the past three years. The Space Elevator competition, called “Elevator 2010”, is one of NASA’s Centennial Challenges. Twenty-two teams from around the world are involved in the competition. His team has won first place three years in a row.

“Team USST from the University of Saskatchewan was the best performer, moving their laser-powered 25 kg climber [55 lb] at an average speed

of 1.8 m/s [6 ft/sec] over a 94 m run. This corresponds to over 400 Watts of mechanical power maintained for almost a minute. They did this four times within 40 minutes, demonstrating the simplicity of the Space Elevator design.” (Resource: The Spaceward Foundation, Dec/07).

The USST entered the most advanced entry for 2007. They had a truck-mounted laser system, automated tracking, and a rich data link with the climber. The USST is an undergraduate college team headed by Clayton Ruszkowski.

Clayton’s interests are many and varied. “I was very involved with hockey before I began University. I played Junior A for a year out of high school and in high school, I played Midget AAA which was the highest level available



USST showing laser beam signature



for that age group. I am still involved with hockey but not on a serious note. I also am an avid scuba diver, boxer, and water sports enthusiast. I am currently in flight school

for my private pilot's license. I also enjoy lifting weights and cross country running. Being in shape is very important to me. I believe in having a healthy lifestyle."

His future plans are to join the Canadian Air Force and become a fighter pilot. He would eventually would like to be a test pilot for one of the large aerospace firms. He would also like to take his Masters Degree in some form of Aerospace Engineering. "With this training it would allow me to not only fly these awesome machines, but also aid in designing them."



Winning Team Photo USST