

## Fr. Haus Memorial Mathematics Lecture

### Modeling the Effect of Age in Human Performance

Dr. Richard De Veaux, Williams College

**Date:** Friday, 22 April 2016

**Time:** 3:15 – 4:15pm

**Venue:** Science Hall 1013, Canisius College

**Abstract:** In 2012 Robert Lida became the first man over the age of 75 to ever run under 13.50 seconds in the 100-meters in winning the event in 13.49. The women's 95+ record is 35.48 sec set in 2010 by Katsuko Iwaki of Japan. How fast will 100 year old women run the 100m in 20 years? The past fifty years have witnessed an incredible improvement in the sport performances of "masters" athletes – those over 35 years old. Men and women as old as 104 have been pushing the envelope of what's possible for their age group every year in running and swimming events. Using hundred of thousands of individual events from the US masters swimming organization and several running events, I will attempt to model the average deterioration in performance that one can expect from age 35 to 100 in various events and distances in both running and swimming.

I will compare my model to the Dipsea race handicap. The Dipsea is a 100 year old 8 mile running event that starts in Mill Valley CA and ends at the Pacific Ocean near Stinson Beach. What makes the event unique is its handicap system. Each age group for men and women receive a handicap time. For example, the slowest group, the AAA group, comprised of men 74 years old and older, boys 6 and under, women 66 and older, and girls 7 and under, receive a 25 minute handicap. But what makes the event unique is that each group starts ahead of the scratch group by that amount. So first to leave, at 8:30 AM, is the AAA group. Finally 25 minutes later, the 19-30 year old men get to go. The winner is the one who crosses the finish line first.

But, what's a fair age and sex handicap?

**Dr. Richard De Veaux**, is the *C. Carlisle and Margaret Tippit Professor of Statistics* in the Department of Mathematics and Statistics at Williams College. Professor De Veaux is the author of 6 textbooks and has consulted with several major corporations. He is an entertaining and engaging speaker who has made important contributions to statistics education and has interests in data mining methodology and its application to problems in science and industry.

### Fr. Haus: teacher, administrator, mentor, friend, and priest

With the passing of **Fr. Robert Haus, S.J.**, Canisius College lost a fine teacher, administrator, mentor, friend, and priest.

Fr. Haus held advanced degrees in philosophy, theology, and mathematics. For many years Fr. Haus served as a resident counselor in Bosch Hall. With people that he didn't know well, he was always gentle. With friends and his fellow Jesuits he would enjoy repartee, often getting the better of the other conversationalist.

