

**MICHIGAN STATE UNIVERSITY**  
Department of Statistics and Probability

## **COLLOQUIUM**

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### **Age-associated power decline and gender differences in Olympic weightlifting**

**Tuesday, October 31, 2017**

**10:20 a.m. - 11:10 am**

**Refreshments 10:00 am**

**C405 Wells Hall**

#### **Abstract**

The decline in physical performance with older age has been studied in populations of trained athletes in weightlifting, track and field, or other sports. Comparing competitors in weightlifting is challenging due to the different body weight classes, and various assumptions have been made to account for this in regression models. Most studies were done for male athletes. It has been proposed that Olympic weightlifting's age associated performance decline is comparable to that in jumping and throwing disciplines. The rate of performance decline for women in this sport is thought to be faster than that for men at any age in the Masters age classes.

Problems with current approaches with both body weight adjustment and models for gender differences will be discussed and alternative models proposed. Results from Masters Weightlifting competitions from 1993-2017 were compiled from original score sheets and meet results made available by International Weightlifting Federation. Cross-sectional and longitudinal models were used to study the functional form of the rate of decline.

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