**Rehabilitation Exam, Xiaogang Hu**

April 16th 2021, 9am -1pm, take home and open book

Exam questions will be emailed on April 16th. Exam answers should be returned through email by 1pm.

**Exam topic:**

1) Forward and inverse kinematic and dynamic calculation

Eg. Can derive muscle force or joint torque, if the following is given: endpoint force vector, and kinematic variables such as muscle moment arm.

2) Literature review:

Introduction to Neural Engineering for Motor Rehabilitation, Edited by Dario Farina, Winnie Jensen, and Metin Akay, Wiley-IEEE Press, 2013 http://onlinelibrary.wiley.com/book/10.1002/9781118628522

PDF version available through UNC/NCSU campus network

Specific book chapters:

Nervous system injury

Chapters 1, 2

Signal detection and conditioning

Chapters 4, 5, 6

Functional replacement and restoration

Chapters 12, 14, 17, 19, 26