



IEEE

Cleveland Section

IEEE Control Systems Society, HKN Epsilon Alpha Chapter, and IEEE Student Branch at Cleveland State University Jointly present

Control of Human Movement: from Physiology to Engineering

Dr. Antonie J. (Ton) van den Bogert

Date and time

Friday, April 3, 2015
2:30pm-4:30pm

Location

Fenn Hall 103
Fenn College of Engineering
Cleveland State University
1960 East 24th Street
Cleveland, OH 44115

Agenda

2:30-3:00: social hour
3:00-4:00: seminar
4:00-4:30: Q&A

Who is invited?

Anyone interested in attending
Priority will be given to
members of IEEE Control
Systems Society

CPD

One credit available
Bring your flyer for credit.



Dr. Antonie J. (Ton) van den Bogert currently holds the Parker-Hannifin Endowed Chair in Human Motion and Control in the Department of Mechanical Engineering at Cleveland State University. He has previously been working at the Cleveland Clinic (1998-2010). Ton's work has been supported by numerous federal grants including NSF grant. Ton has published over 130 journal articles and book chapters, holds three patents in the area of rehabilitation technology. Notable awards are the Sports Injury Research Award of the American Orthopaedic Society for Sports Medicine (2004), and a Technical Achievement Award from the Academy of Motion Picture Arts and Sciences in 2005.

Abstract of the seminar: Compared to electric motors, muscles are inefficient, slow, and have highly nonlinear dynamics. Nerves introduce large time delays when transmitting signals for sensing and control. Nevertheless, humans control this system with high accuracy and little effort. In this presentation, we will review the unique features in anatomy (mechanical design) and physiology (actuation and control) that are responsible for this remarkable performance. We will then explore how this understanding can be used as inspiration for the design of engineered systems such as powered prostheses and exoskeletons, walking robots, and computer-animated characters.

Refreshment and soft drink will be provided!

RSVP: Dr. Lili Dong • L.Dong34@csuohio • 216-687-5312

This is to certify that _____ attended this seminar. Certified by _____. Certificates of attendance and other evidence of CPD activity should be retained by the attendee for auditing purposes."