

AnyGait: Getting quickly from mocap to individualized musculoskeletal analysis



The web cast will
start in a few
minutes....

1. Overview
2. Demo
3. Conclusions

Q&A session (~10 min)

Please follow the instructions to set up the audio:
www.anybodytech.com/fileadmin/downloads/AudioInstructionsWebEx.pdf

People



John Rasmussen
(Presenter)



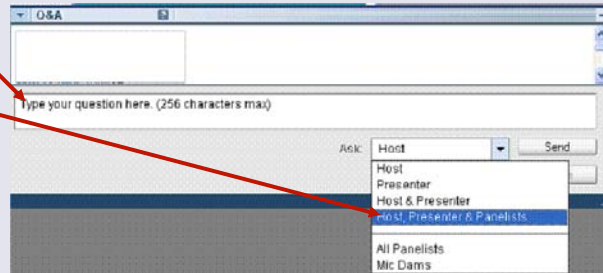
Arne Kiis
(Host)



Søren Tørholm
(Panelist)

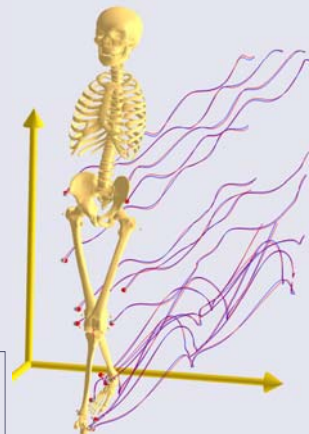
Q&A Panel

- Launch the Q&A panel here.
- Type your questions in the Q&A panel.
- Send the question to "Host, Presenter & Panelists"
- Notice the answer displays next to the question in the Q&A box. You may have to scroll up to see it.



1/3: Overview

- Problems of over-determinacy were recently solved by Andersen et al.
- Additional benefit of automatic parameter identification.
- Now implemented into AnyBody.
- AnyGait: Models becoming an actual gait application.
- Aim: Seamless integration with motion capture technology.



Andersen MS, Damsgaard M, Mac-Williams B & Rasmussen J 2009: 'A computationally efficient optimisation-based method for parameter identification of kinematically determinate and over-determinate biomechanical systems', Computer Methods in Biomechanics and Biomedical Engineering. In Press.

Method

- Two generic gait models.
We look at pre-cooked models and see how they are used with existing data.
- Import of data:
Then we import a completely different motion and see how the model adapts to them.

Marker set(s)

- Currently plugin gait for Vicon.
- Other marker sets will come.
- Easy to create your own marker set.

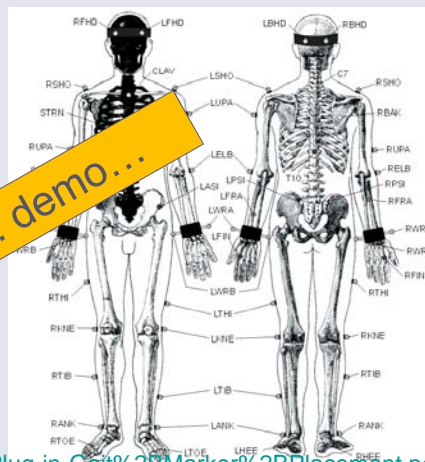


Illustration from

<http://fourms.wiki.ifi.uio.no/images/4/4b/Plug-in-Gait%2BMarker%2BPlacement.pdf>

3/3: Conclusions

- Models can be driven easily using all markers.
- Redundancy is exploited for automatic scaling. Might enhance accuracy.
- Multiple experiments with the same marker set can be processed very quickly.
- The method is independent of marker sets: new sets can easily be defined.
- More force platforms will become available.
- Lower extremity models will be further developed.

Thank you!
Q & A