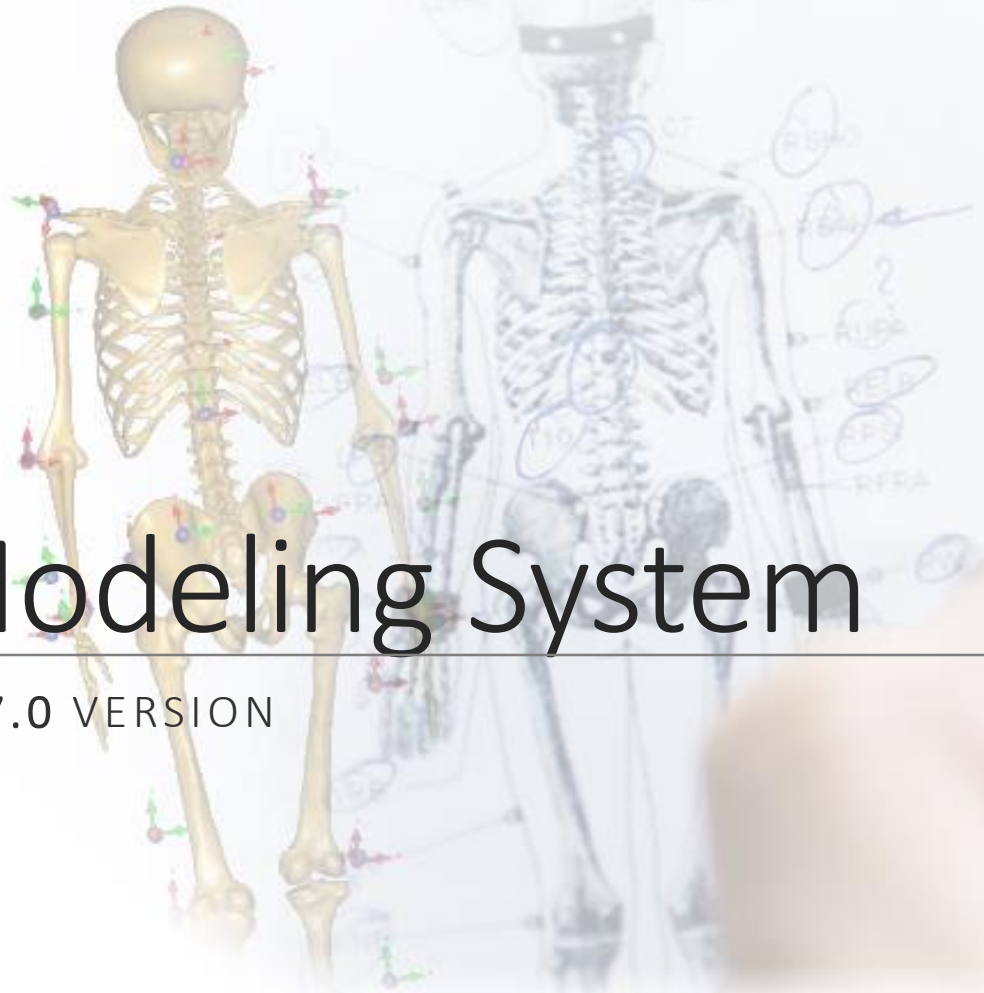
The webcast will start in a few minutes….



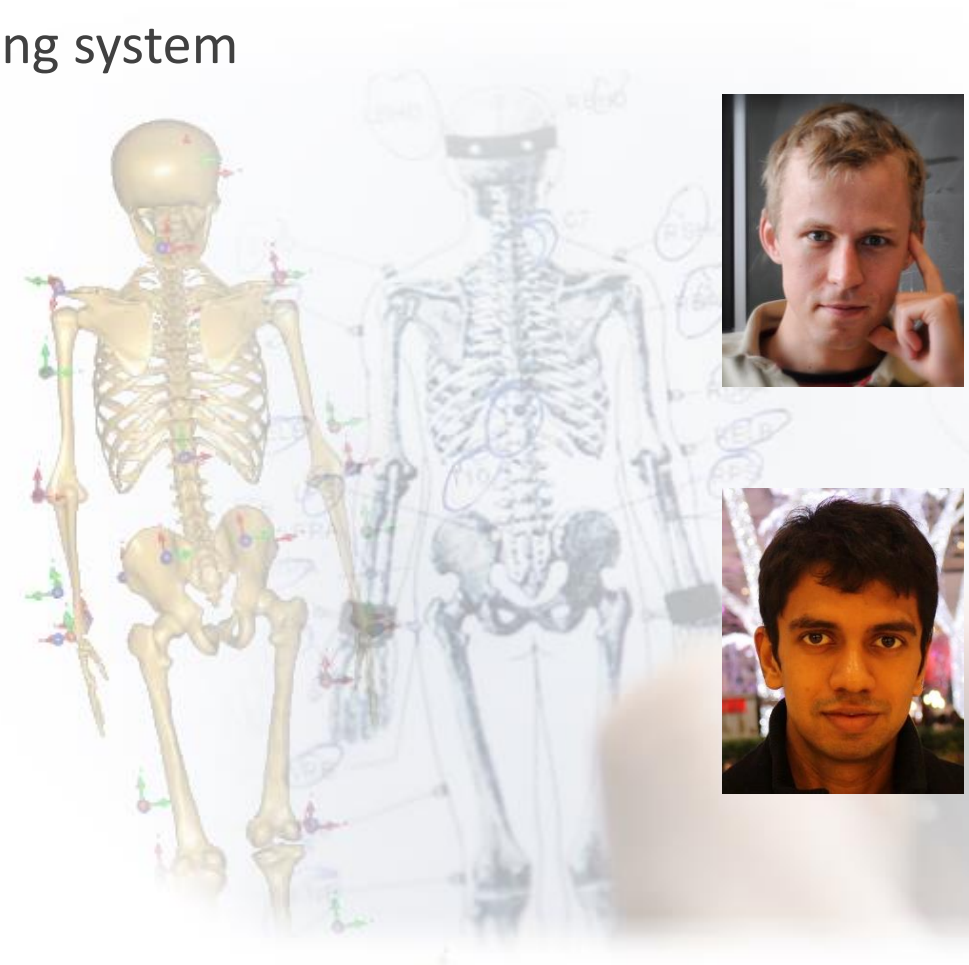
The AnyBody Modeling System

TOUR AND OVERVIEW OF THE NEW **7.0** VERSION

Date 29th Jun 2017

Outline

- General introduction to the modeling system
- New UI features
- Live Demo
  - Based on new MoCap Model
- New minor features
- Future vision
  - Graphical model interaction
  - New model repository (AMMR2.0)
- Questions and answers



Morten Enemark Lund
R&D Engineer

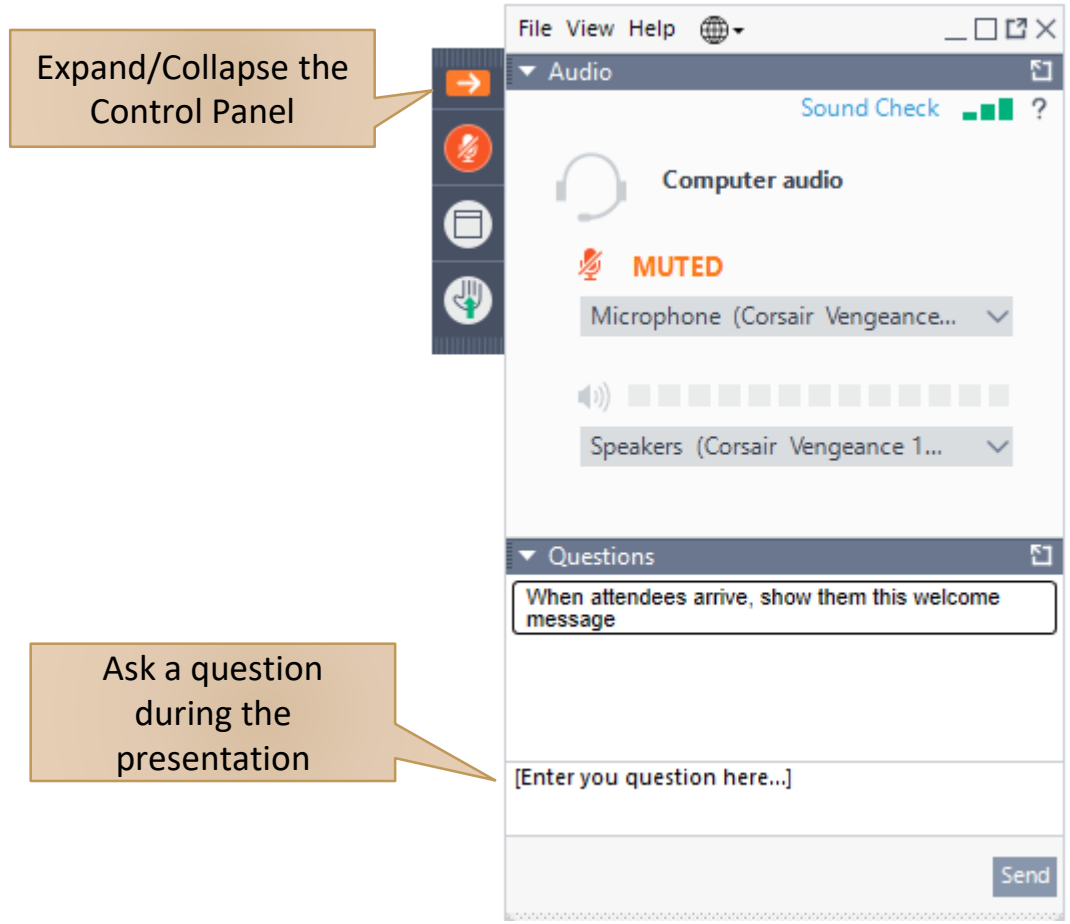
Ananth Gopalakrishnan
Sr. Consultant, Ph.D

Control Panel

The Control Panel appears on the right side of your screen.

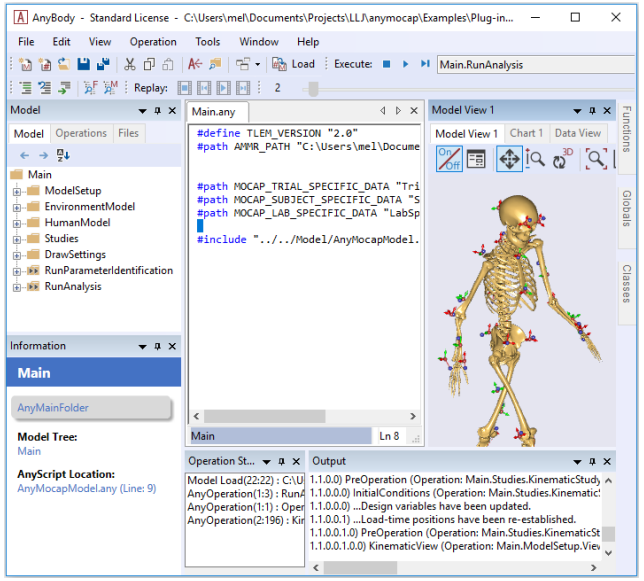
Submit questions and comments via the Questions panel.

Questions will be addressed at the end of the presentation. If your question is not addressed we will do so by email.



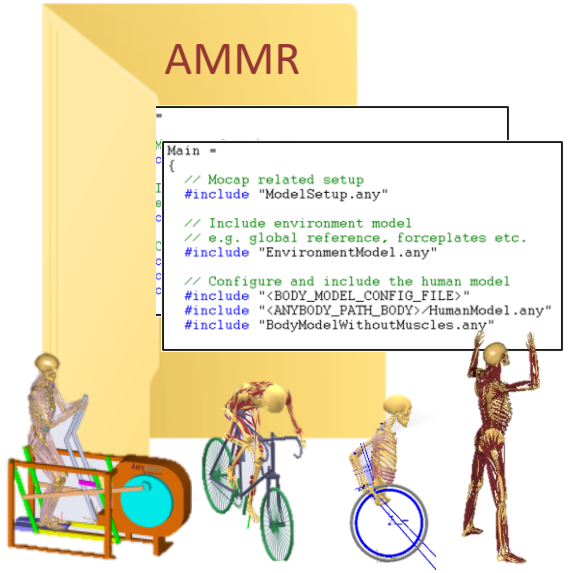
AnyBody Modeling System

AnyBody Modeling System

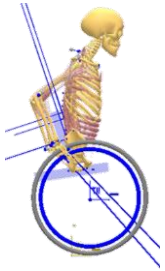


Version 7.0

Model Repository



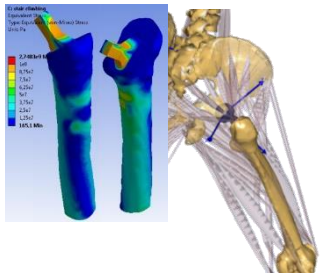
Movement Analysis



Product Design Optimization

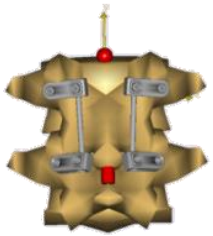
ANYBODY Modeling System

Ergonomic Analysis



Load Cases for Finite Element Analysis

Surgical Planning and Outcome Evaluation

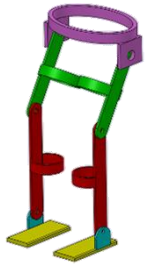


AnyBody Modeling System

Motion and Forces

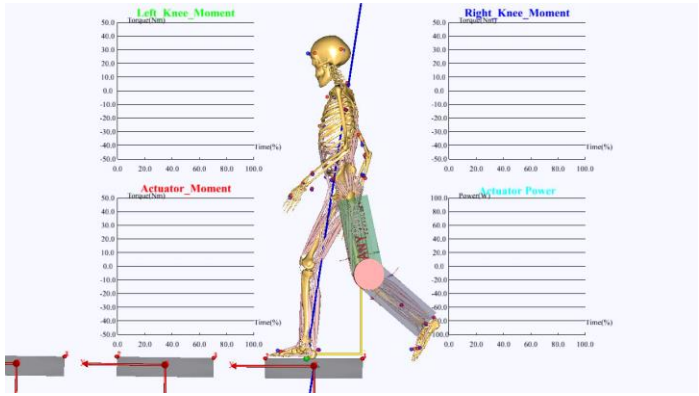
Body model

Environment model



Inverse dynamics
Muscle recruitment

Simulation



Internal body loads

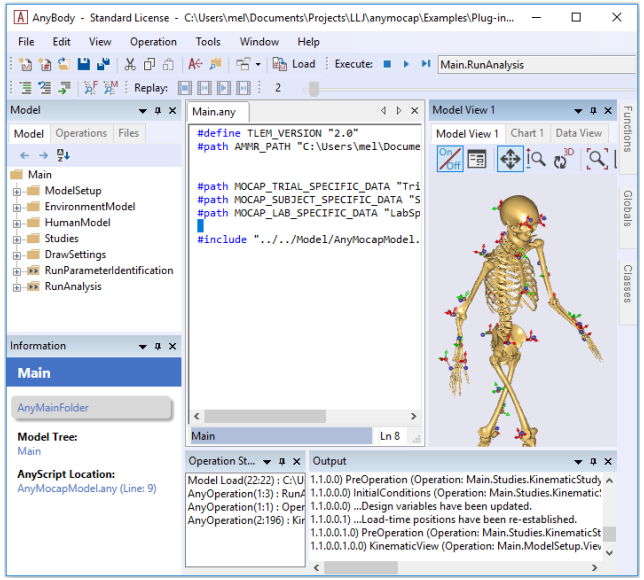
- Muscle forces
- Joint forces

Design Optimization

Post Processing (e.g. FE tools)

What is new?

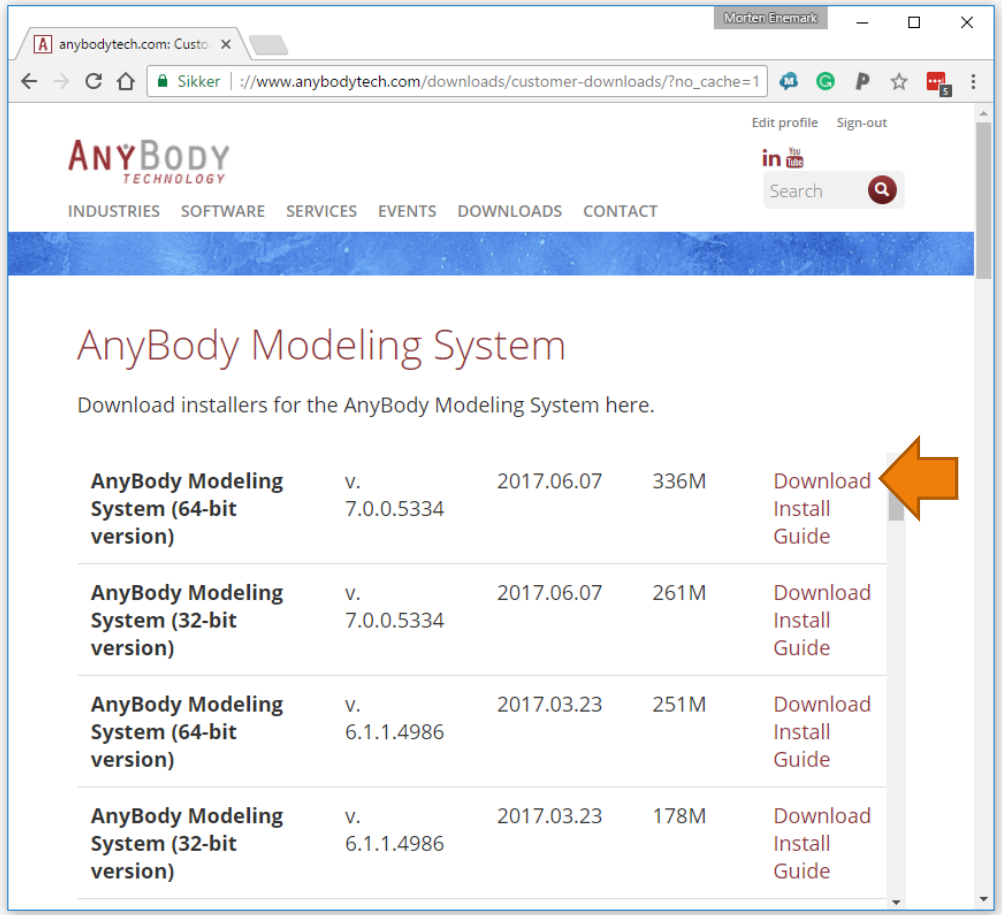
ANYBODY Modeling System



Version 7.0

Model Repository

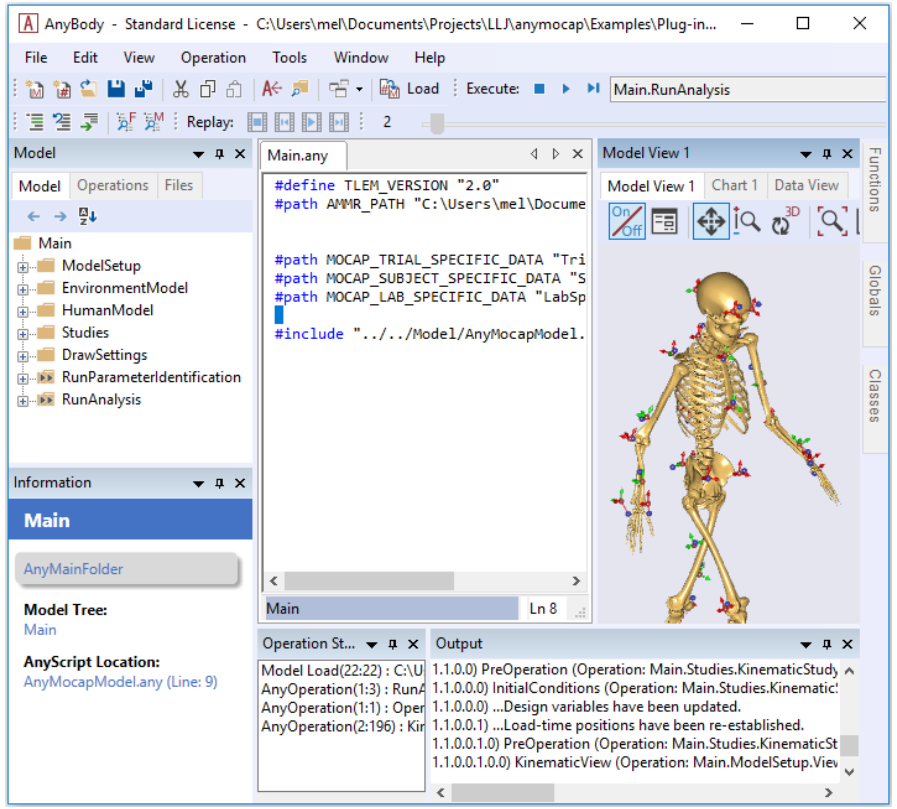
How to get the new version



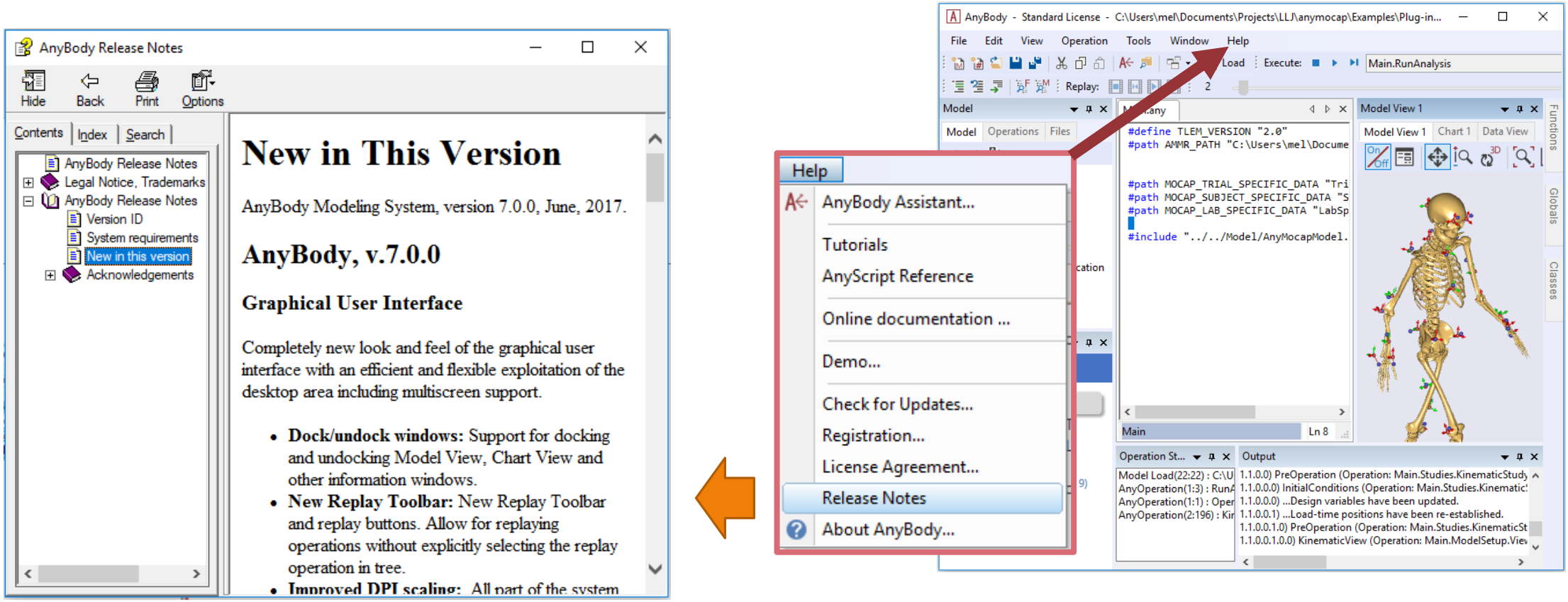
What is new?

- Major changes:
  - New framework for the user interface
  - New replay system

- Minor changes
  - New system for default drawings
  - New AnyScript functions
  - Gap filling trajectories in C3D files
  - + More tweaks and fixes (see release notes)



What is new?


AnyBody Release Notes
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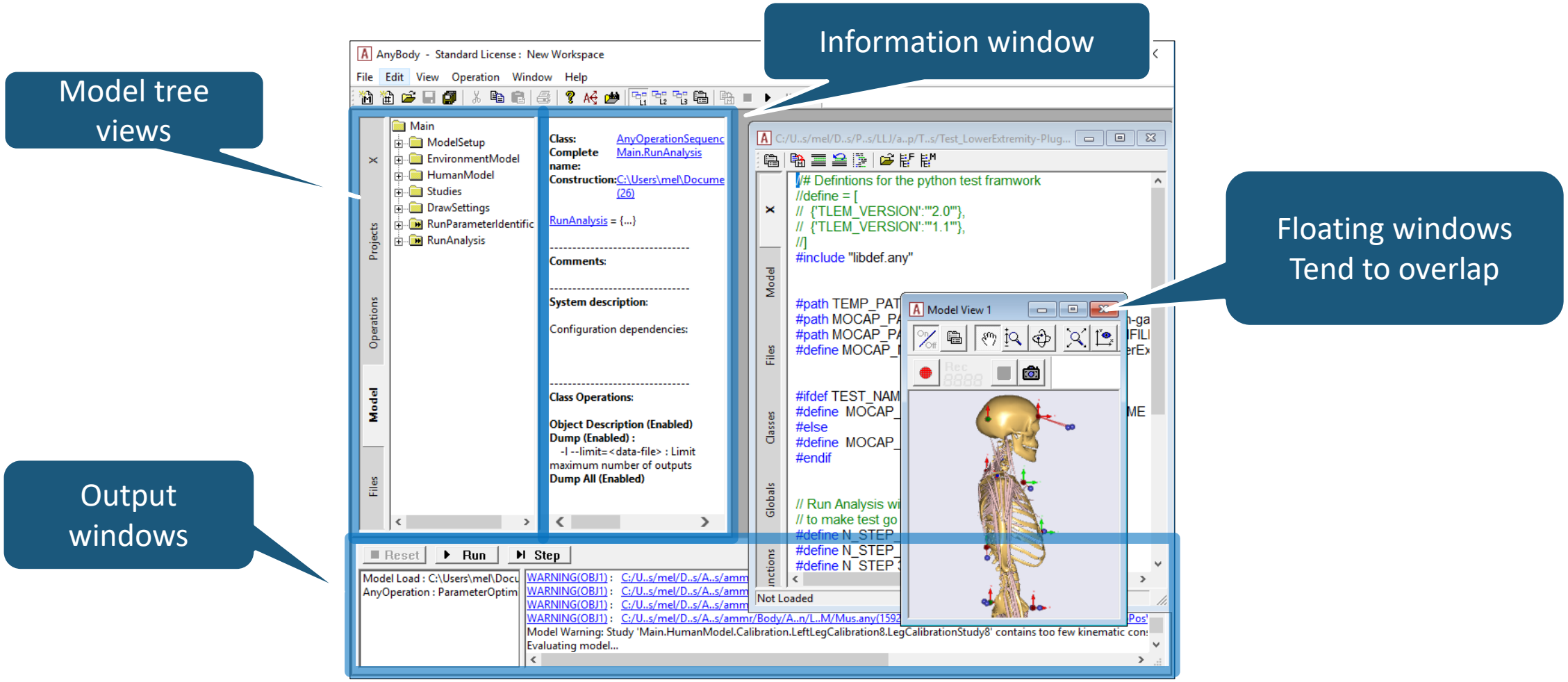
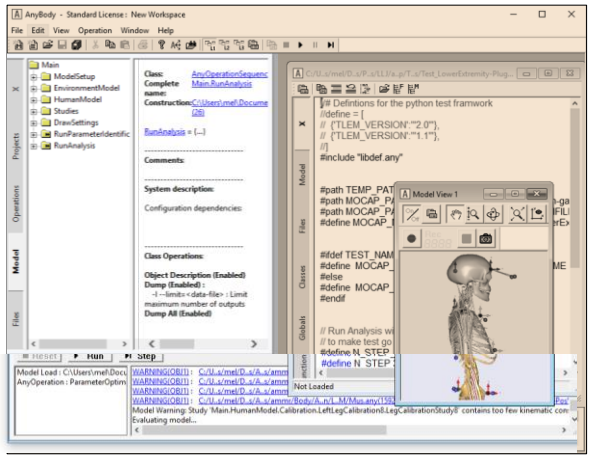
Legal Notice, Trademarks
AnyBody Release Notes
Version ID
System requirements
New in this version
Acknowledgements
New in This Version
AnyBody Modeling System, version 7.0.0, June, 2017.
AnyBody, v.7.0.0
Graphical User Interface
Completely new look and feel of the graphical user interface with an efficient and flexible exploitation of the desktop area including multiscreen support.
Dock/undock windows: Support for docking and undocking Model View, Chart View and other information windows.
New Replay Toolbar: New Replay Toolbar and replay buttons. Allow for replaying operations without explicitly selecting the replay operation in tree.
Improved DPI scaling: All part of the system
AnyBody - Standard License - C:\Users\mel\Documents\Projects\LLJ\anymocap\Examples\Plug-in...
File
Edit
View
Operation
Tools
Window
Help
Load
Execute:
Main.RunAnalysis
Replay:
Model
Operations
Files
Model View 1
Chart 1
Data View
Functions
Globals
Classes
#define TLEM_VERSION "2.0"
#path AMMR_PATH "C:\Users\mel\Docume
#path MOCAP_TRIAL_SPECIFIC_DATA "Tri
#path MOCAP_SUBJECT_SPECIFIC_DATA "S
#path MOCAP_LAB_SPECIFIC_DATA "LabSp
#include "../../Model/AnyMocapModel.
Main
Ln 8
Operation St...
Output
Model Load(22:22) : C:\U
AnyOperation(1:3) : RunA
AnyOperation(1:1) : Oper
AnyOperation(2:196) : Kir
1.1.0.0) PreOperation (Operation: Main.Studies.KinematicStudy
1.1.0.0.0) InitialConditions (Operation: Main.Studies.Kinematic
1.1.0.0.0) ...Design variables have been updated.
1.1.0.0.1) ...Load-time positions have been re-established.
1.1.0.0.1.0) PreOperation (Operation: Main.Studies.KinematicSt
1.1.0.0.1.0.0) KinematicView (Operation: Main.ModelSetup.Viev
Help
AnyBody Assistant...
Tutorials
AnyScript Reference
Online documentation ...
Demo...
Check for Updates...
Registration...
License Agreement...
Release Notes
About AnyBody...

Previous version (v. 6.1)

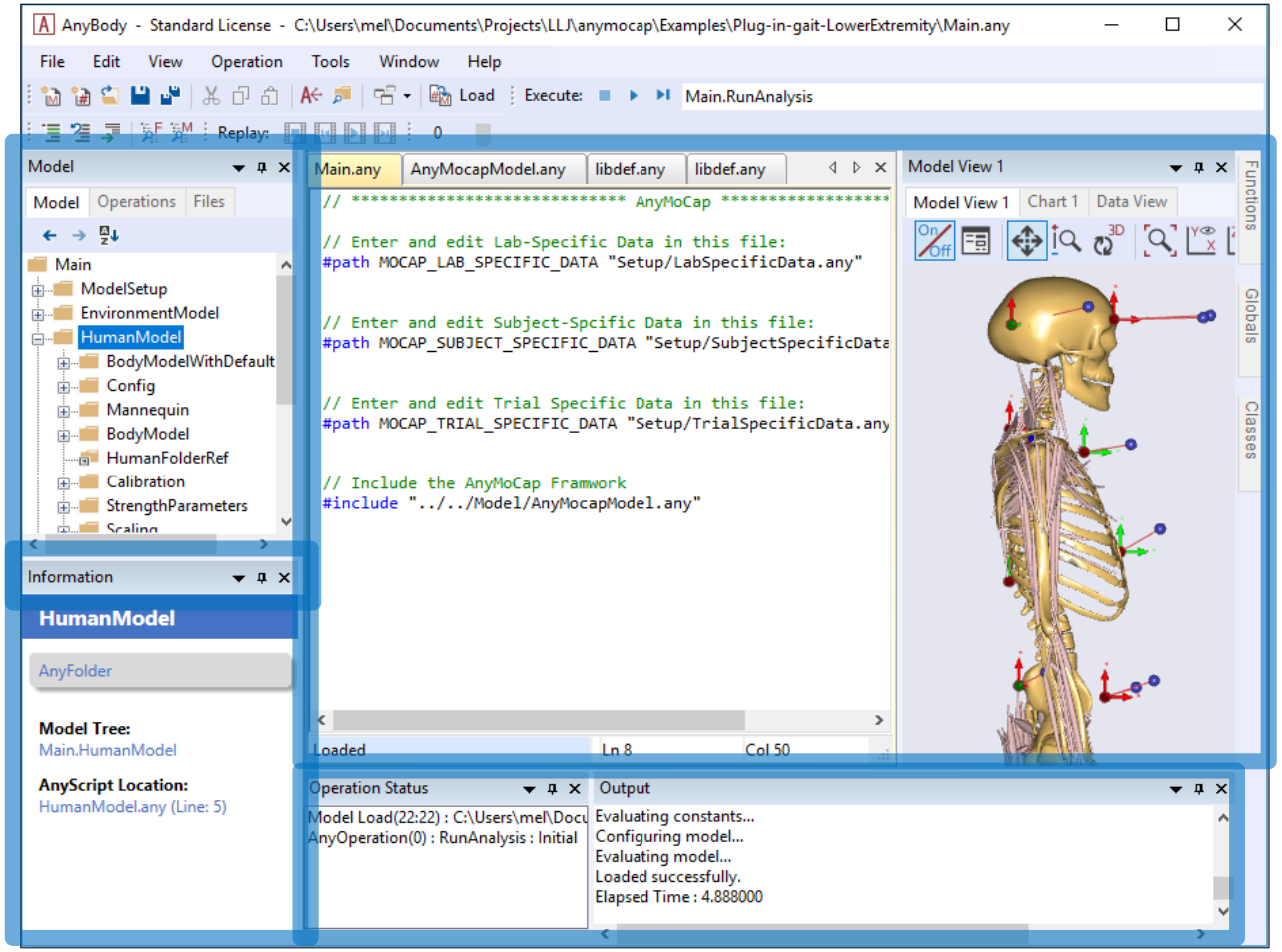


New User Interface

AMS 6.1

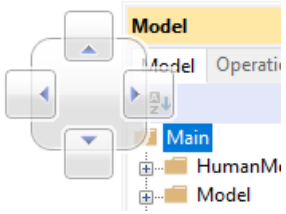


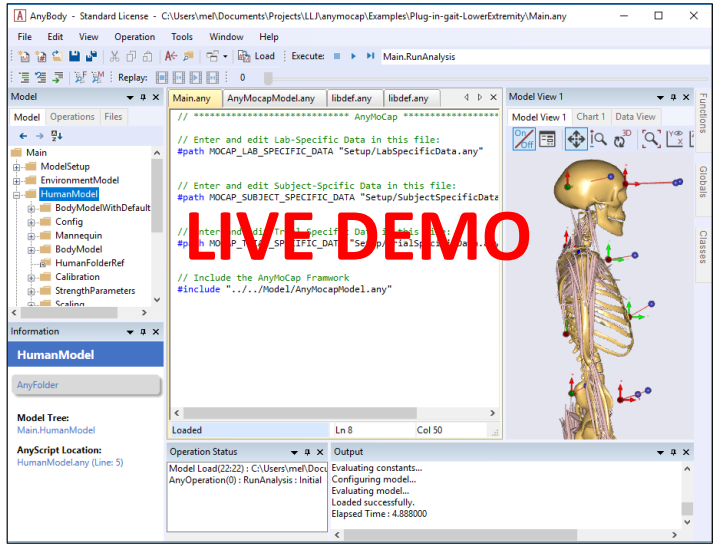
AnyBody Modeling System7.0



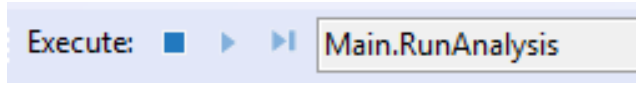
New Look'n'Feel

Custom window layout

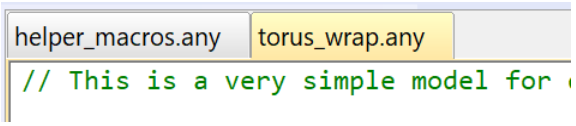




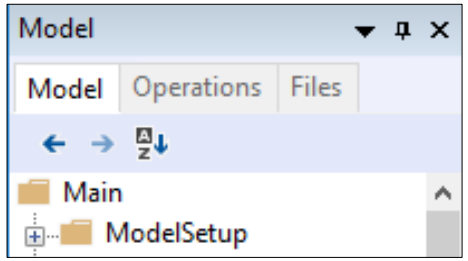
Operation control



Tabbed editor



Model tree navigation and sorting



NEW! Replay functionality

New AnyScript functions

```
AnyFloat m1 = zeros(3,3);
```

$$\begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$$

```
AnyFloat m1 = ones(2,3);
```

$$\begin{bmatrix} 1 & 1 & 1 \\ 1 & 1 & 1 \end{bmatrix}$$

```
AnyFloat m2 = eye(2,2);
```

$$\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$$

```
AnyFloat arr = linspace(0,9.9,100);
```

$$[0 \;\; 0.1 \;\; \ldots . 9.8 \;\; 9.9]$$

```
AnyFloat m3 = repmat(m2,1,2);
```

$$\begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 0 & 1 \end{bmatrix}$$

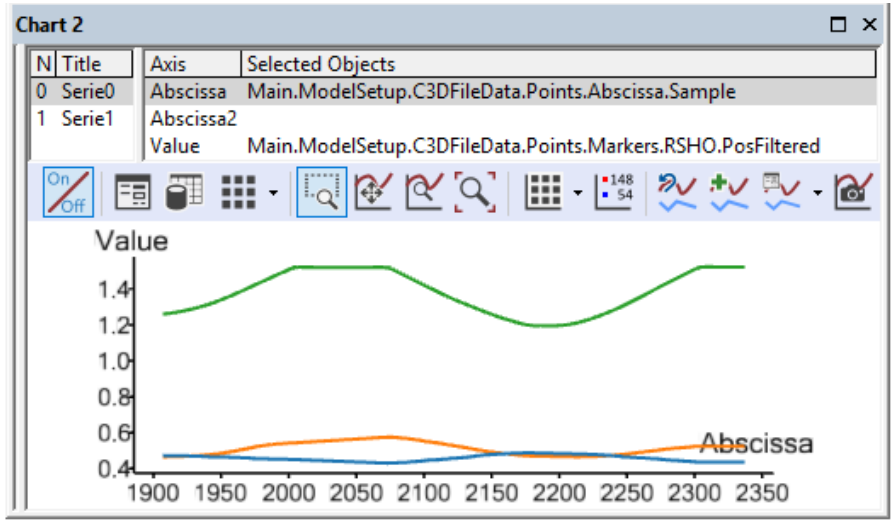
```
AnyEnum m3 = repmat(Off,1,10);
```

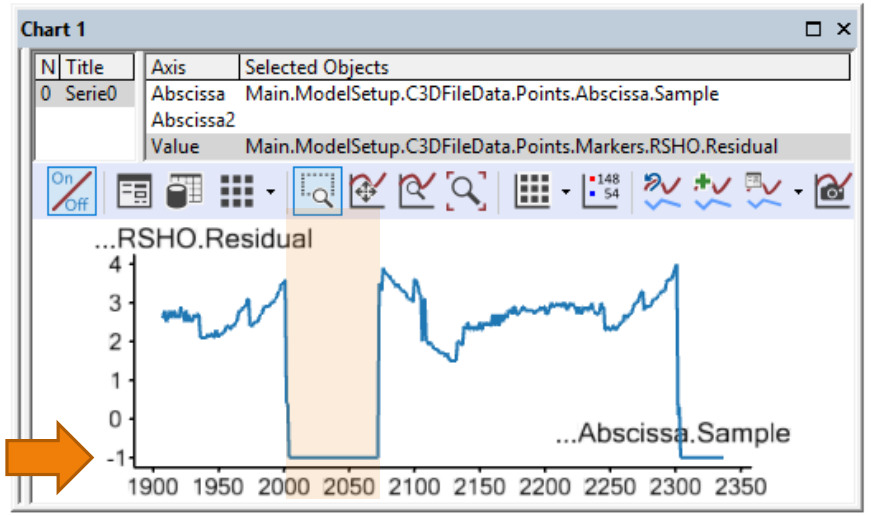
```
[Off Off Off Off Off Off Off Off Off Off]
```

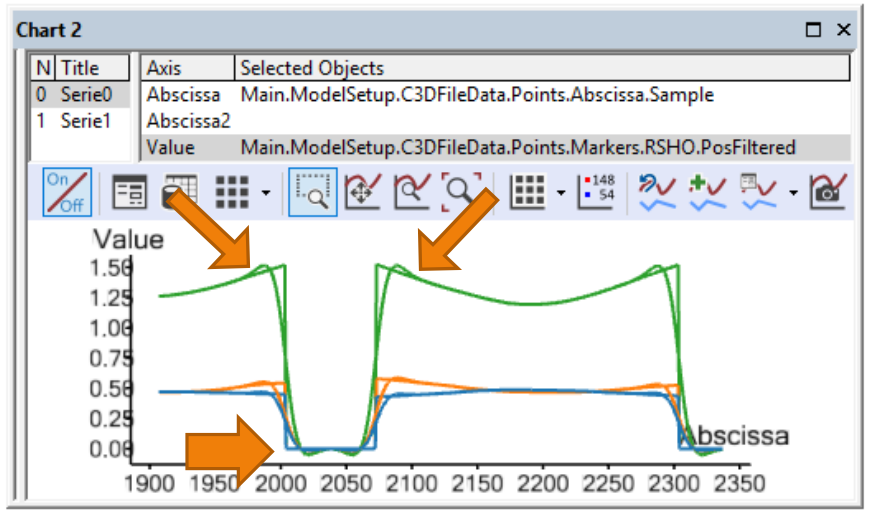
Gap filling C3D trajectories

- New option in `AnyInputC3D` class:

```
AnyInputC3D C3DFileData = {
  ⋮
  GapFillUsingResidualsOnOff = On;
};
```

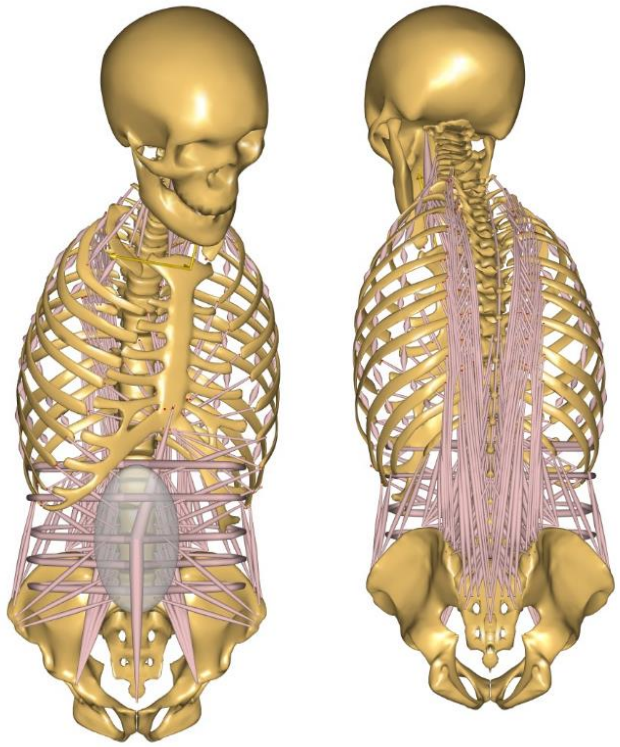




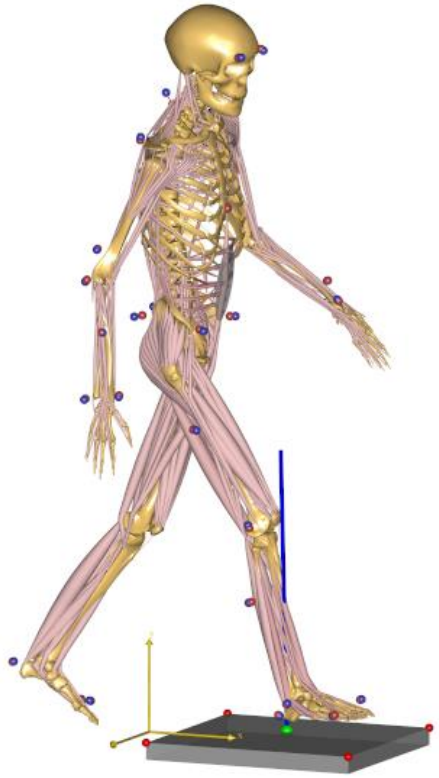


What can you expect in 2017?

- **New model repository**
  - New Lower limb model TLEM2.0
  - New thoracic model
  - Updated lumber spine and pelvis
  - Many new application examples



New thoracic model



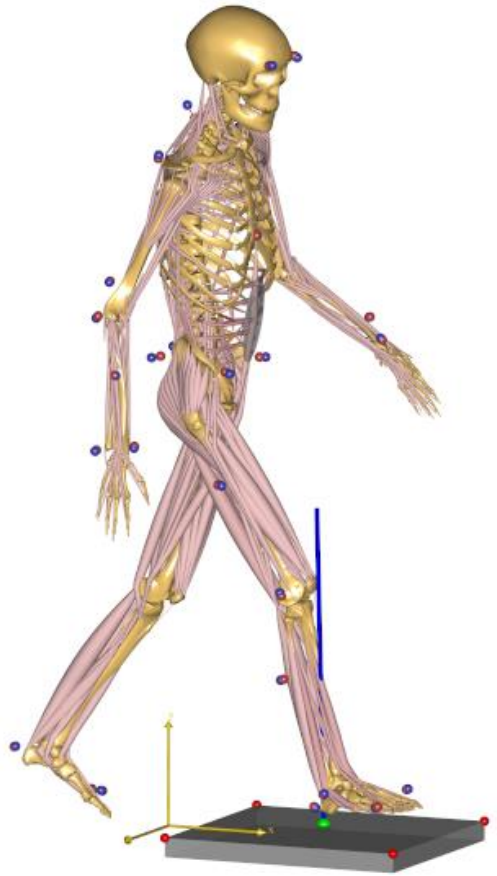
Twente Lower Extremity Model 2.0

New Framework for MoCap models

Makes MoCap models much simpler

Now with Ground Reaction Force prediction

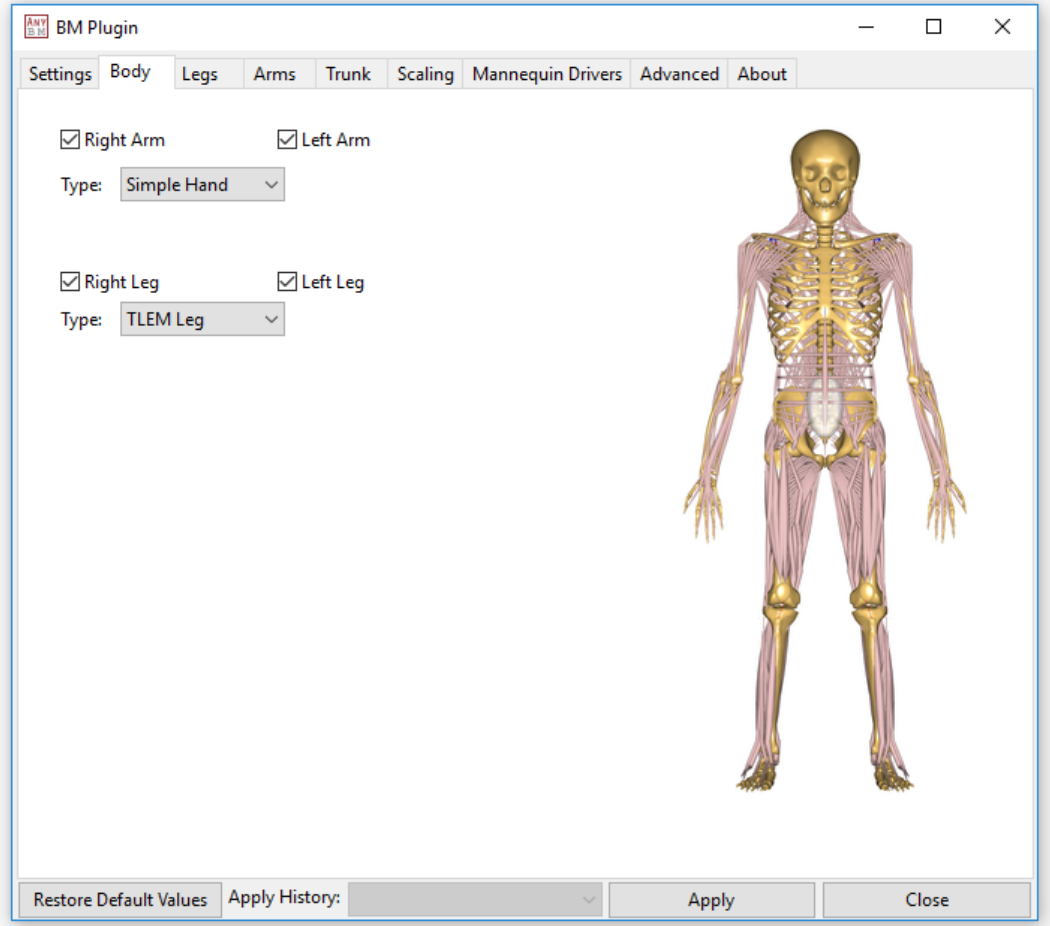
http://github.com/AnyBody/AnyMocap



Now with Ground Reaction Force prediction

What can you expect in 2017?

- **Graphical model editing**
  - Plugin for system (Using Python)
  - Example: BM configurator plugin.
- We intend to make more apps like this.



Previous webcasts

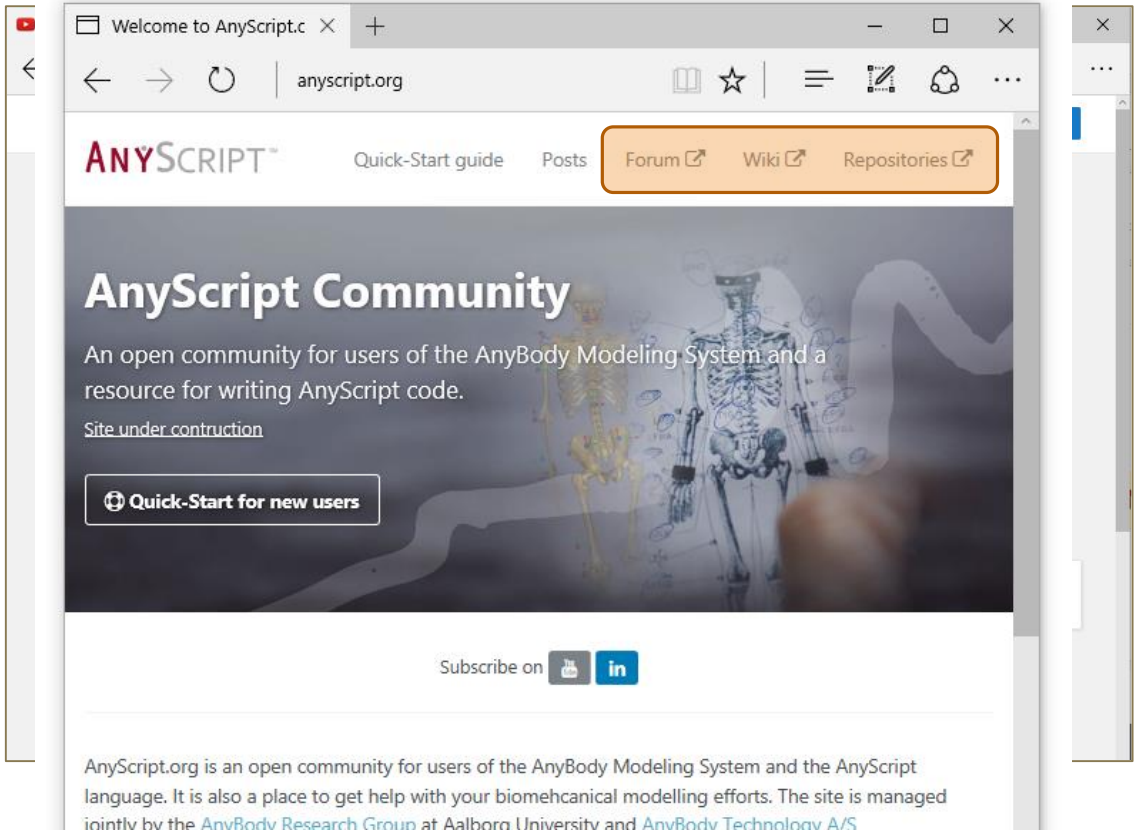
- Check our YouTube channel

www.anybodytech.com

- Events, dates, publication list, ...

www.anyscript.org

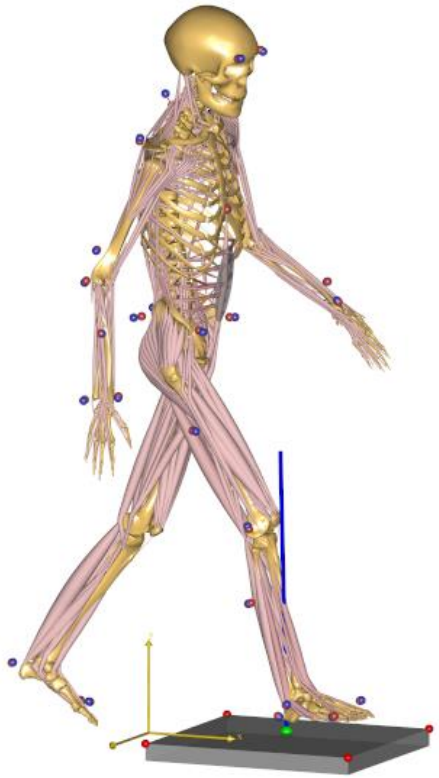
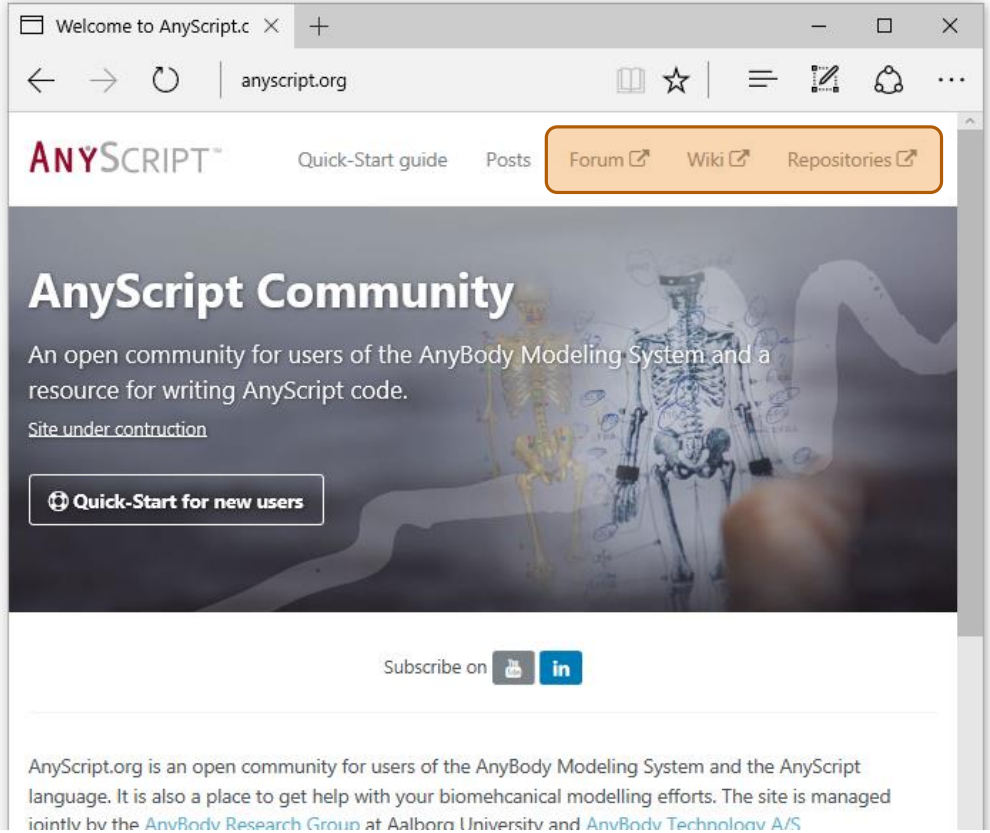
- Wiki, Forum, Repositories



Events:

2-5 Jul: ESB2017 - Sevilla, Spain

20-27 Jul: ISB 2017 - Australia

Meet us? Send email to sales@anybodytech.com

Time for questions: