

ANYBODY A Shortcut for Your Research

The AnyBody Modeling System is a versatile technology for research in biomechanics, kinesiology, orthopedics, sports science, ergonomics, engineering and biology; any field in which movements and forces matter. Bottom-up musculoskeletal modeling requires a huge amount of resources which are not available to most researchers. Many researchers turn to the flexible and credible models and software from AnyBody Technology.

"I use AnyBody for my research because it has a great scientific foundation along with great acceptance from the scientific community."

Pierre-Olivier Lemieux, PhD, Université du Québec - Ecole de Technologie Supérieure

KINEMATICS

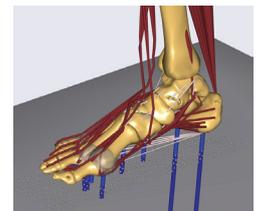
AnyBody's kinematics processing is second to none. It contains every conceivable standard joint and allows the user endless options to define more advanced joints involving, for example, ellipsoid contact or CoM positions. Models can be driven in any combination of inverse and forward kinematics. The system also handles redundant kinematics and calculates the best compromise between as many marker positions as you can record.

"The capability to fully configure [the model] is excellent."

Motomu Nakashima, PhD,
Assoc. Prof. of Mechanical and
Environmental Informatics,
Tokyo Institute of Technology

KINETICS

AnyBody's versatile kinetics solvers compute forces in thousands of muscles and joints on desktop computers using inverse dynamics. The user has detailed influence on the definition of the problem. Available criteria are linear, polynomial of different degrees, min/max and combinations of these. User-defined constraints comprise links between muscles and upper and lower bounds on activations.



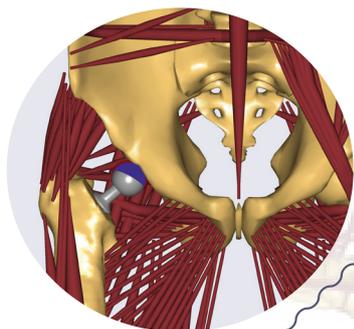
"I was interested in estimating muscle forces for clinical gait analysis as a routine variable which could eventually be used for clinical decision making and to understand the effects of orthopaedic intervention such as muscle transfer and osteotomy."

Bruce MacWilliams, PhD, Assoc. Prof., University of Utah Orthopaedics & Director,
Movement Analysis Laboratory, Shriners Hospitals for Children®, Salt Lake City

The unique built-in modeling language, AnyScript, ensures transparency and reuse of models and gives users the ultimate flexibility to model single joints, limbs or entire bodies of humans or any vertebrate animal.

"The model repository and application examples are a great resource and make it possible to get a jump-start on a new project. I personally like that you can still work directly with the Anyscript code (giving you more control compared to most "menu-based" engineering software). This is very valuable in a research setting."

Joakim Holmberg, PhD, Linköping University



Advanced modeling features such as muscle wrapping over multiple and intersecting surfaces, nonlinear relations between degrees-of-freedom and morphing of bones are available in the AnyBody Modeling System.

"Over the last 4 years the software has changed a huge amount with frequent updates, all of which are backed up by excellent Web demonstrations. The automation of data entry and analysis has streamlined the musculoskeletal modelling process and made batch processing of data much more feasible. The graphical user interface has also made large gains in its user friendliness."

Peter Worsley, PhD, MCSP, BSc, University of Southampton

UNIVERSITIES AND RESEARCH INSTITUTES USING ANYBODY

Asia-Pasific:

- Auckland University of Technology, New Zealand
- Beijing Institute of Technology, China
- Kagoshima University, Japan
- Kansai University, Japan
- Kaohsiung Medical University, Taiwan
- Monash University, Malaysia
- National Rehabilitation Center Korea, South Korea
- National Yang Ming University, Taiwan
- Queensland University of Technology, Australia
- Seoul National University, South Korea
- Shanghai Rehabilitation Research Center, China
- Shanghai University of Sport, China
- Sharif University of Technology, Iran
- Shiga University of Medical Sciences, Japan
- Thammasat University, Thailand

North and South America:

- Clemson University, United States
- Colorado School of Mines, United States
- Laval University, Canada
- Mississippi State University, United States
- North Carolina A&T State University
- San Jose State University, United States
- State University of New York at Buffalo, United States
- Texas Woman's University, United States
- Universidad Andres Bello, Chile
- University of Memphis, United States
- University of Montreal, Canada

- University of Ottawa, Canada

- University of Sao Paulo, Brazil

- University of Waterloo, Canada

- Virginia Polytechnic Institute and State University, United States

Europe:

- ETH Zurich, Switzerland

- Glasgow Caledonian University, United Kingdom

- Hannover Medical School, Germany

- Mid Sweden University, Sweden

- National Technical University of Athens, Greece

- Northumbria University, United Kingdom

- Oxford University, United Kingdom

- Polytechnic University Bucharest, Romania

- Poznan University of Technology, Poland

- Ruhr University Bochum, Germany

- Russian State University of Physical Education, Russia

- Technikum Wien, Austria

- TU Darmstadt, Germany

- University Lyon 1, France

- University of Bern, Switzerland

- University of Hull, United Kingdom

- University of Kassel, Germany

- University of Ljubljana, Slovenia

- University of Luxembourg, Luxembourg

- University of Navarra, Spain

- University of Porto, Portugal

- University of Twente, The Netherlands

...and many more across the world

PUBLICATION LIST

View the comprehensive list of AnyBody publications here: <http://www.anybodytech.com/publications.html>

THE ANYBODY RESEARCH GROUP AT AALBORG UNIVERSITY

AnyBody originated from researchers at Aalborg University, whose biomechanics group is alive and thriving.

"My group participates in numerous international research projects on development and application of biomechanical models. Our working philosophy is to seek the combination of my group's knowledge about biomechanical modeling in general with domain expertise about particular application fields from other groups. This combination of skills very often allows progress much beyond what we could achieve on our own. We are always happy to initiate new collaborations with other groups and individual scientists."

Prof. John Rasmussen, PhD, The AnyBody Research Group, Aalborg University



Prof. John Rasmussen

INTERFACES

The AnyBody Modeling System includes interfaces to leading FE tools, MoCap systems, Matlab, Python and other software packages.

SOFTWARE AND HARDWARE REQUIREMENTS

AnyBody runs on PC computers with Windows XP, Windows Vista and Windows 7 operating systems; Vista or Windows 7 is recommended. All solvers, compilers, algorithms and models are available in AnyBody. No third-party products are necessary. Hardware with at least 4 Gb RAM, a modern 2 GHz or faster engine, and a graphics adapter with 128 Mb or more dedicated memory with OpenGL support is recommended for typical work.