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Featherstone's algorithm

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Featherstone's algorithm is a technique used for computing the effects of forces applied to a structure of joints and links (an "open [kinematic chain](#)") such as a [skeleton](#) used in [ragdoll physics](#).

The Featherstone's algorithm uses a reduced coordinate representation. This is in contrast to the more popular [Lagrange multiplier method](#), which uses maximal coordinates. [Brian Mirtich's PhD Thesis](#)  has a very clear and detailed description of the algorithm. Baraff's paper "[Linear-time dynamics using Lagrange multipliers](#)"  has a discussion and comparison of both [algorithms](#).

References

- Featherstone, R. (1987). *Robot Dynamics Algorithms*. Boston: Kluwer. ISBN 0-89838-230-0.

External links

- The Moby rigid body dynamics simulator contains an implementation of Featherstone's algorithm 
- Source code for implementation of Featherstone's algorithm 
- Description and references 
- Mirtich's Thesis 
- Baraff's Lagrange multiplier method 
- Roy Featherstone's home page 



*This [algorithms](#) or [data structures](#)-related article is a **stub**. You can help Wikipedia by [expanding it](#).*

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This page was last modified on 21 December 2014, at 19:11.

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