

Quaternions 2/23/2016

Fantastic Quaternions - Numberphile

<https://www.youtube.com/watch?v=3BR8tK-LuB0>

2 and 3 dimensional rotations

https://en.wikipedia.org/wiki/Quaternions_and_spatial_rotation

https://en.wikipedia.org/wiki/Rotation_matrix

http://inside.mines.edu/fs_home/gmurray/ArbitraryAxisRotation/

Standard Units of Measure and Coordinate Conventions

<http://www.ros.org/reps/rep-0103.html>

ROS [topic_tools transform](#)

`transform` is a ROS node that subscribes to a topic, or a topic field, and publishes incoming data to another topic, after applying a given Python expression. It's mainly useful for simple message transformation, like computing the norm of a vector or quaternion, or even converting a quaternion to Euler angles. It can work with any message type.

http://wiki.ros.org/topic_tools/transform

[opengl-tutorial](#)

<http://www.opengl-tutorial.org/intermediate-tutorials/tutorial-17-quaternions/>

<http://www.3dgep.com/understanding-quaternions/>

https://en.m.wikipedia.org/wiki/Quaternions_and_spatial_rotation

Convert

<http://quat.zachbennett.com/>

<http://www.onlineconversion.com/quaternions.htm>

Examples

http://www.imsc.res.in/~knr/131129workshop/writeup_knr.pdf

Rotating Objects Using Quaternions

http://www.gamasutra.com/view/feature/131686/rotating_objects_using_quaternions.php