

# Medical Robotics

## Rigid Body Kinematics

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# What is a rigid body?

# Math Preliminary: Matrices

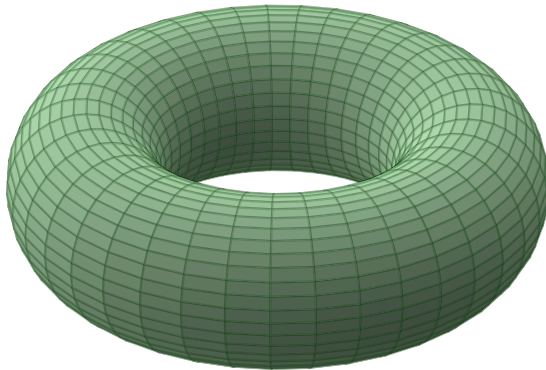
# Math Preliminary: Four view of matrix multiplication

# Math Preliminary: Matrices represent linear transformations

# Math Preliminary: Rank of a matrix

# Math Preliminary: Matrix inverse

$\mathbb{T}^2$  torus representing the C-space  
of a RR robot.



Matrix inverse

# Math Preliminary: Change of basis



# Some more definitions and conventions