Modern Robotics Videos

From Mech
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These videos accompany the textbook *Modern Robotics (http://hades.mech.northwestern.edu/index.php/Modern_Robotics)*.

Click here (http://modernrobotics.northwestern.edu) to watch the video lectures embedded in a convenient viewing environment.

YouTube playlist for all *Modern Robotics* videos. (https://www.youtube.com/playlist?list=PLggLP4f-rq02vX0OQQ5vrCxbJrzamYDfx)

Video supplements for *Modern Robotics* are linked below. They cover much of the material in the book, but at a fast pace. To fully understand the material, you will need to consult the book and work some exercises! A good strategy for self-study may be to watch the video first, to get a quick introduction to the material, then read the corresponding section in the book.

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Introduction

YouTube playlist (https://www.youtube.com/playlist?list=PLggLP4f-rq02hvwNGpSWJMqjZhLpuDM-Y) (Total running time: 2:16)

1. **Introduction to the Lightboard** (https://youtu.be/jVu-Hijns70) (1:33)
2. **Acknowledgments** (https://youtu.be/9usycd3tnCk) (0:43)

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1. **Chapters 2 and 3: Foundations of Robot Motion** (https://youtu.be/csYtU2GY7FY) (2:12)
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4. **Chapter 2.3.1: Configuration Space Topology** (https://youtu.be/FyLNR3edOds) (4:37)
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1. **Chapter 3: Introduction to Rigid-Body Motions** (https://youtu.be/29LhXWjn7Pc) (2:10)
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8. **Chapter 3.3.2: Twists (Part 1 of 2)** (https://youtu.be/mvGZtO_ruj0) (5:00)
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11. **Chapter 3.4: Wrenches** (https://youtu.be/0wsYPJPGtKE) (3:01)

Chapter 4: Forward Kinematics

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2. **Chapter 4.1.2: Product of Exponentials Formula in the End-Effector Frame** (https://youtu.be/27jUrkFdyks) (4:41)
3. **Chapter 4: Forward Kinematics Example** (https://youtu.be/cKHsil0V6Qk) (3:28)

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3. **Chapter 11.2.2: Linear Error Dynamics** (https://youtu.be/1TY4tpSnjBg) (4:20)
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Chapter 13: Wheeled Mobile Robots

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Capstone Project, Mobile Manipulation

Capstone Project, Mobile Manipulation (https://youtu.be/Q1CekpBW6Js) (2:27)