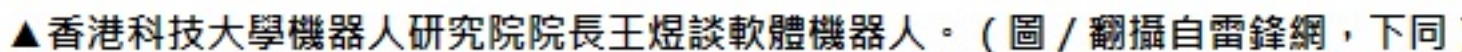


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Critical Capabilities

Humanlike Dexterous Manipulation: 15 years

- High-complexity hands with tactile array densities
- Robust whole-hand grasp and dexterous manipulation
- Superior dynamic performance, like human's

Safe Physical Human-Robot Interaction: 15 years:

- Recognize, work with, and adapt to human behaviors
- Intuitive assistance to human in unstructured environment



March 20, 2013

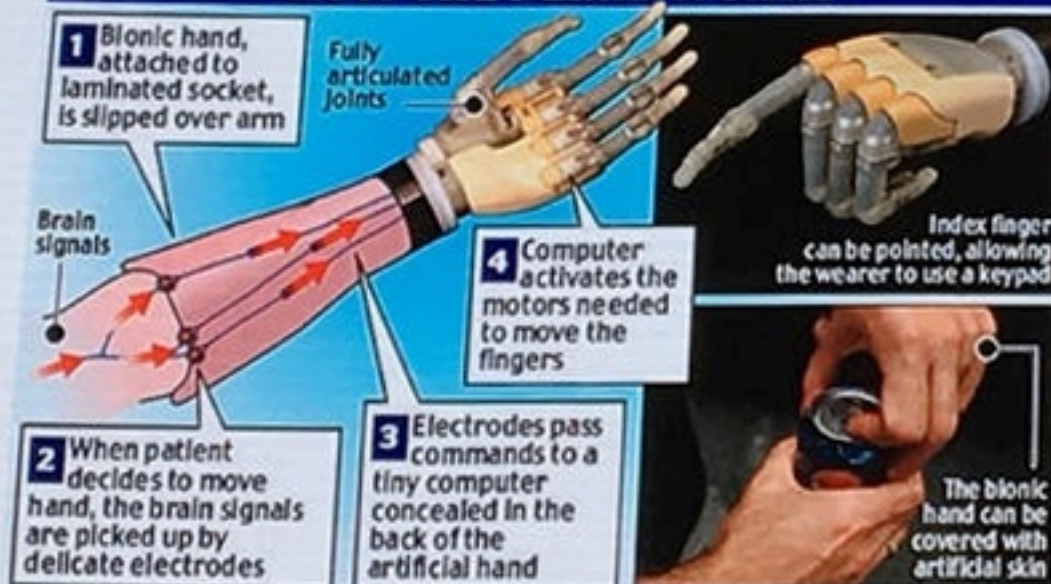
A Roadmap for U.S. Robotics From Internet to Robotics

2013 Edition

8/18/2018

Bionic Hand with Human Dexterity

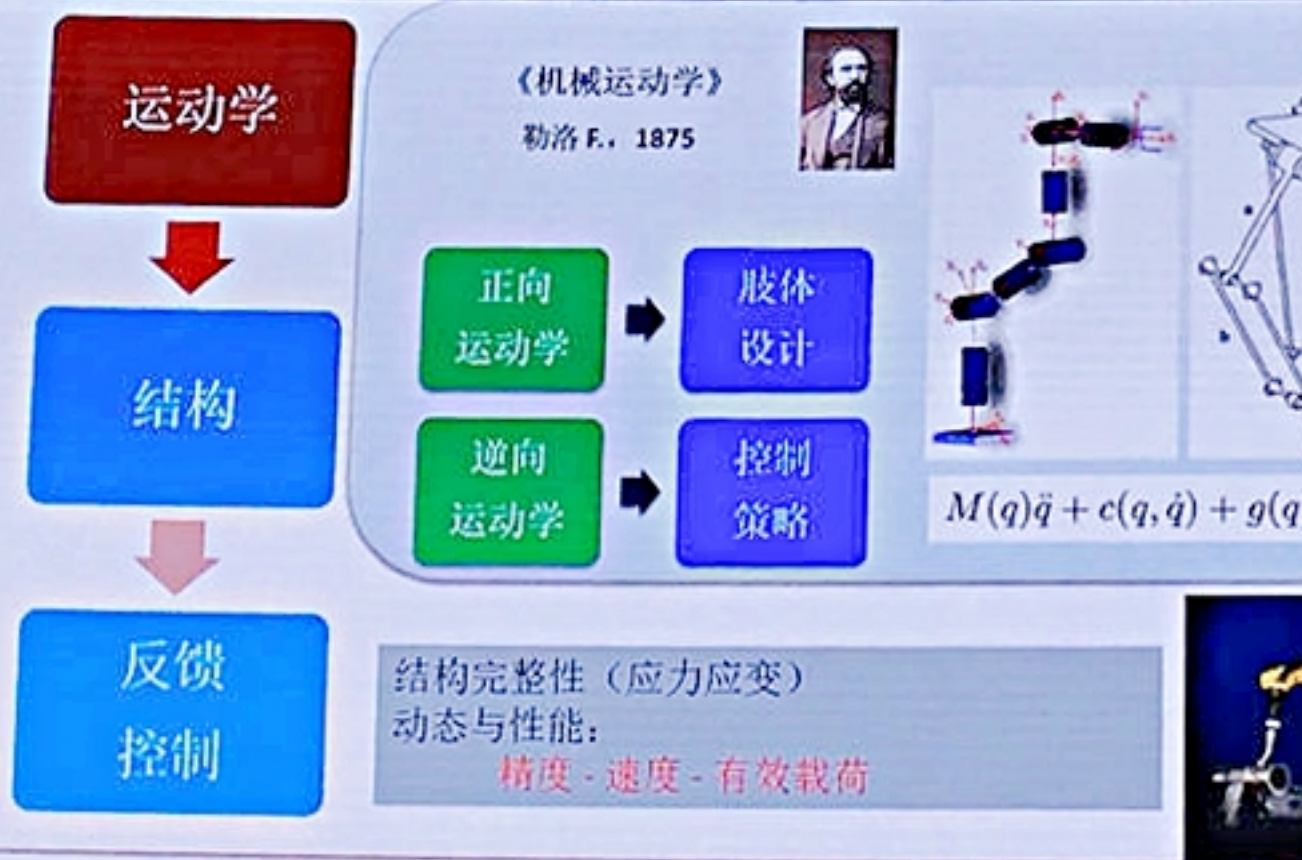
HOW THE i-LIMB WORKS



Daily Mail (UK), July 2007

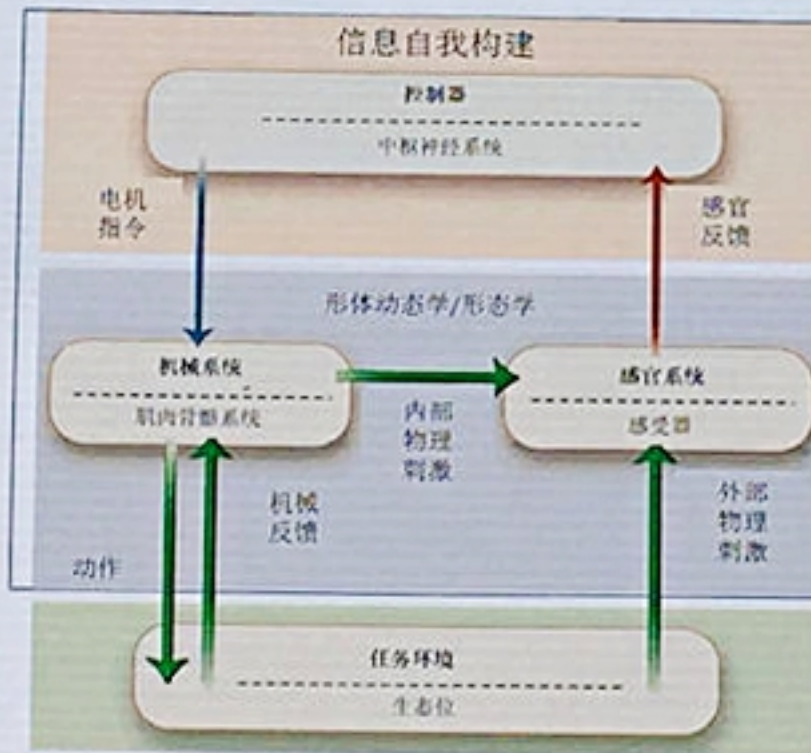


铰接（刚体）机器：建模与设计



1876

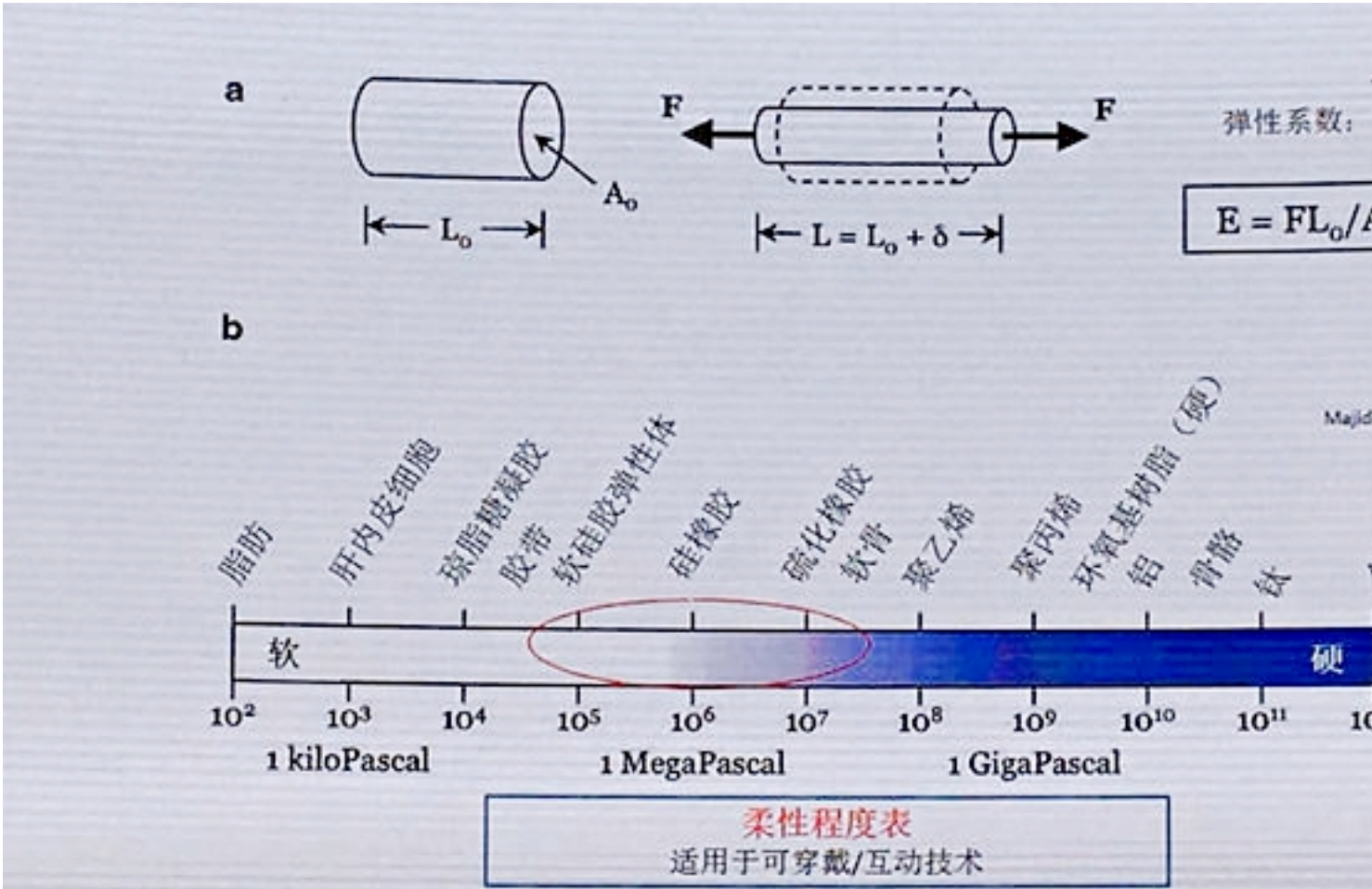
两种机器人的故事



主要特性:

- 速度
- 精度
- 有效载荷

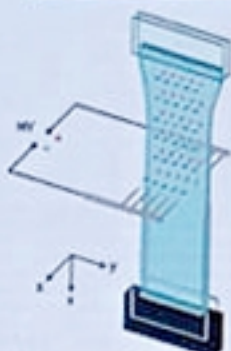
Pfeifer, 《科学》2007



生物启发与使能技术

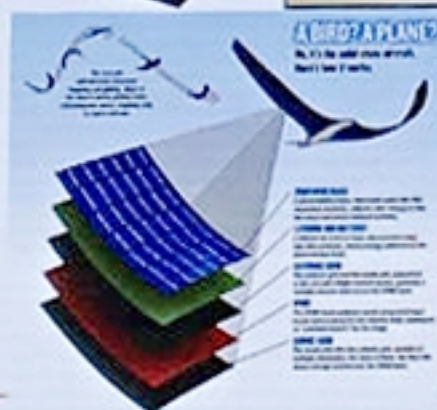
肌腱复合体

- 电活性聚合物 (EAPs)



皮肤传感器

- 软性 (有机) 电子设备
- MEMS压力传感器



3D打印:

- 聚合物、金属
- 纳米粒子复合材料



J. Bissler 2009

J. Hiller 2011

3D