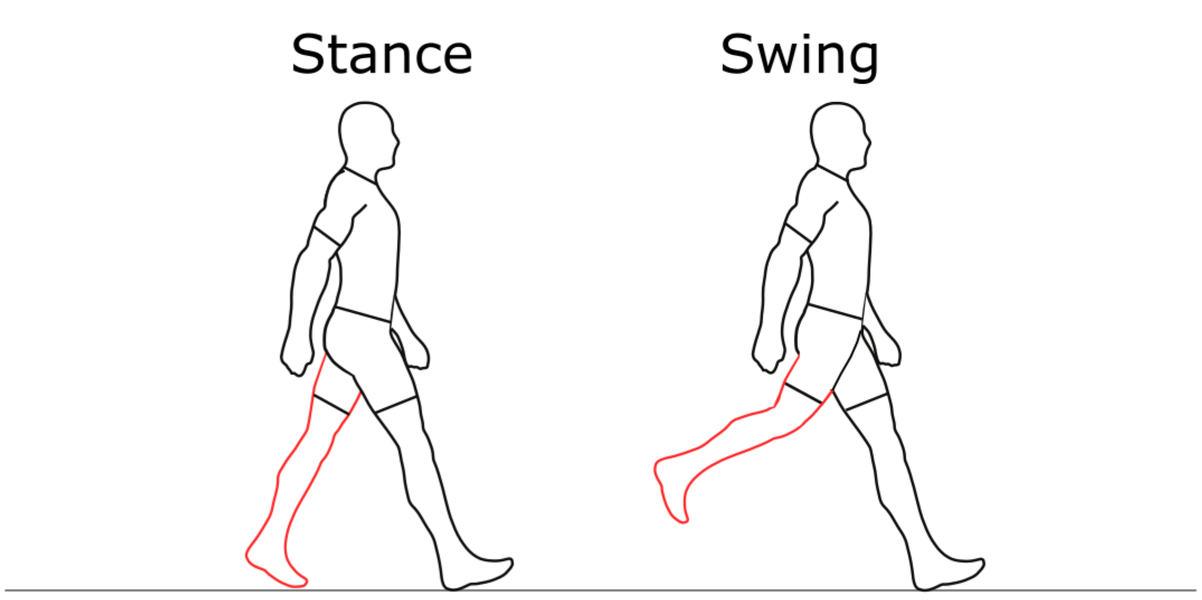
Two Axis aDaptable Ankle (TADA)

Rebecca Roembke, Sofya Akhetiva, Kieran Nichols, Peter G. Adamczyk

University of Wisconsin-Madison

Semi-Active Device:

+moves when unloaded (swing phase)
+locked in place when loaded (stance phase)
+variable properties
+smaller/lighter/more compact
-not fully robotic

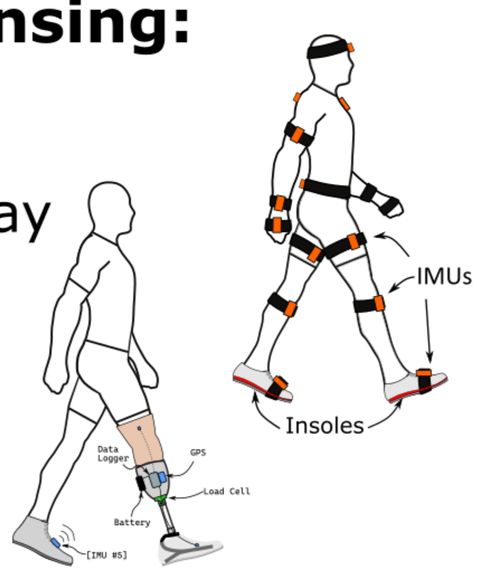


Wearable Robotics:

+ Restore function
+ Augment performance
+ Add functionality

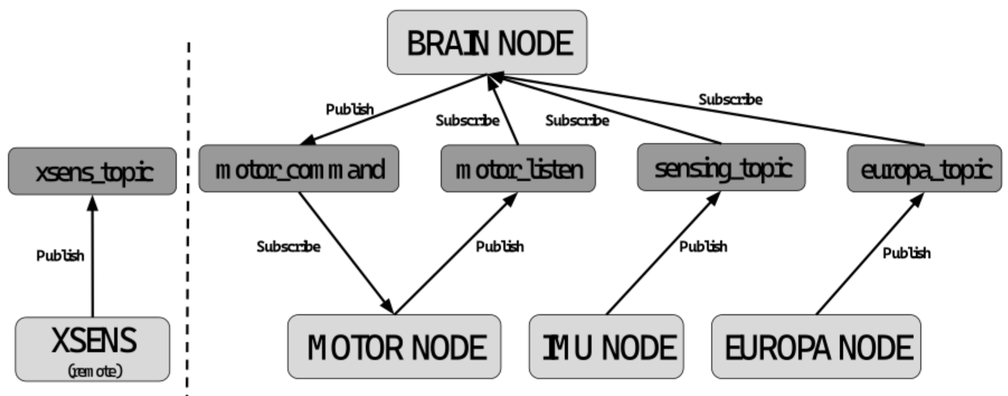
Wearable Sensing:

+ Allows for realistic everyday data from outside the lab
+ Larger datasets

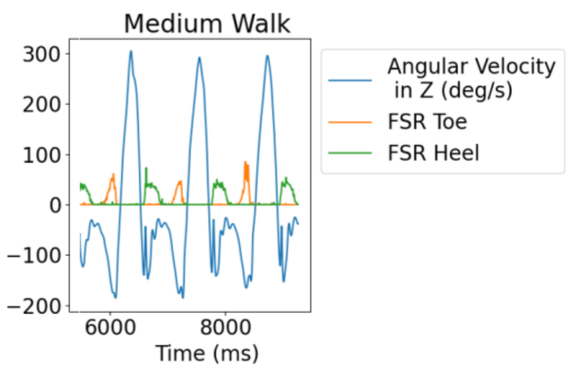


State of Technology:

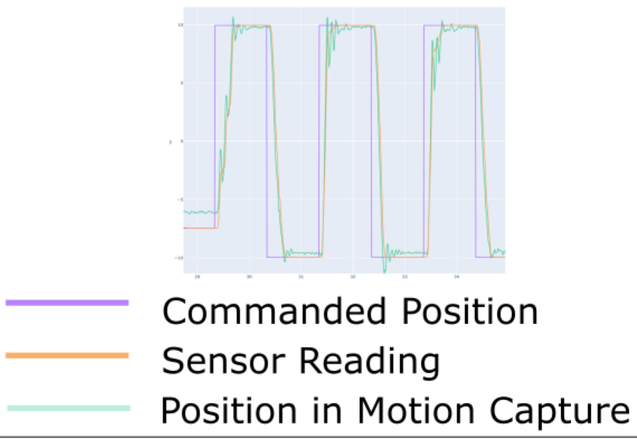
Software Architecture



Contact Detection

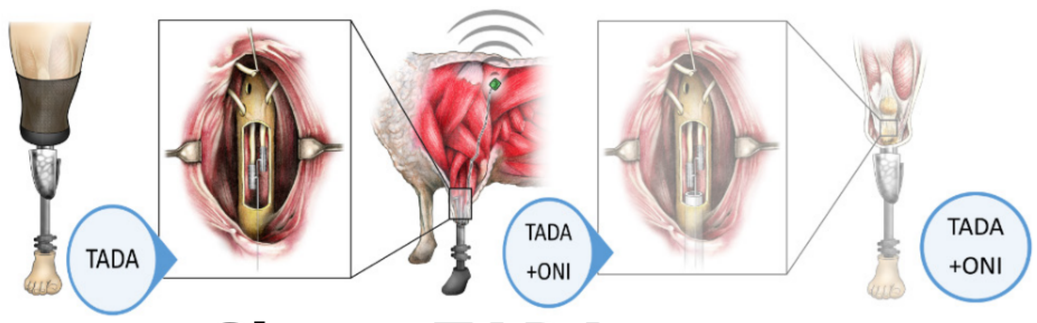


Motor Position



Osseointegrated Bidirectional Neural Interface:

+ sensory and motor neural integration
+ uses a percutaneous bone-anchored prosthetic abutment
+ ROS central coordination architecture



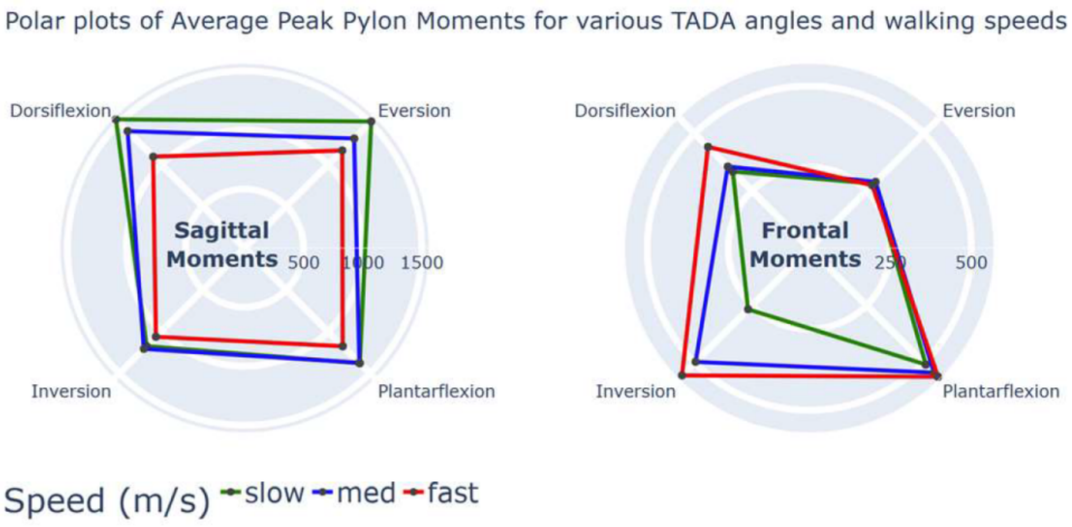
Sheep TADA

+ Two hooved design
+ Seeed controller
+ Moved by 2 servo motors

Application of TADA Technology:

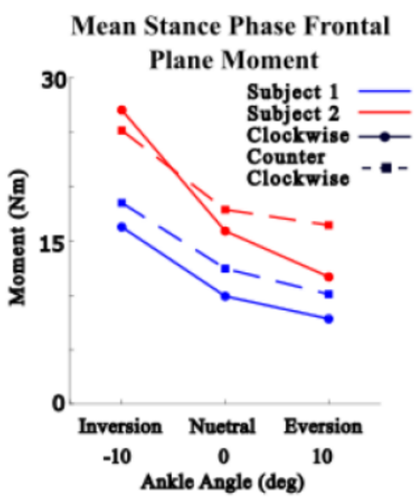
Moment Targeting Control

Walking on a Straight Path



Balance Augmentation

Circle Walking



Toe Lift Control

+ Toe clearance in Swing

Acknowledgments:

This material is based upon work supported by the National Science Foundation Graduate Research Fellowship Program under Grant No. DGE-1747503. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation. DOD grant W81XWH2010884

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