Task-Based Assistance for Software-Enabled Biomedical Devices

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(For more information, please visit poster # 109)

How should devices support motion when the goal is motor learning or relearning?

Hybrid Shared Control

- Does not provide guidance or augment error

- Selectively rejects (but does not replace) user actions

- Adapts to user needs using task-based acceptance criteria
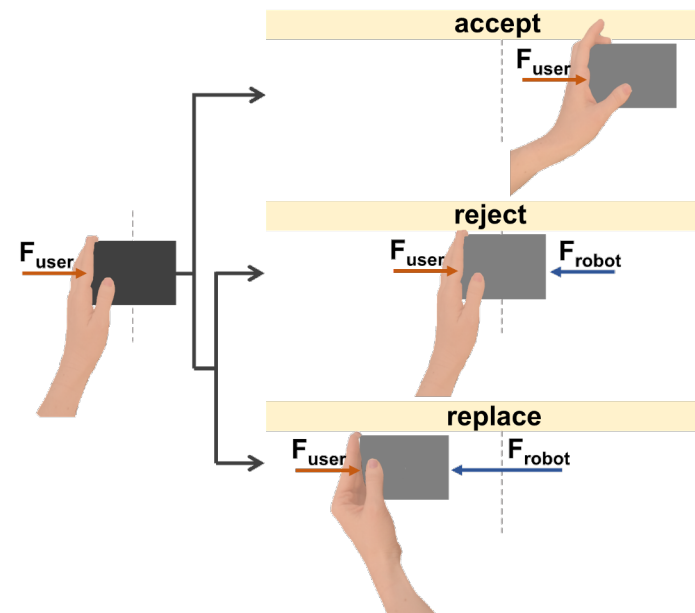
Scientific Impact

- User studies demonstrate features of pHRI that are critical to motor learning.

- Experimental analysis has led to broader questions about how we assess motion.

Broader Impact

- Task-based assistance can enhance neuromotor rehabilitation.

- Outreach at Museum of Science and Industry, Chicago