





*Proportioning*

- **Vision-based expected friction coefficient**

- Surface material dataset with friction coefficients  
[Brandão, M., et al. (2016)]
- Friction from vision (e.g. surface roughness, material similarity) [Noh, D., et al. (2020)]

- **Traversability estimation**

- Traversability by vision  
[Shneier, M., et al. (2006)]
- Self-supervised traversability with percepts  
[Gan, L., et al. (2022)]

- **Multimodal motion policies**
  - Surface estimation through inference  
[Ewan, P., et al. (2022)]\*
  - Reinforcement Learning  
[Margolis, G., et al. (2023)]

heavily dependent on  
semantic prediction

**possibly ill-posed**

one-way conditioning of  
physical properties

# *Property estimation*

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*Approach: Feel it*