



# Visual Navigation for Flying Robots

## Waving Recognition

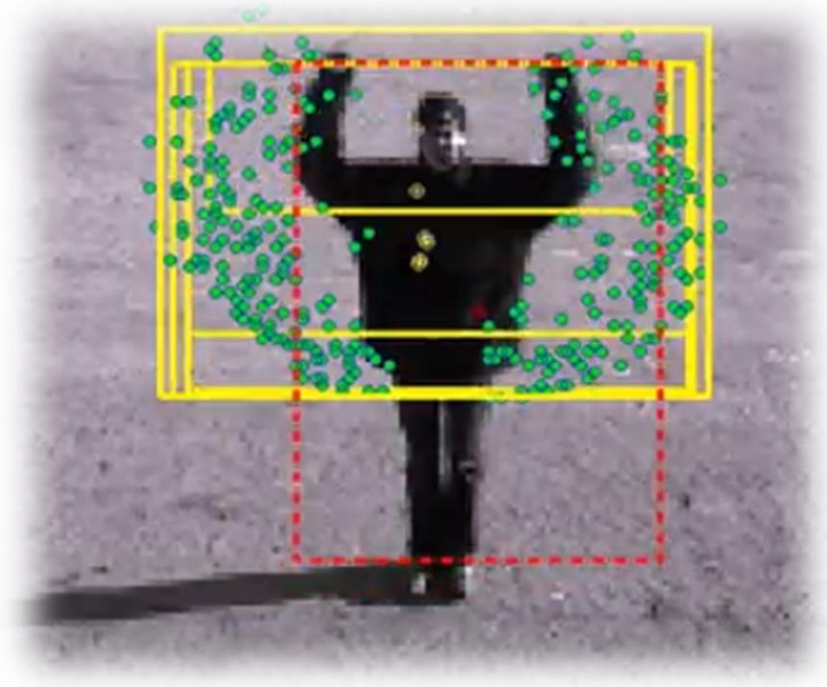


Casaburo, Daniele

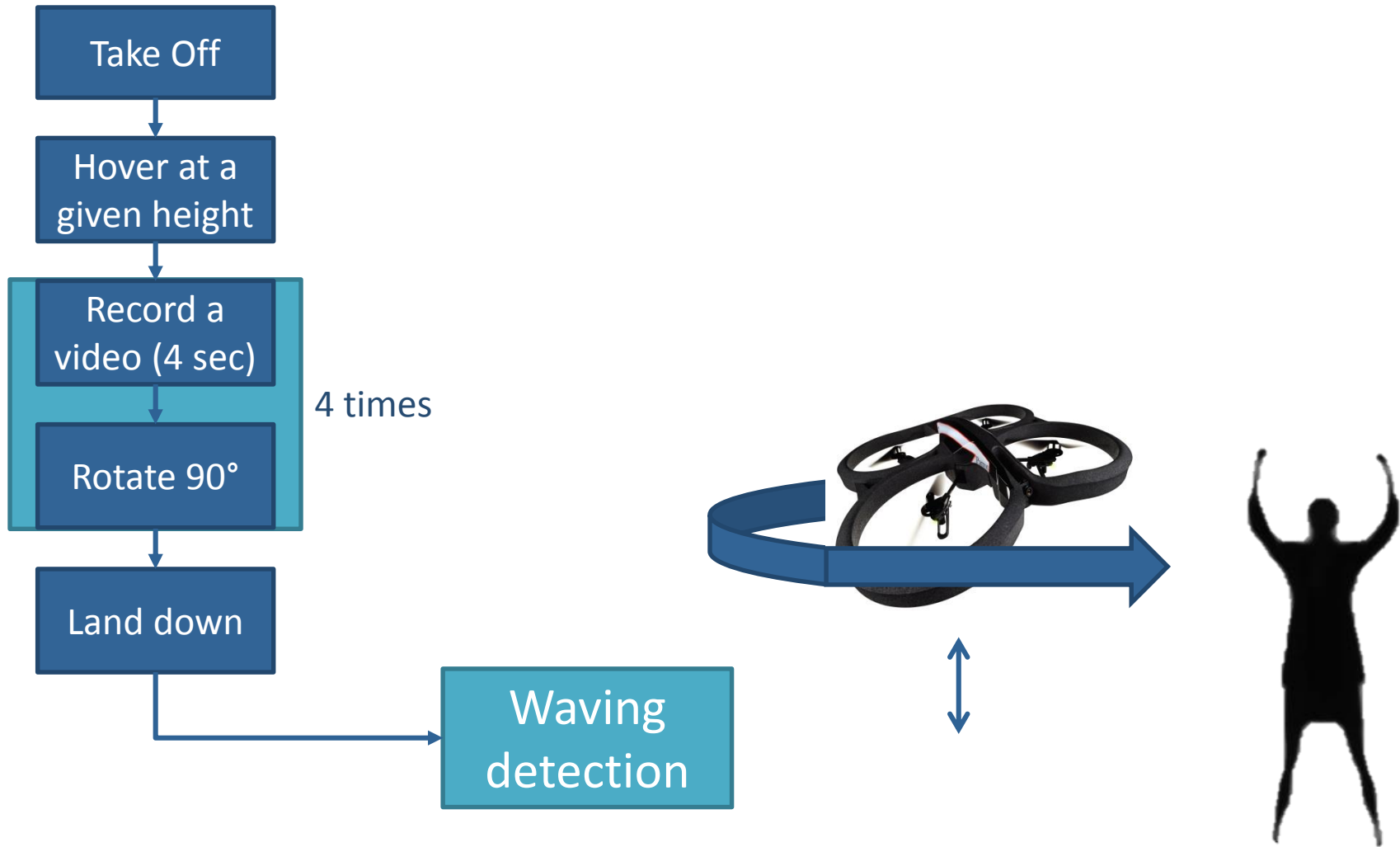
Dianov, Ilya

Garcia, Mario

Habon, Laszlo

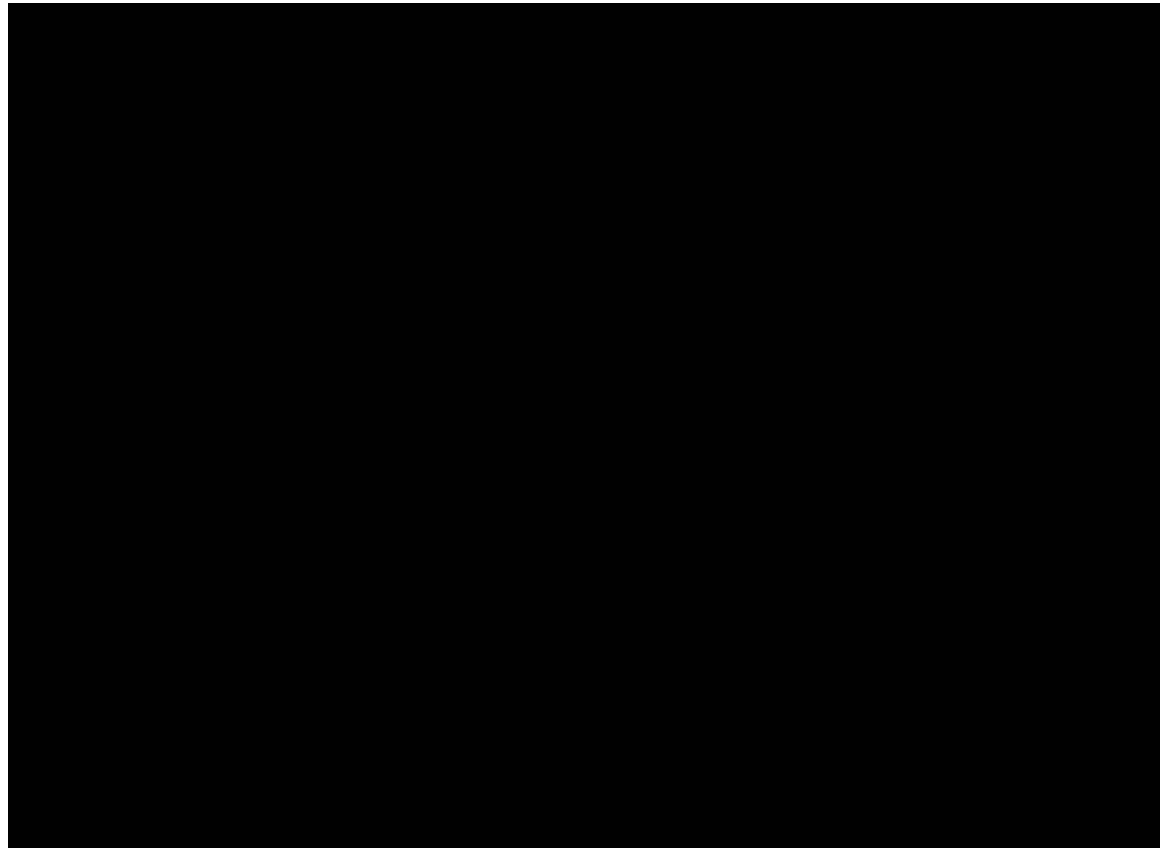


# Implementation



# Recording videos

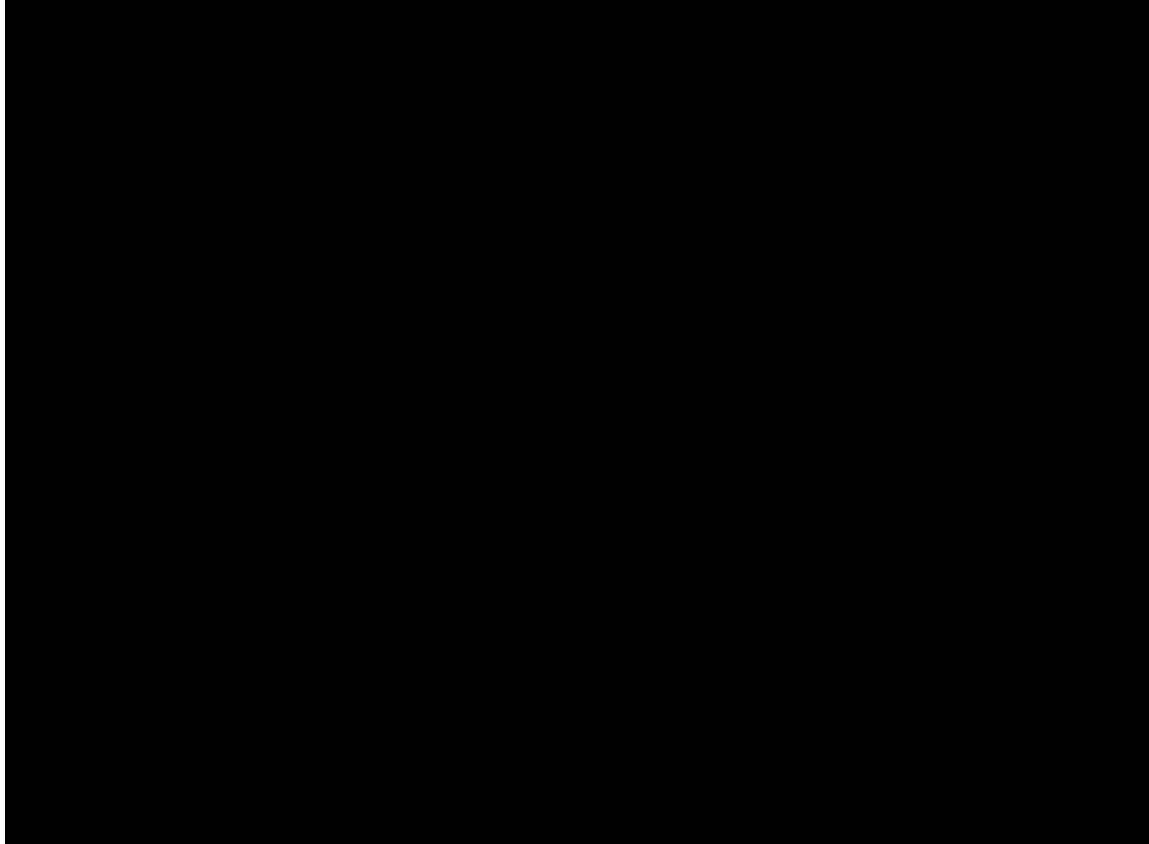
1. Record 4 seconds
2. Rotate 90°



# Waving recognition

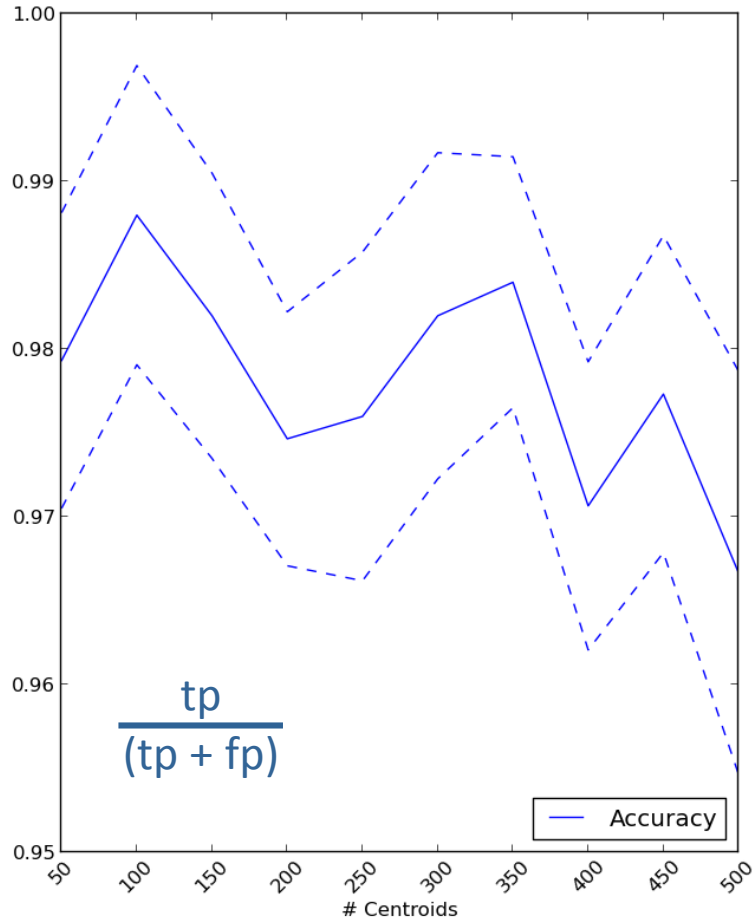
- **Detection of Space-Time Interest Points (STIPs)**
- **Get Descriptors from Cuboid centered at STIP**
- **Bag-of-Words approach:**
  - **Minibatch K-meaning of all descriptors**
  - **Histogram of descriptors of each video sequence**
  - **Grid-search for best C-Parameter**
  - **Training of an SVM**
    - **Over 20 runs**
    - **Test size: 30%**

# Waving recognition

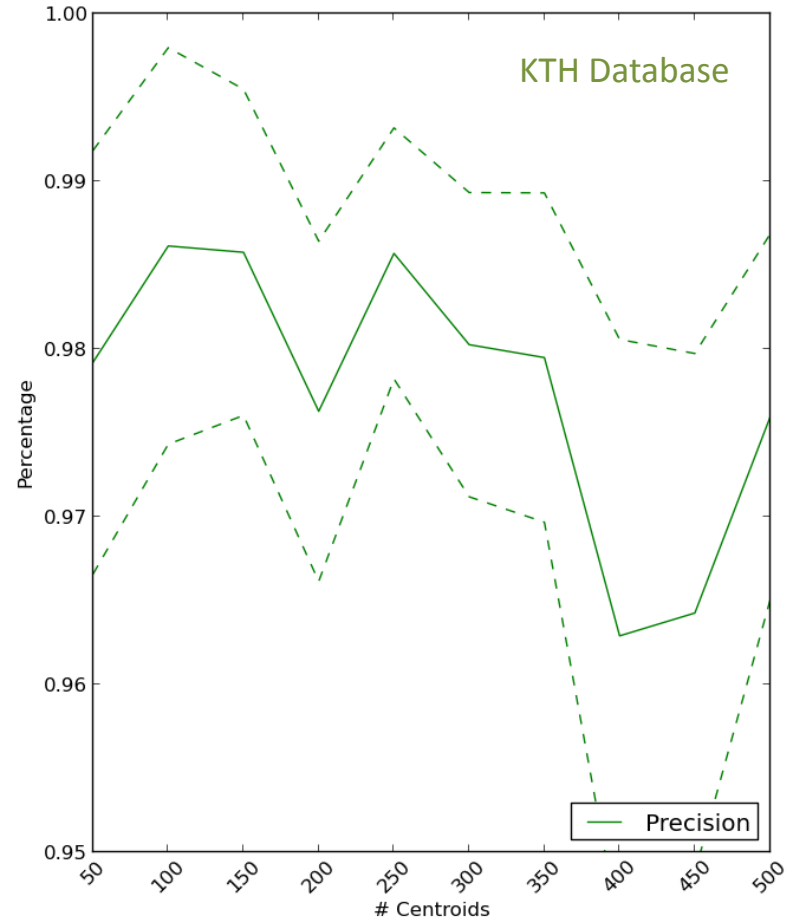


# Precision and Accuracy

Action recognition from ARDrone video



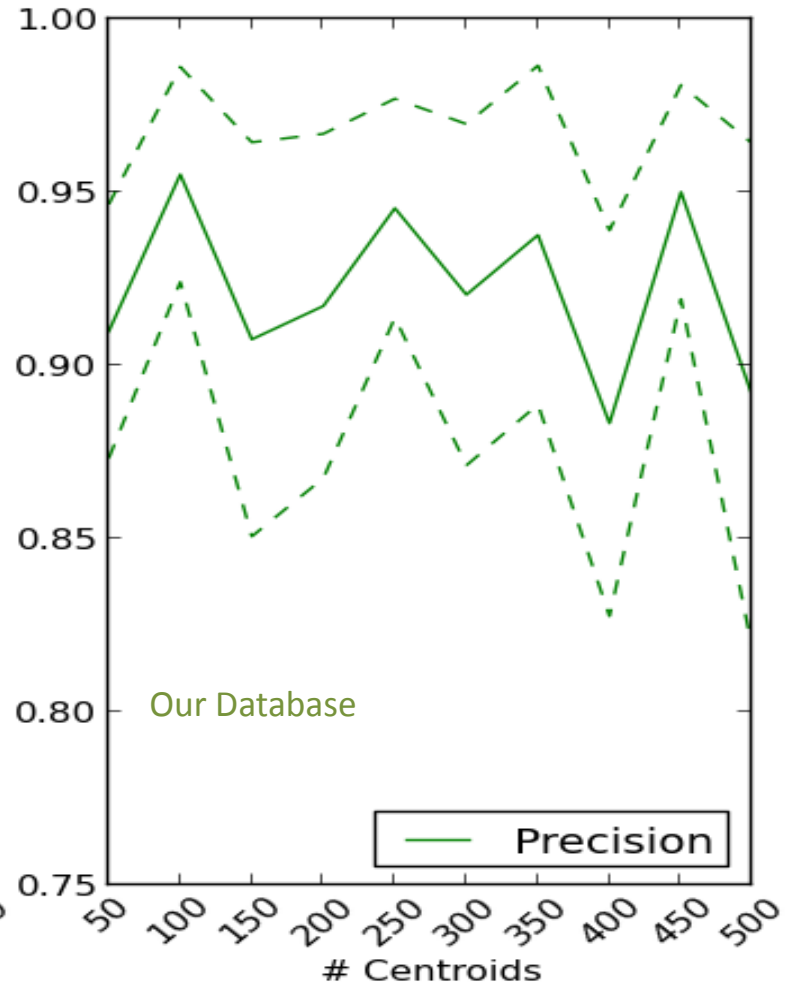
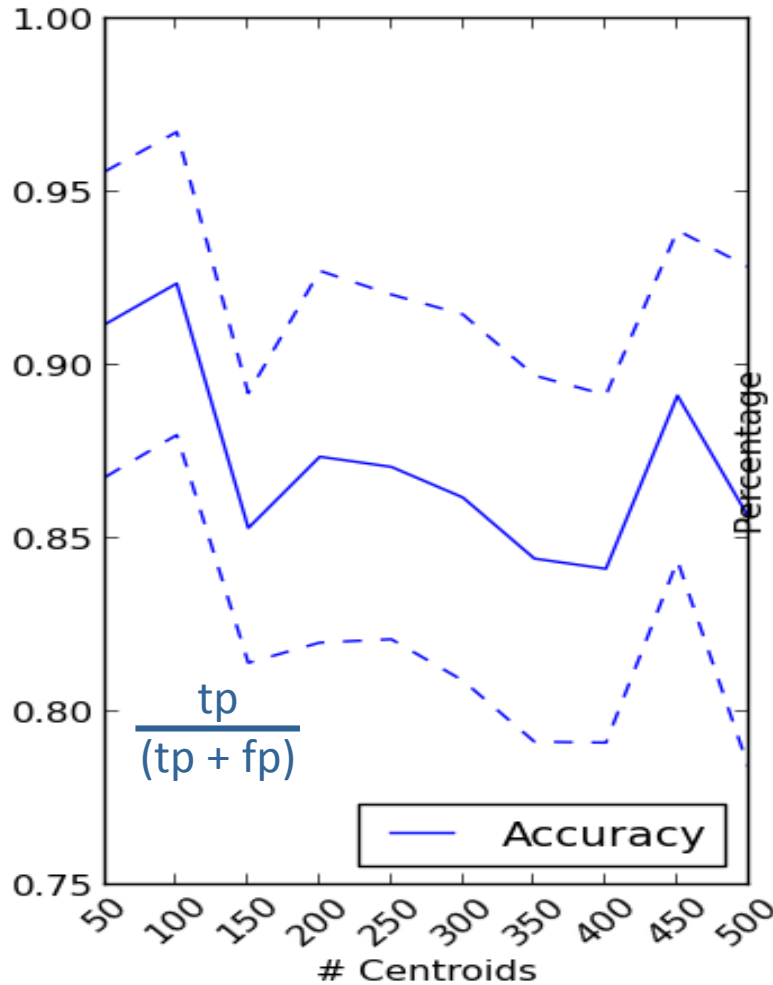
True positives (tp) vs False positives (fp)

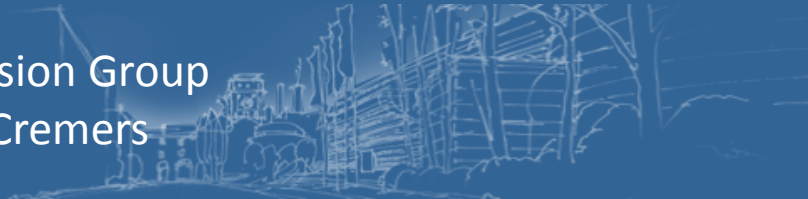


Ratio of Correct Predictions

# Precision and Accuracy

Action recognition from ARDrone video (Group Videos)





# Waving Recognition

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