I. Motivation

How can we enable public cameras to send personalized messages to people without knowing any addresses of their phones?

II. System Design

We define this problem as Private Human Addressing and develop a real-time end-to-end system called PHADE to solve it.

- Motion transformation using principal component analysis (PCA).
- Motion extraction (with mask) from video side.

III. Performance

Overall matching performance and Computation time on server. The time is bounded around three seconds, which is caused by the hard boundary for each stage in the pipeline.

Tested with indoor localization and gesture-based messaging.