**Introduction**

- **Motivations:**
  - Mobile videos are prevalent
  - YouTube statistics: ~20% mobile videos, ~3 hours/min upload
  - Rich sensors are available
  - Video frame-level geo-tagged (FOV model)

- **Computer vision applications**
  - Persistent tracking, panorama generation, etc.
  - Technique needs:
    1) Fine granularity spatial metadata
    2) Effective data management on media data

**GIFT Applications and Techniques**

- **Panorama generation**
  - Key video frame selection based on geo-metadata
    1) Apply circle range query first
    2) For each direction group, select the "best" (considering both direction and location) image
  - Panorama generation with autoStich

**Experimental Results of GIFT for Persistent tracking**

- Without GIFT, 228 FOVs were selected
- With GIFT, only 13 FOVs were used

**Conclusion**

- Present the novel GIFT to select key-frames for computer vision applications
- GIFT can significantly improve the performance for computer vision applications.