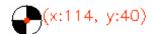
# Computer Vision Fall 2018 Problem Set #3

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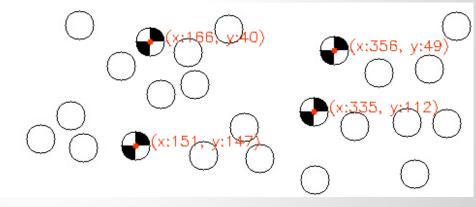
#### 1: Marker detection







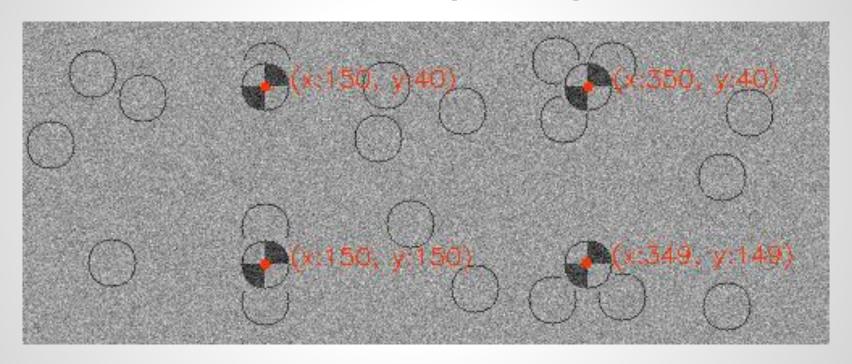




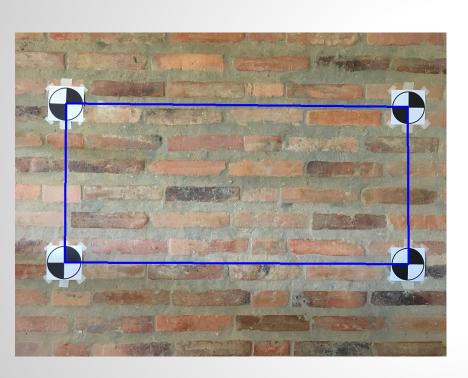
ps3-1-a-1.png

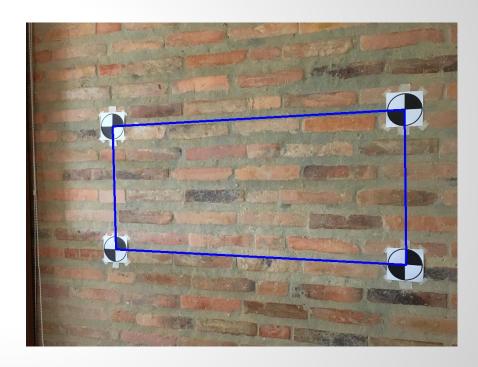
ps3-1-a-2.png

### 1: Marker detection (cont.)



# 2: Marker detection (wall scene)

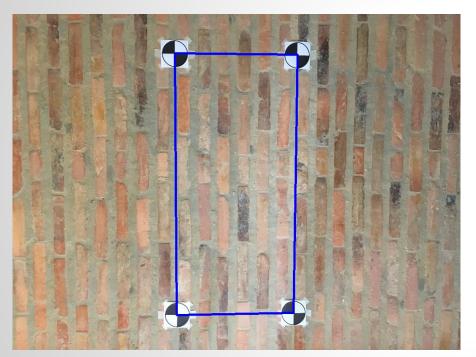


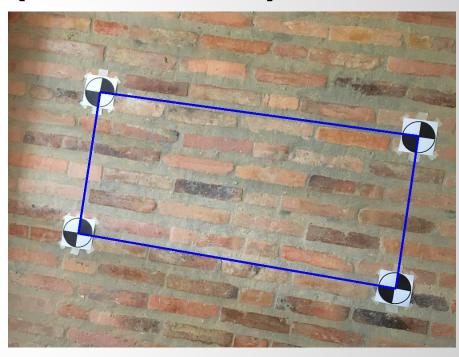


ps3-2-a-1.png

ps3-2-a-2.png

## 2: Marker detection (wall scene)

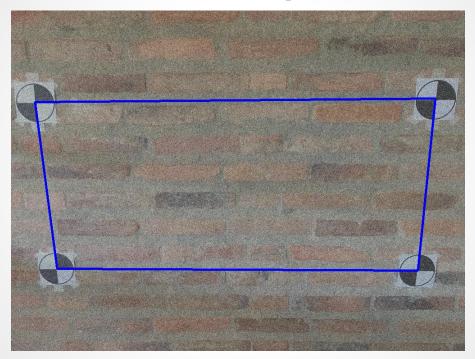




ps3-2-a-3.png

ps3-2-a-4.png

# 2: Marker detection (wall scene)



ps3-2-a-5.png

# 3: Projective Geometry





ps3-3-a-1.png ps3-3-a-2.png

#### 3: Projective Geometry (cont.)



ps3-3-a-3.png

#### 4: Markers in Video





ps3-4-a-1.png

ps3-4-a-2.png



Youtube / Dropbox / etc. link:

https://www.dropbox.com/s/hlfg1w f71gaq4hi/ar\_4-a-ps3-4a.mp4.avi?dl=0

ps3-4-a-3.png





ps3-4-a-4.png

ps3-4-a-5.png



#### Youtube / Dropbox / etc. link:

https://www.dropbox.com/s/cm4vjlcur 3751hu/ar\_4-a-ps3-4-b.mp4.avi?dl=0

ps3-4-a-6.png

#### 4: Markers in Video





ps3-4-b-1.png ps3-4-b-2.png



Youtube / Dropbox / etc. link:

https://www.dropbox.com/s/xi8w4 9k1lms0xtw/ar\_4-b-ps3-4c.mp4.avi?dl=0

ps3-4-b-3.png



(x:579) (x:534, y:255)

ps3-4-b-4.png

ps3-4-b-5.png



Youtube / Dropbox / etc. link:

https://www.dropbox.com/s/d54oj2ftfu c603f/ar\_4-b-ps3-4-d.mp4.avi?dl=0

ps3-4-b-6.png

#### 5: AR in Video





ps3-5-a-1.png

ps3-5-a-2.png

## 5: AR in Video (cont.)



#### Youtube / Dropbox / etc. link:

https://www.dropbox.com/s/tjech91n 7h434y9/ar\_5-a-ps3-4a.mp4.avi?dl=0

ps3-5-a-3.png

# 5: AR in Video (cont.)





ps3-5-a-4.png

ps3-5-a-5.png

## 5: AR in Video (cont.)



Youtube / Dropbox / etc. link:

https://www.dropbox.com/s/d5hup 05ozsa6pwz/ar 5-a-ps3-4b.mp4.avi?dl=0

ps3-5-a-6.png

#### 5: Markers in Video





ps3-5-b-1.png ps3-5-b-2.png



#### Youtube / Dropbox / etc. link:

https://www.dropbox.com/s/kpeitz4qkr8xcd q/ar\_5-b-ps3-4-c.mp4.avi?dl=0

ps3-5-b-3.png





ps3-5-b-4.png

ps3-5-b-5.png



Youtube / Dropbox / etc. link:

https://www.dropbox.com/s/qol9ut099 7zyhrg/ar\_5-b-ps3-4-d.mp4.avi?dl=0

ps3-5-b-6.png

#### 6: Video in Video





ps3-6-a-1.png

ps3-6-a-2.png

## 6: Video in Video (cont.)



Youtube / Dropbox / etc. link:

https://www.dropbox.com/s/z20cxq ekr8vv2oh/ar\_ps3-6-ps3-4a.mp4.avi?dl=0

ps3-6-a-3.png

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