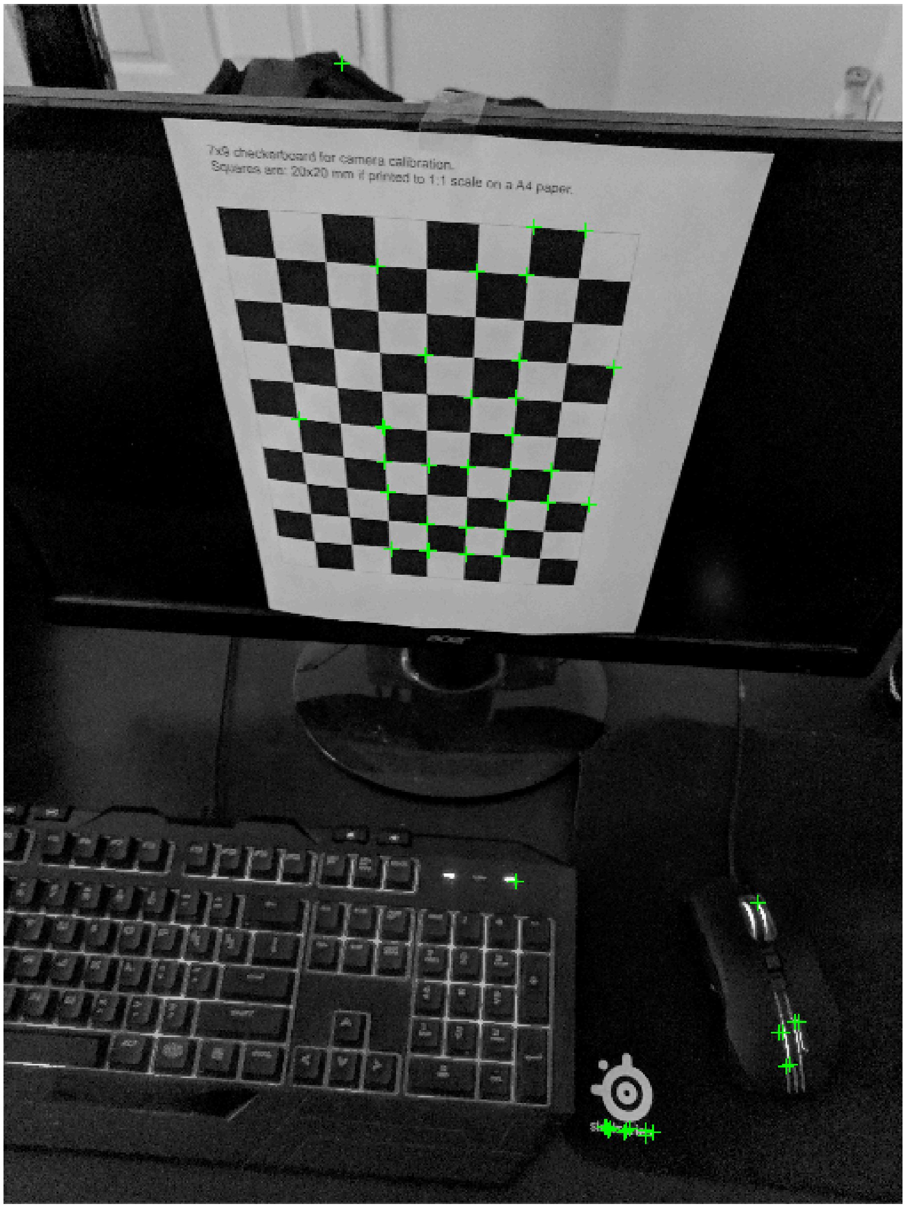
```
%https://drive.google.com/open?id=10GeqpN-dwusa93hQUYOxrH0FnkiIc2a6
I = imread('C:\Users\bengo\Downloads\Photos\001.jpg');
I = rgb2gray(I);
points = detectBRISKFeatures(I);

imshow(I); hold on;
```

```
Warning: Image is too big to fit on screen; displaying at 17%
```

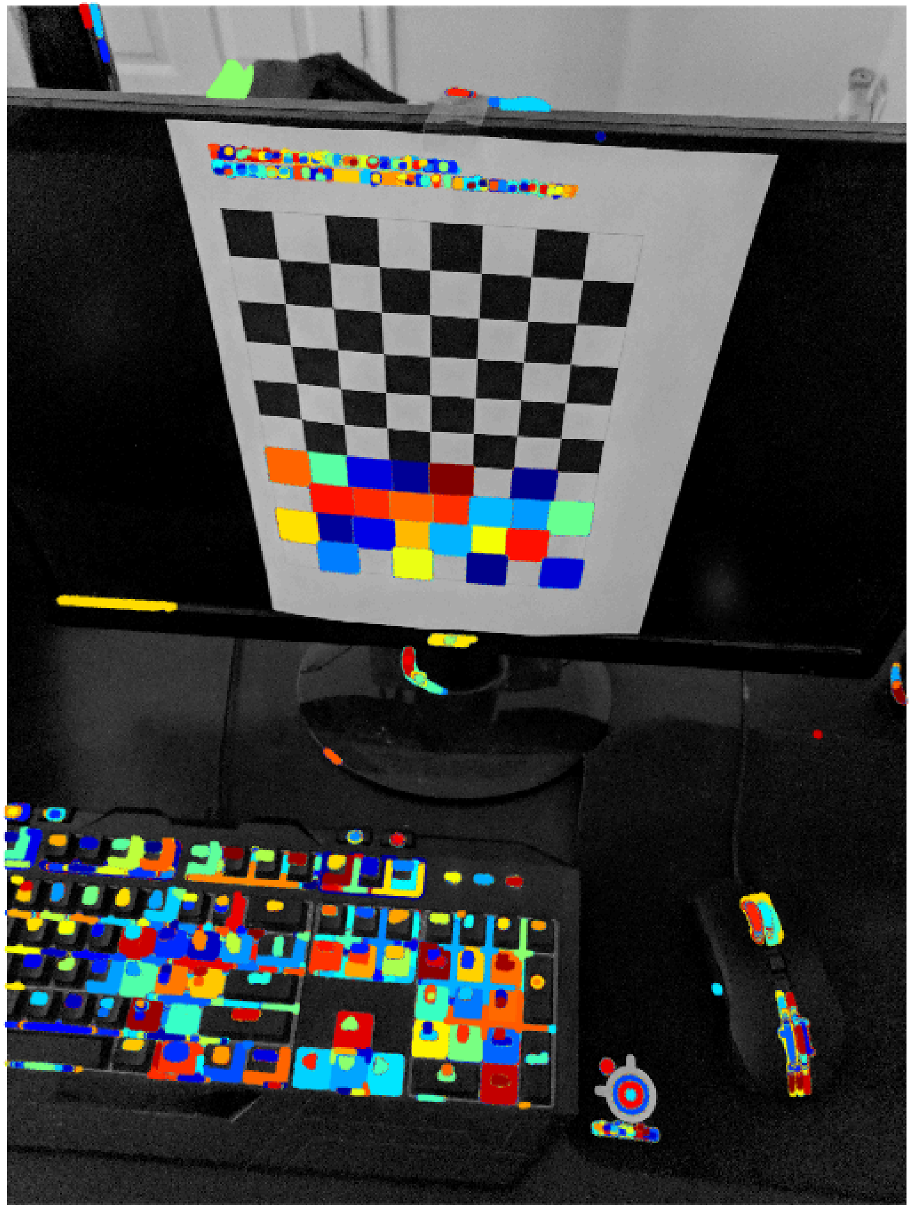
```
plot(points.selectStrongest(20));

corners = detectFASTFeatures(I);
imshow(I); hold on;
plot(corners.selectStrongest(50));

corners = detectHarrisFeatures(I);
imshow(I); hold on;
plot(corners.selectStrongest(50));

corners = detectMinEigenFeatures(I);
imshow(I); hold on;
plot(corners.selectStrongest(50));
```


7x9 checkerboard for camera calibration.
Squares are: 20x20 mm if printed to 1:1 scale on a A4 paper.

```
regions = detectMSERFeatures(I);
figure; imshow(I); hold on;
```

```
Warning: Image is too big to fit on screen; displaying at 17%
```

```
plot(regions,'showPixelList',true,'showEllipses',false);
```

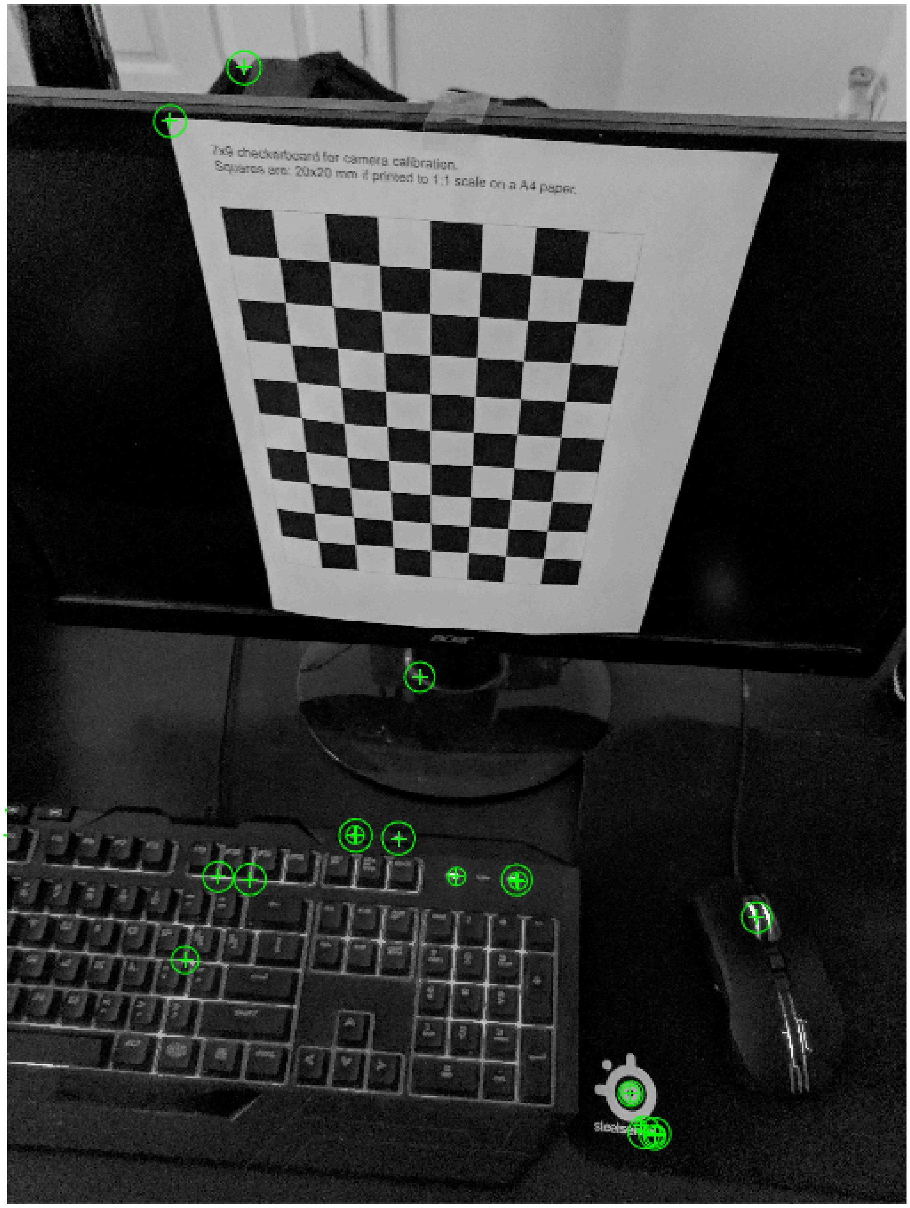


```
figure; imshow(I);
```

```
Warning: Image is too big to fit on screen; displaying at 17%
```

```
hold on;
plot(regions);


%I = imread('C:\Users\bengo\Downloads\Photos\001.jpg');
%I = rgb2gray(I);
%points = detectORBFeatures(I);
%figure
```

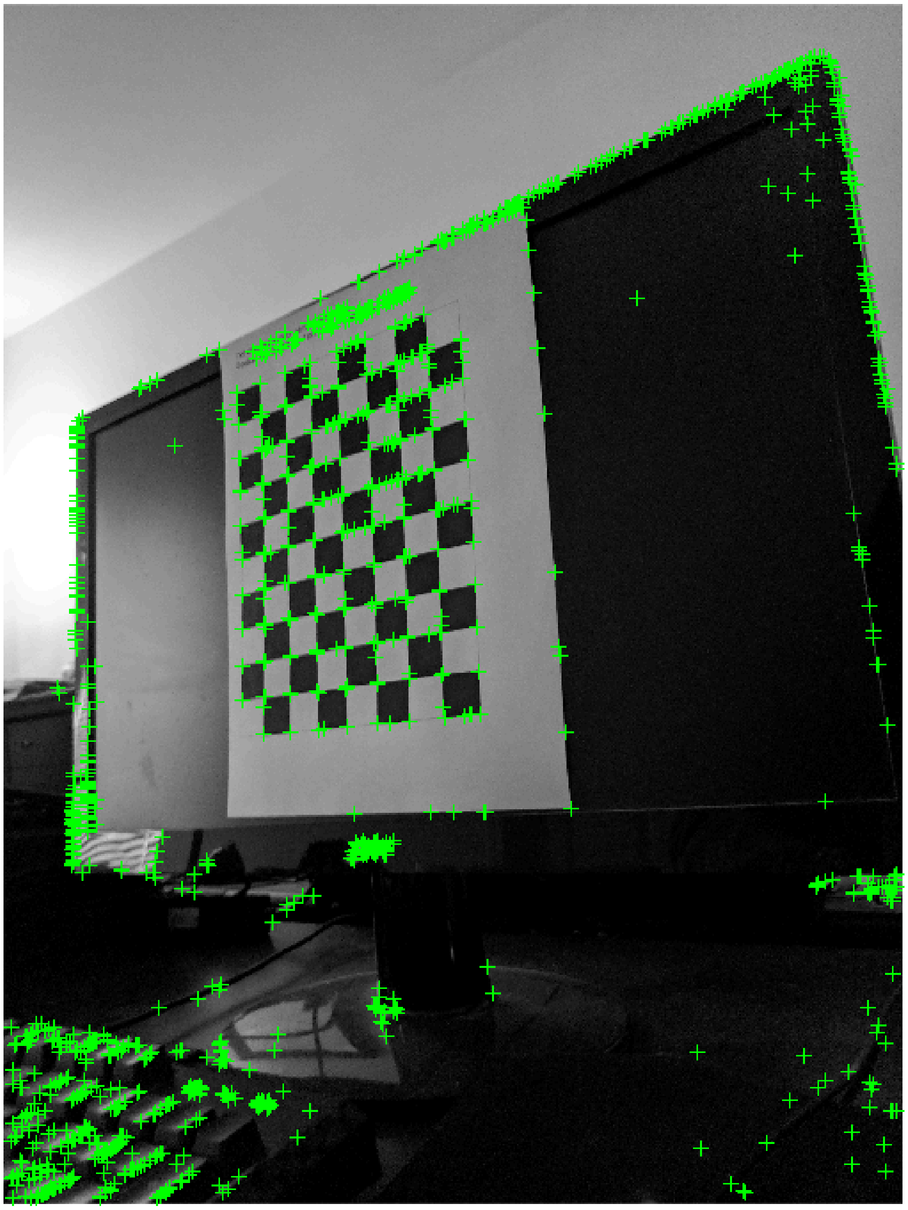
```
%imshow(I)
%hold on
%plot(points,'ShowScale',false)
%hold off

points = detectSURFFeatures(I);
imshow(I); hold on;
plot(points.selectStrongest(10));

points = detectKAZEFeatures(I);
imshow(I)
hold on
plot(selectStrongest(points,20))
hold off
```


7x9 checkerboard for camera calibration.
Squares are: 20x20 mm if printed to 1:1 scale on a A4 paper.

```
I = imread('C:\Users\bengo\Downloads\Photos\002.jpg');
I = rgb2gray(I);
corners = detectHarrisFeatures(I);
[features, valid_corners] = extractFeatures(I, corners);
figure; imshow(I); hold on
```

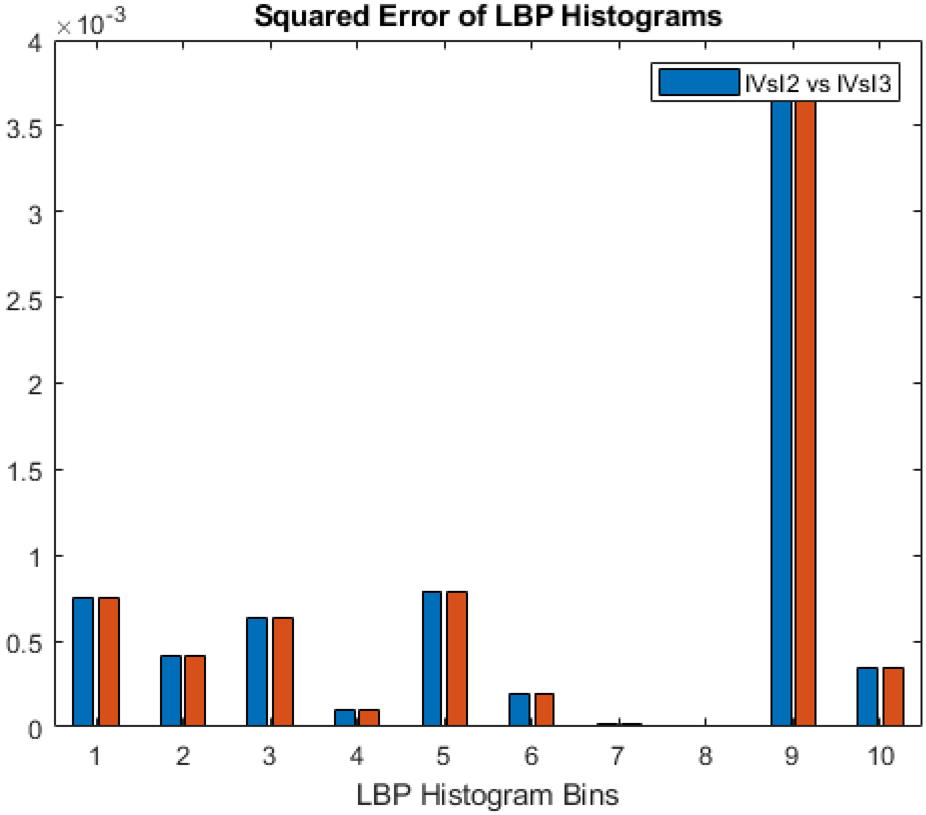
```
Warning: Image is too big to fit on screen; displaying at 17%
```

```
plot(valid_corners);
```



```
I = imread('C:\Users\bengo\Downloads\Photos\001.jpg');
I = rgb2gray(I);
I2 = imread('C:\Users\bengo\Downloads\Photos\002.jpg');
I2 = rgb2gray(I2);
I3 = imread('C:\Users\bengo\Downloads\Photos\002.jpg');
I3 = rgb2gray(I3);
I4 = extractLBPFeatures(I,'Upright',false);
I5 = extractLBPFeatures(I2,'Upright',false);
I6 = extractLBPFeatures(I3,'Upright',false);
IVsI2 = (I4 - I5).^2;
IVsI3 = (I4 - I6).^2;
```

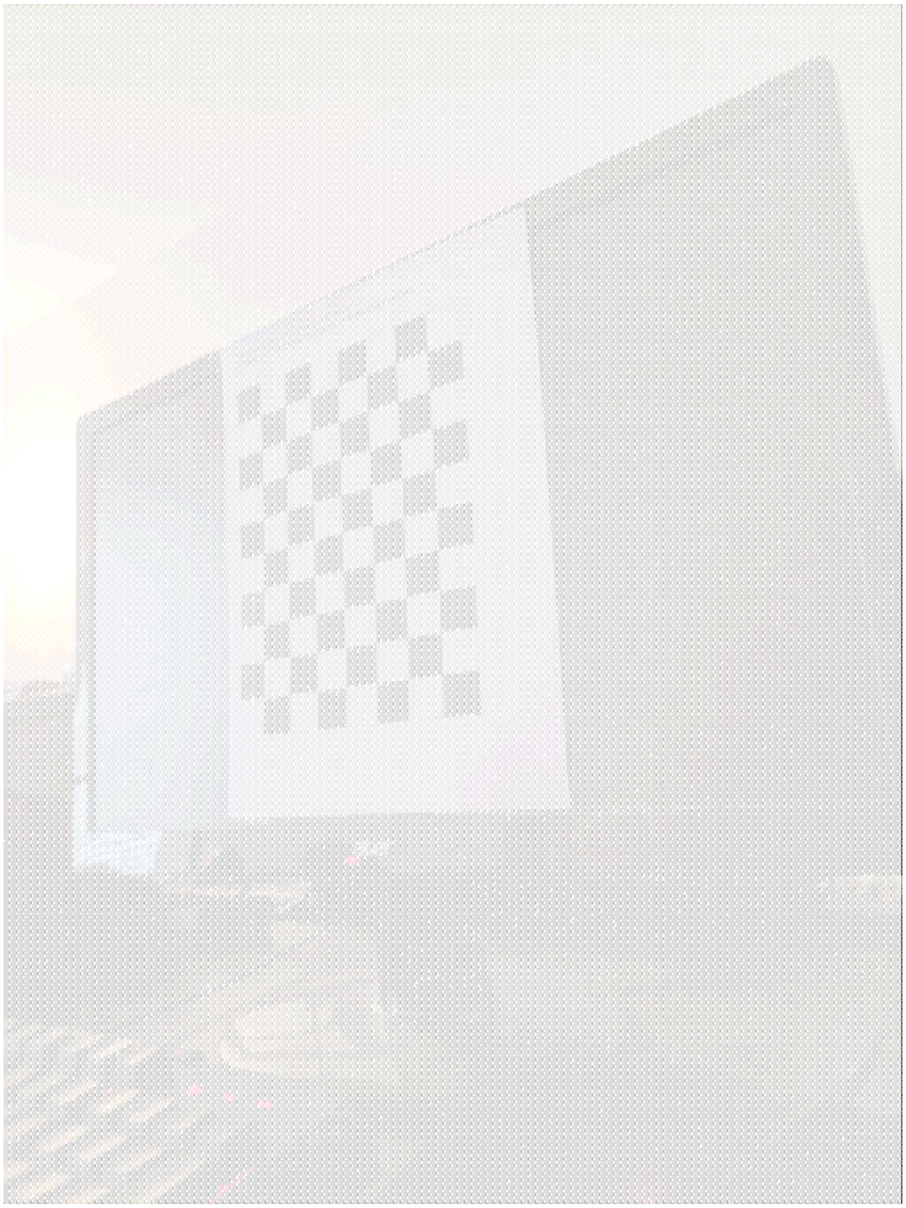
```
figure
bar([IVsI2; IVsI3]','grouped')
title('Squared Error of LBP Histograms')
xlabel('LBP Histogram Bins')
legend('IVsI2 vs IVsI3')
```



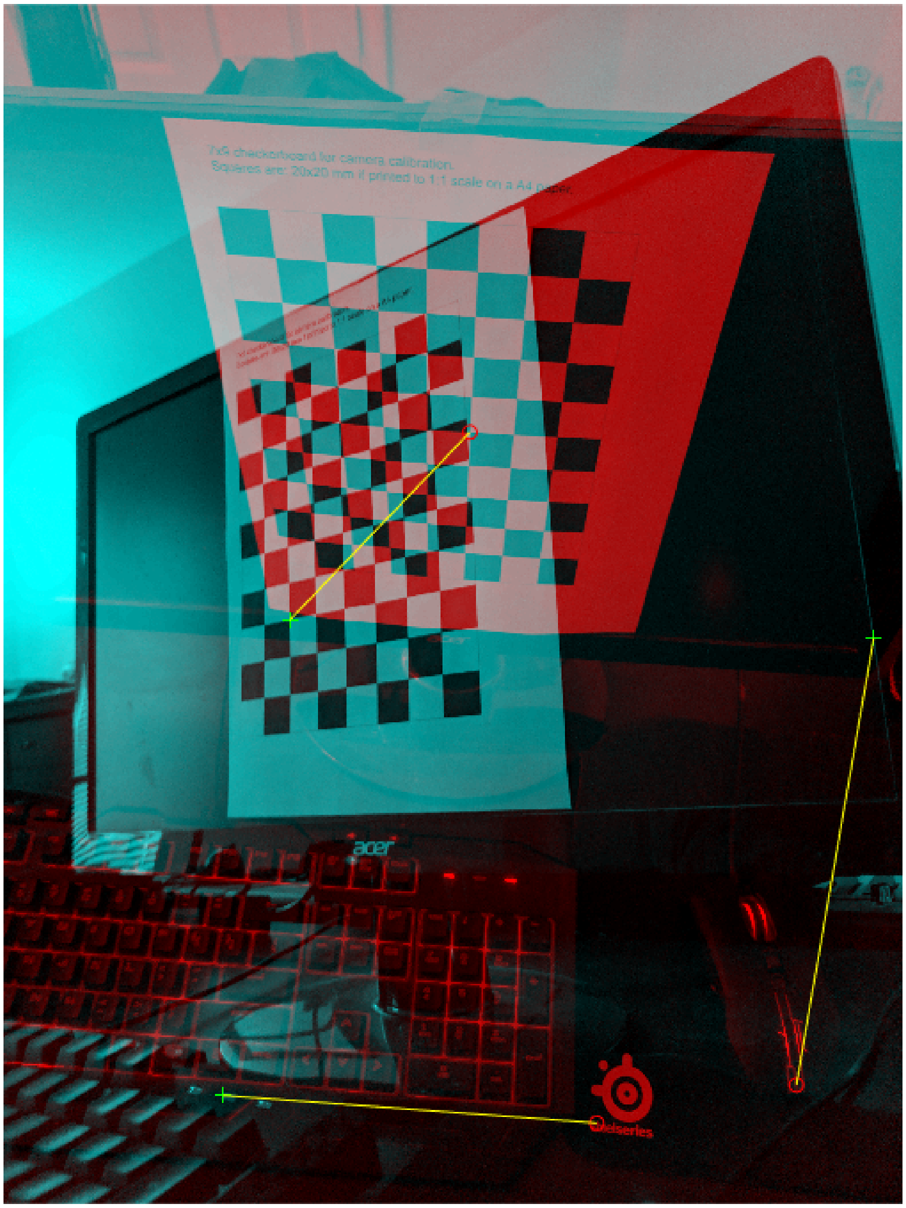
```
img = imread('C:\Users\bengo\Downloads\Photos\002.jpg');
[featureVector,hogVisualization] = extractHOGFeatures(img);
figure;
imshow(img);
```

```
Warning: Image is too big to fit on screen; displaying at 17%
```

```
hold on;
plot(hogVisualization);
```



```
I1 = rgb2gray(imread('C:\Users\bengo\Downloads\Photos\001.jpg'));
I2 = rgb2gray(imread('C:\Users\bengo\Downloads\Photos\002.jpg'));
points1 = detectHarrisFeatures(I1);
points2 = detectHarrisFeatures(I2);
[features1,valid_points1] = extractFeatures(I1,points1);
[features2,valid_points2] = extractFeatures(I2,points2);
indexPairs = matchFeatures(features1,features2);
matchedPoints1 = valid_points1(indexPairs(:,1),:);
matchedPoints2 = valid_points2(indexPairs(:,2),:);
figure; showMatchedFeatures(I1,I2,matchedPoints1,matchedPoints2);
```

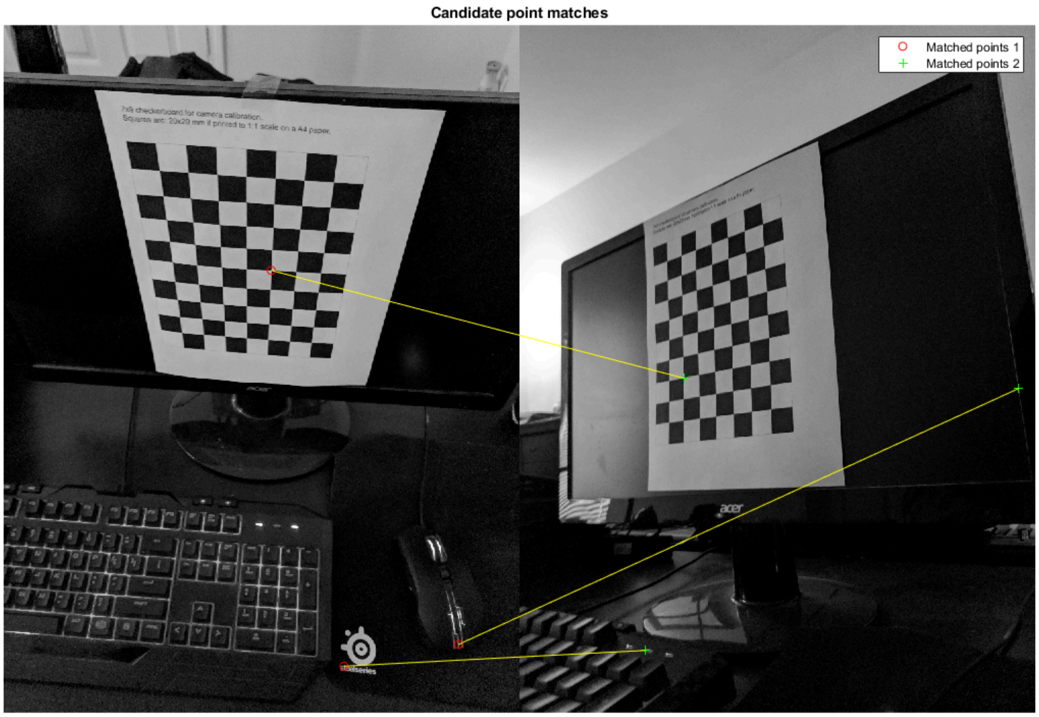

7x9 checkerboard for camera calibration.
Squares are: 20x20 mm if printed to 1:1 scale on a A4 paper.
acer
steelseries

```
Warning: Image is too big to fit on screen; displaying at 17%
```

```
[f1, vpts1] = extractFeatures(I1, points1);
[f2, vpts2] = extractFeatures(I2, points2);
indexPairs = matchFeatures(f1, f2) ;
matchedPoints1 = vpts1(indexPairs(1:3, 1));
matchedPoints2 = vpts2(indexPairs(1:3, 2));
figure; ax = axes;
showMatchedFeatures(I1,I2,matchedPoints1,matchedPoints2,'montage','Parent',ax);
```

```
Warning: Image is too big to fit on screen; displaying at 17%
```

```
title(ax, 'Candidate point matches');
legend(ax, 'Matched points 1','Matched points 2');
```



```
I = imread('C:\Users\bengo\Downloads\Photos\001.jpg');
%features = binaryFeatures(I)

%points = BRISKPoints(I)
```