



# 实习答辩

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# CONTENT



01

实习任务



02

完成情况



03

遇到的问题  
及解决方案



04

实习感悟



01

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实习任务

# 实习任务

1

应用 LabVIEW 完成工业相机的采集任务

2

协助工业相机硬件平台实体搭建和装配

3

实现多种亚像素级轮廓提取图像处理算法

4

实现工业实时图像处理软件程序





02

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完成情况

# 应用 LabVIEW 完成工业相机的采集任务



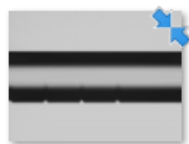
# I 应用 LabVIEW 完成工业相机的采集任务



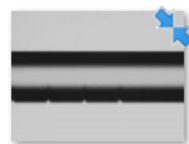
Image\_2019-0  
7-16\_10-10-34  
.bmp



Image\_2019-0  
7-16\_10-11-56  
.bmp



Image\_2019-0  
7-16\_10-20-40  
.bmp



Image\_2019-0  
7-16\_10-21-36  
.bmp



Image\_2019-0  
7-16\_10-23-04  
.bmp



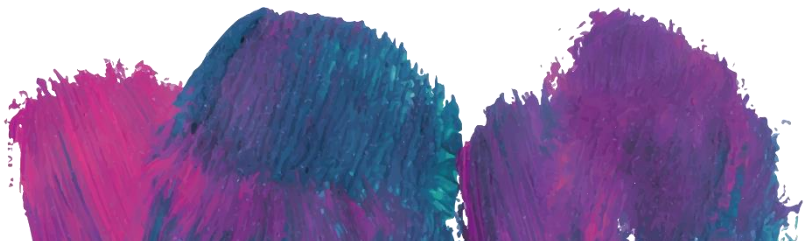
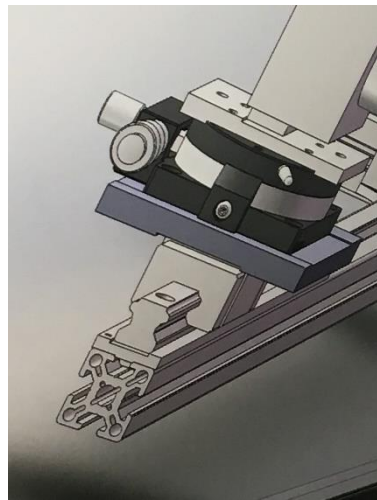
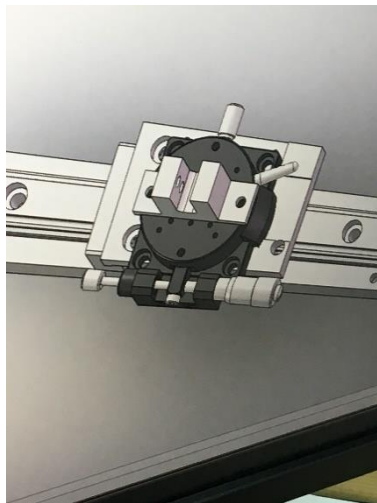
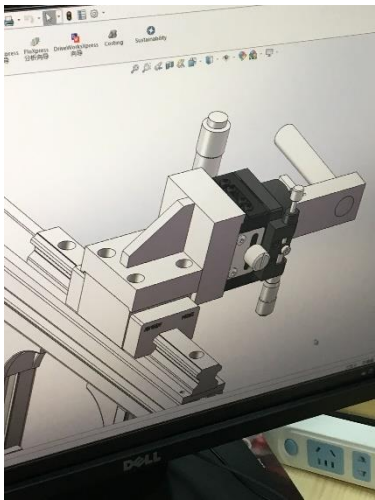
Image\_2019-0  
7-16\_10-23-10  
.bmp





2

## 协助工业相机硬件平台实体搭建和装配



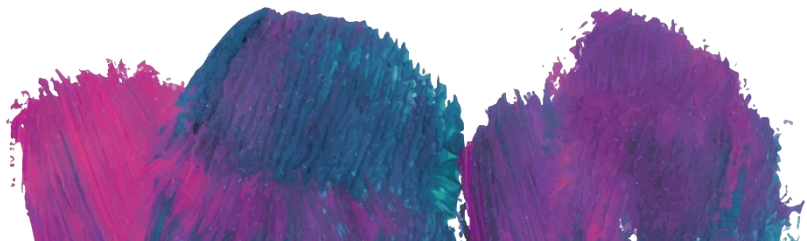


## 实现多种亚像素级轮廓提取图像处理算法

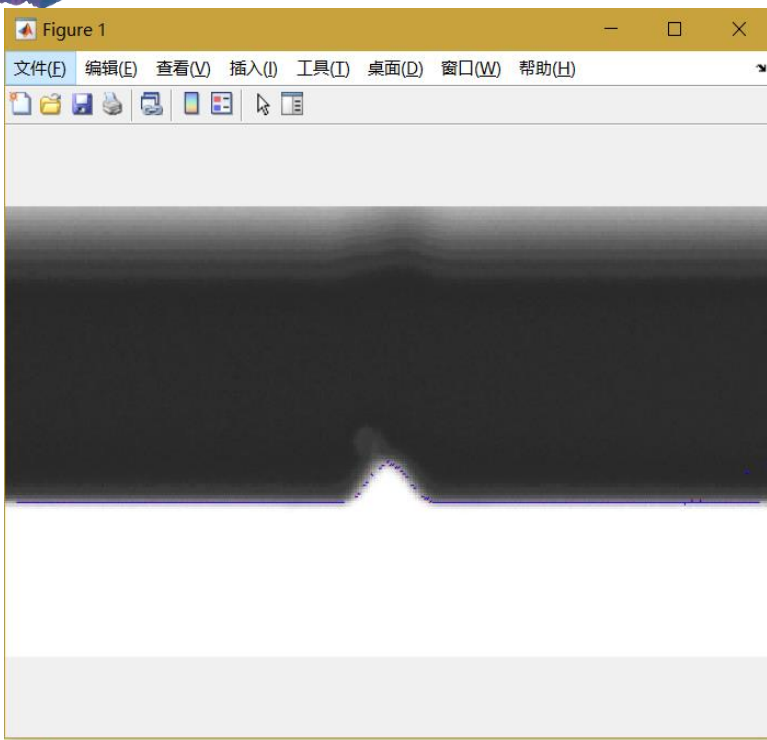
**Interpolation  
Algorithm**

**Advanced  
Zernike  
Moment**

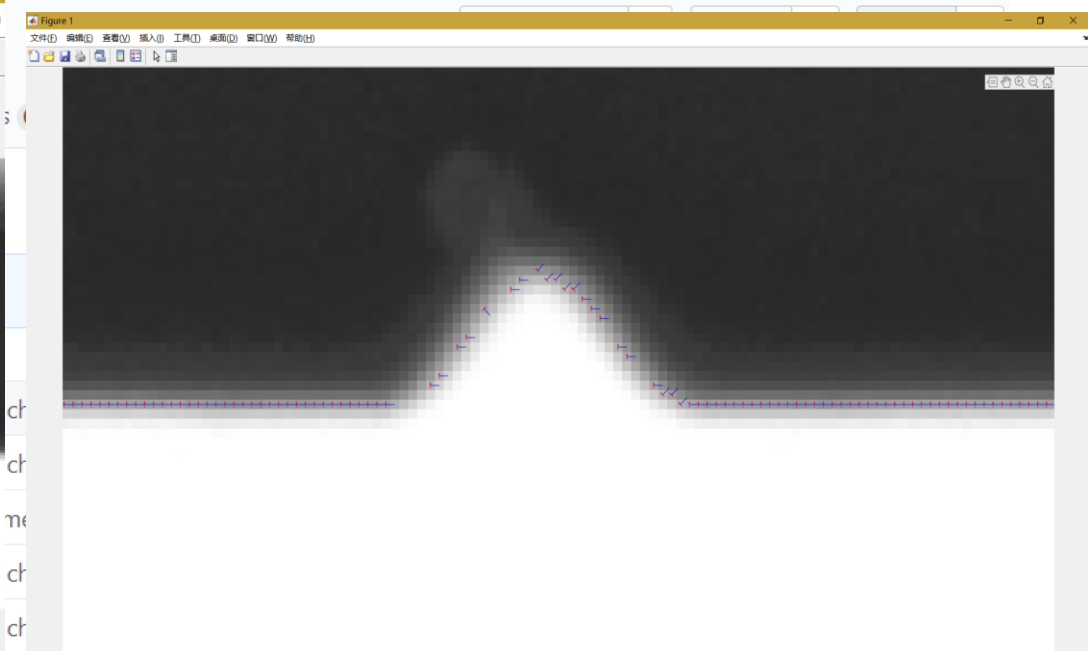
**Partial  
Area  
Effect**



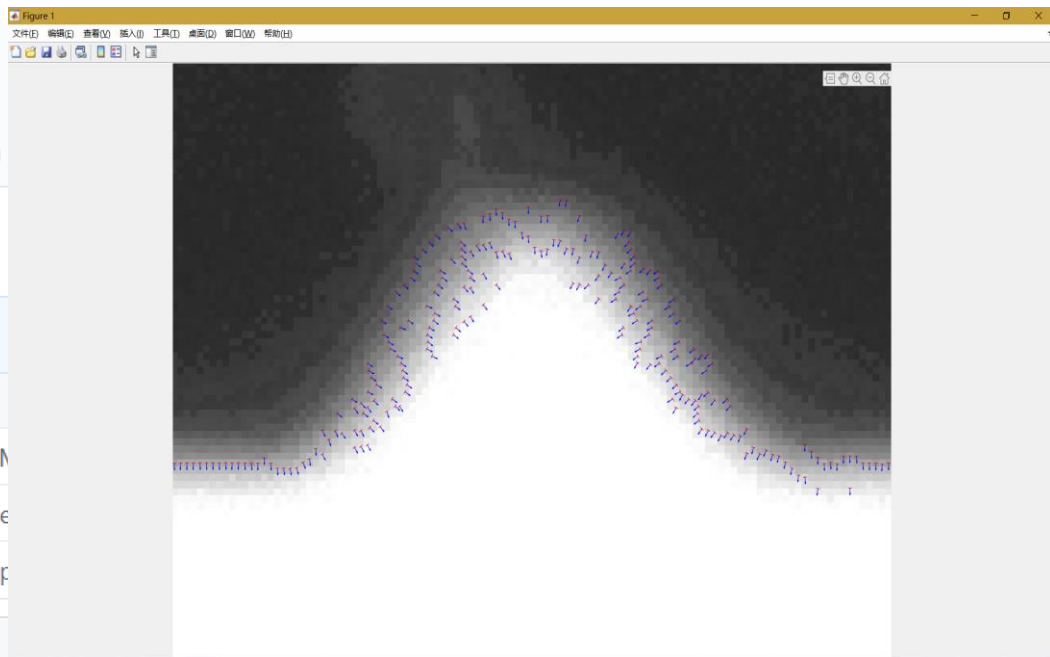
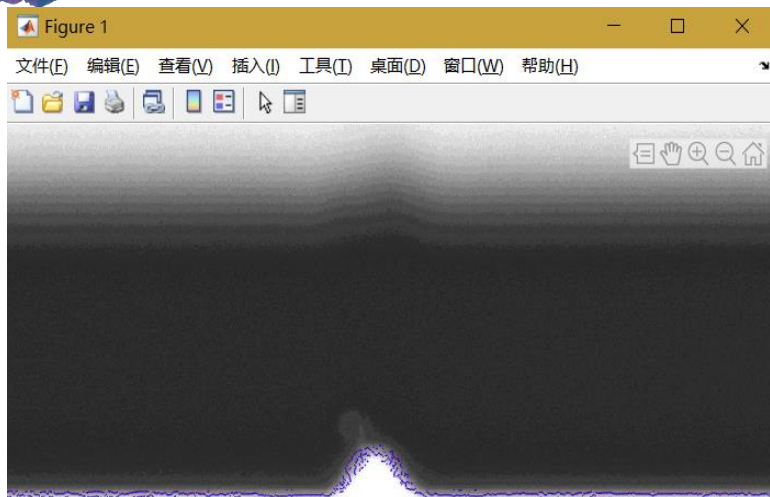
# Interpolation Algorithm



```
>> chazhifa  
时间已过 27.950392 秒。
```



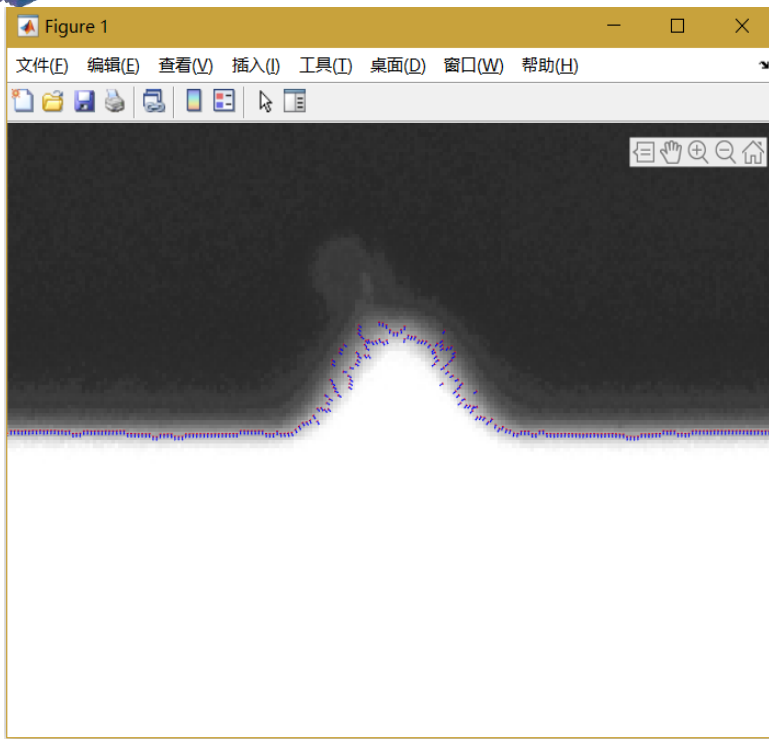
# Advanced Zernike Moment



```
>> GaiJinZernike
```

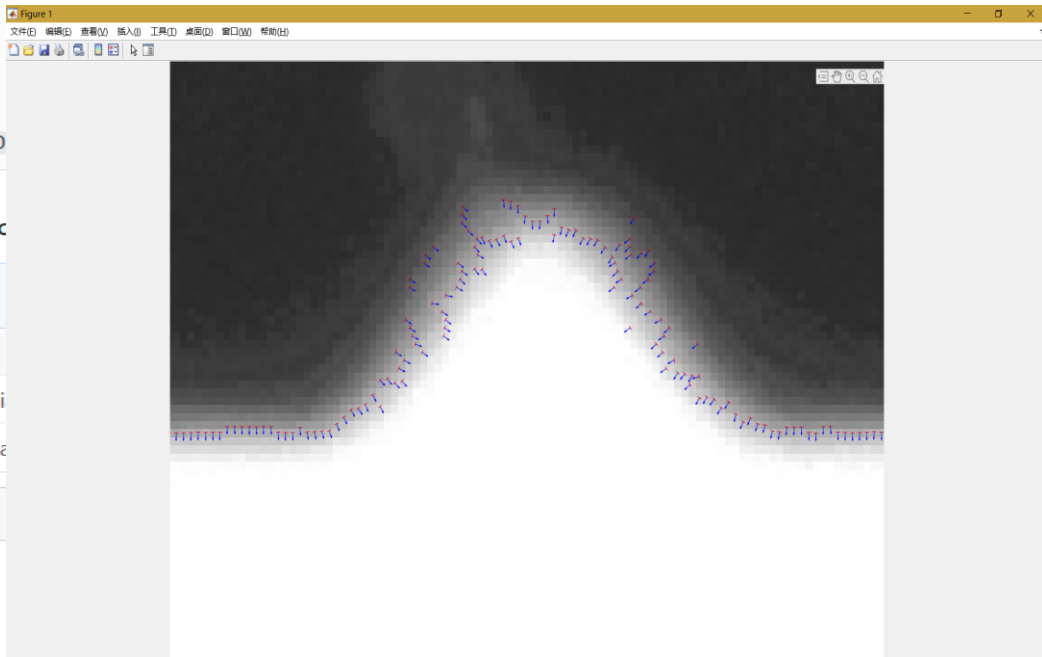
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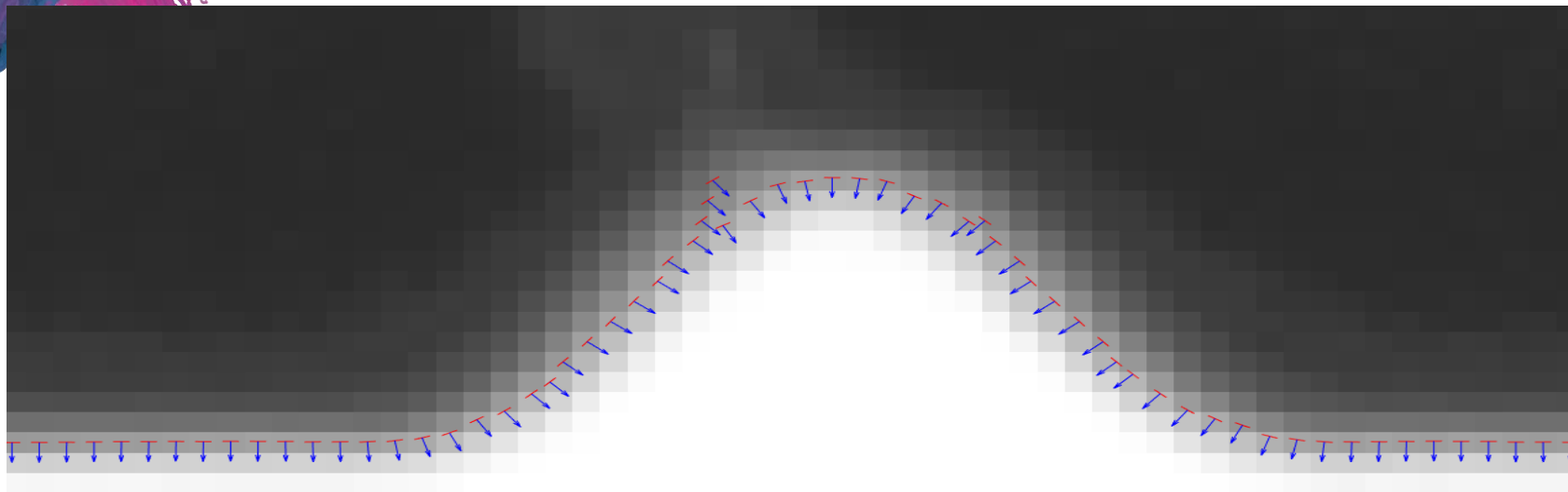
# Partial Area Effect



```
>> jubuxiaoying
```

时间已过 0.251859 秒。







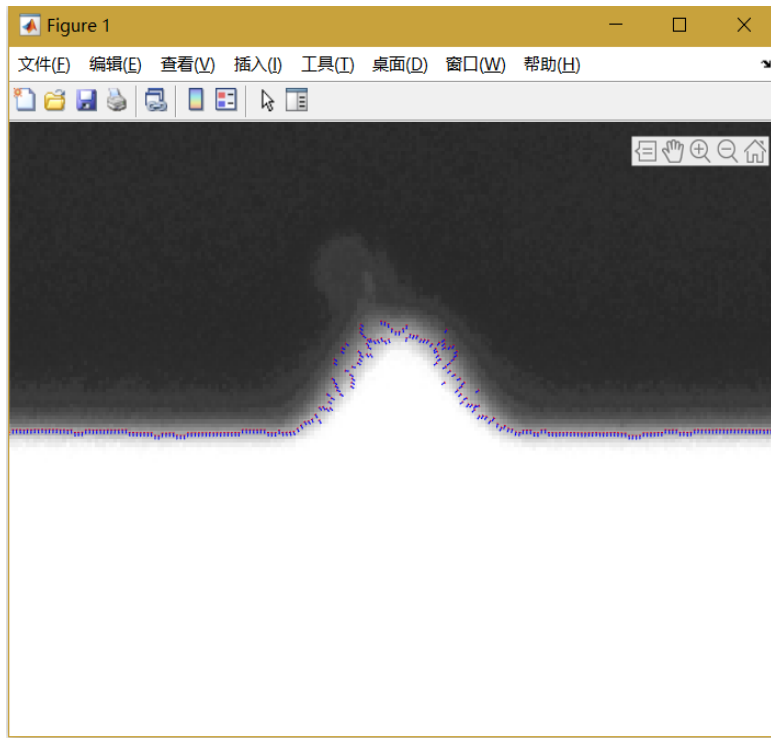
# 03

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## 遇到的问题及解决方案

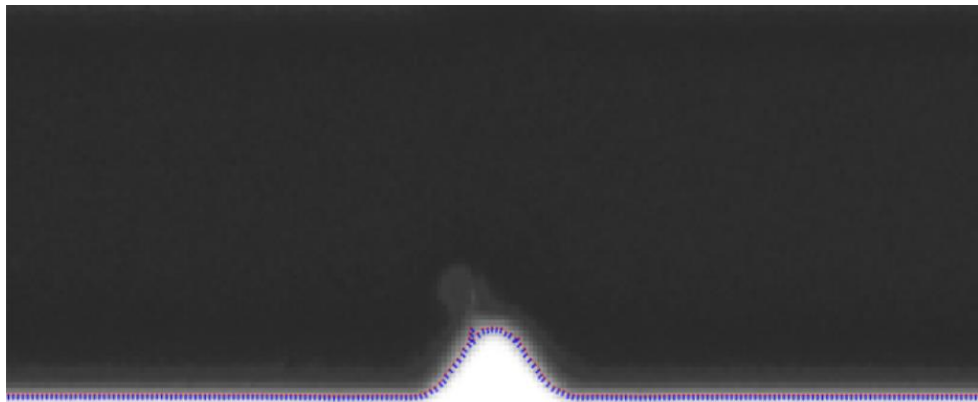
## 问题2

# 科学理论算法 Vs 工程实际应用



>> Jubuxiaoying

时间已过 0.251859 秒。

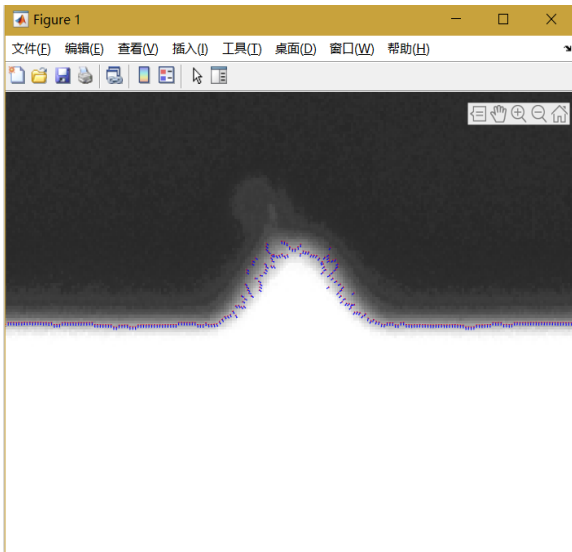




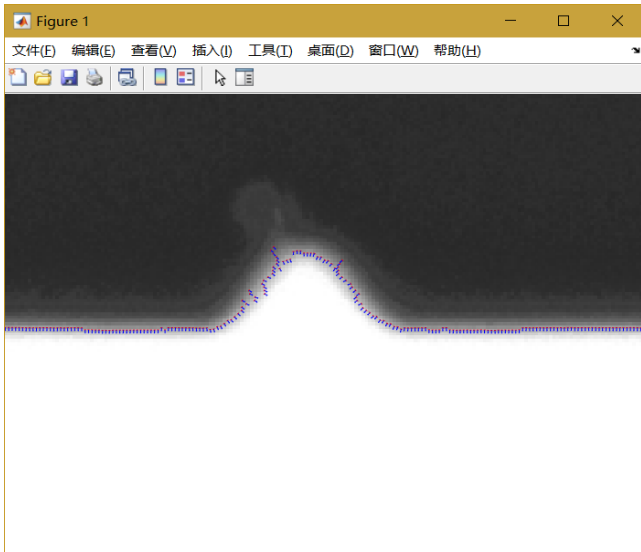
解决方案

## PCA图像降维处理

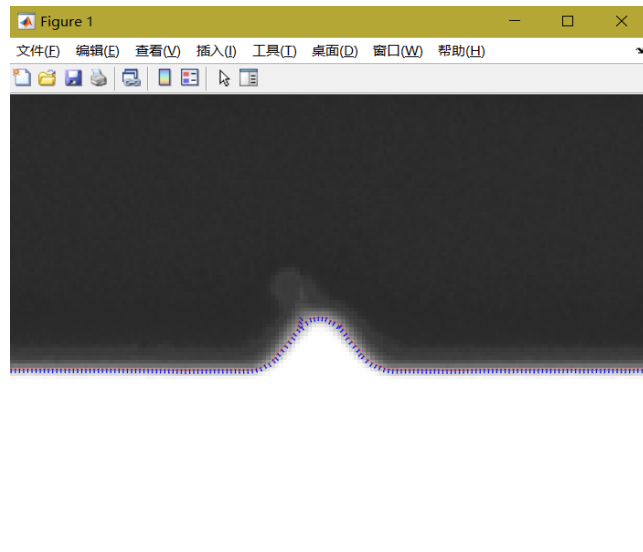
## 多项式拟合+低通滤波



```
>> Jubuxiaoying  
时间已过 0.251859 秒。
```



```
>> Jubuxiaoying2  
时间已过 0.496239 秒。
```



```
>> FinalSolution  
时间已过 0.555419 秒。
```



04

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实习感悟

# 实习感悟

1

身体是革命的本钱

2

有战胜困难的勇气，仰望星空，脚踩大地

3

生命不息，奋斗不止

4

在学校真好



An abstract graphic featuring thick, expressive brushstrokes in shades of purple, blue, and teal. The strokes are layered and textured, creating a sense of movement and depth. They are contained within a thin black rectangular frame. The word "END" is written in white, bold, sans-serif capital letters across the middle of the strokes.

END

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THANK YOU VERY MUCH