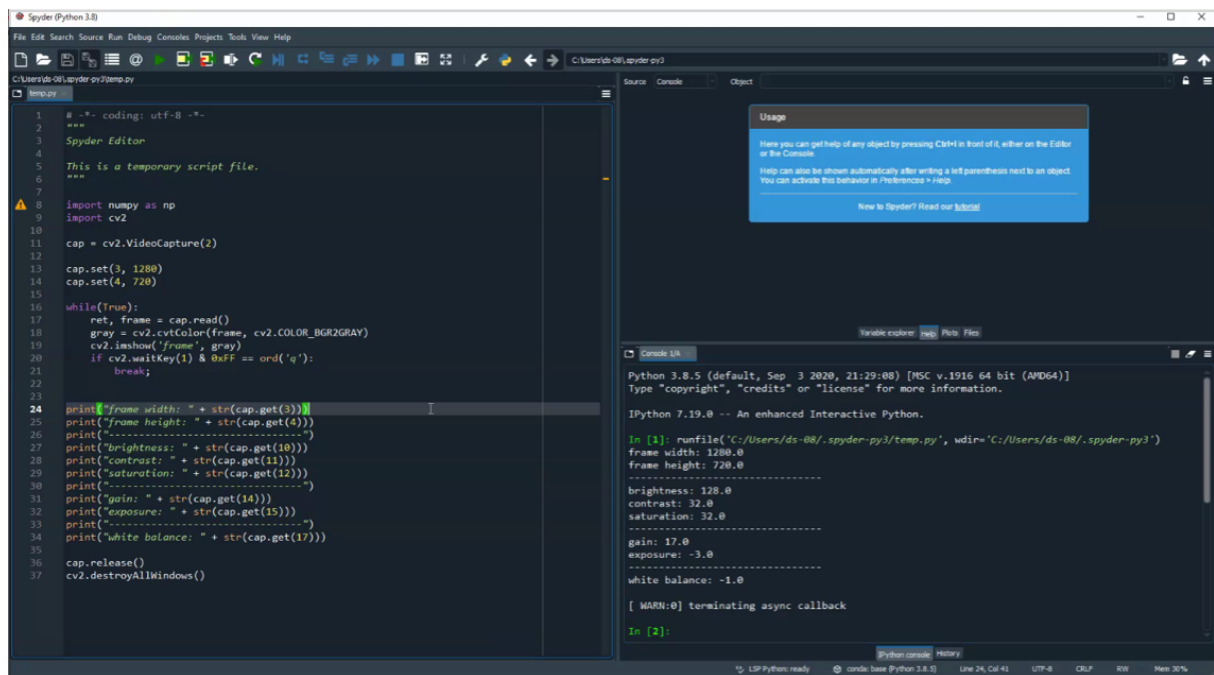


#uni/semester3/SSS/versuch2

- Grauwertkeil und Weissbild
- Ständer
- Kamera



The screenshot shows the Spyder Python IDE interface. The left pane displays a Python script named `temp.py` with the following code:

```
1 # -*- coding: utf-8 -*-
2 """
3 Spyder Editor
4 This is a temporary script file.
5 """
6
7
8 import numpy as np
9 import cv2
10
11 cap = cv2.VideoCapture(2)
12
13 cap.set(3, 1280)
14 cap.set(4, 720)
15
16 while(True):
17     ret, frame = cap.read()
18     gray = cv2.cvtColor(frame, cv2.COLOR_BGR2GRAY)
19     cv2.imshow('frame', gray)
20     if cv2.waitKey(1) & 0xFF == ord('q'):
21         break;
22
23
24 print("frame width: " + str(cap.get(3)))
25 print("frame height: " + str(cap.get(4)))
26 print("-----")
27 print("brightness: " + str(cap.get(10)))
28 print("contrast: " + str(cap.get(11)))
29 print("saturation: " + str(cap.get(12)))
30 print("-----")
31 print("gain: " + str(cap.get(14)))
32 print("exposure: " + str(cap.get(15)))
33 print("-----")
34 print("white balance: " + str(cap.get(17)))
35
36 cap.release()
37 cv2.destroyAllWindows()
```

The right pane shows the IPython console output:

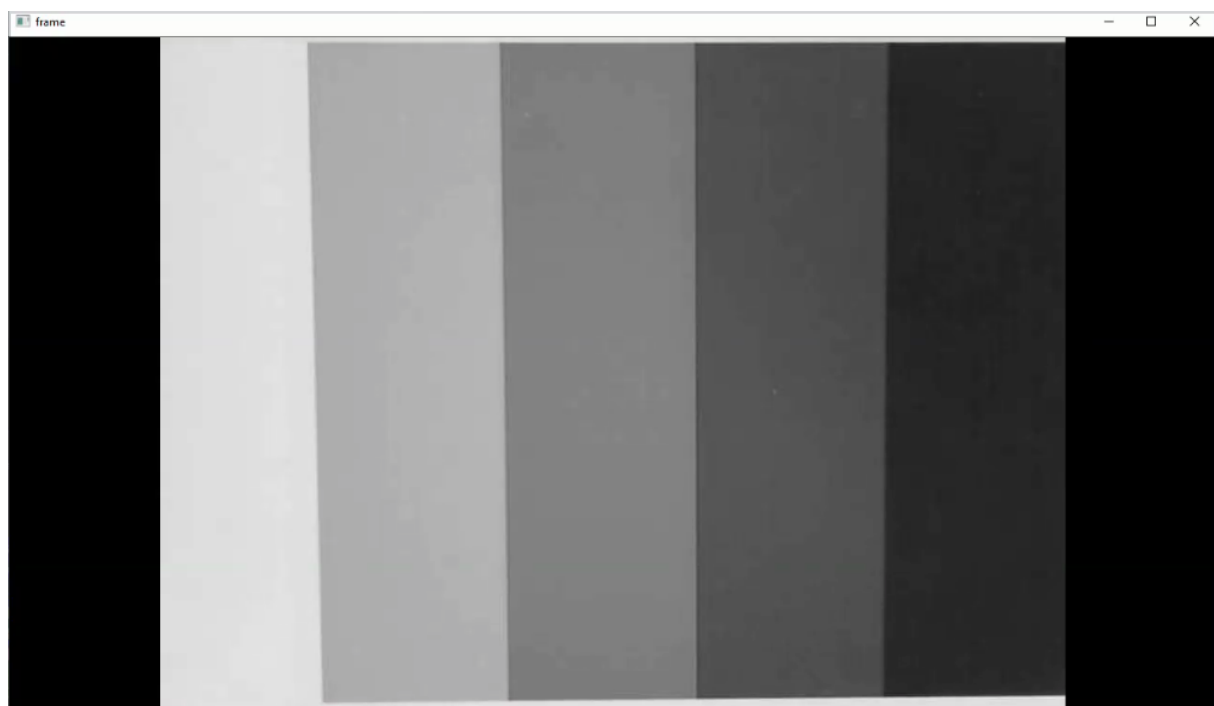
```
Python 3.8.5 (default, Sep 3 2020, 21:29:08) [MSC v.1916 64 bit (AMD64)]
Type "copyright", "credits" or "license()" for more information.

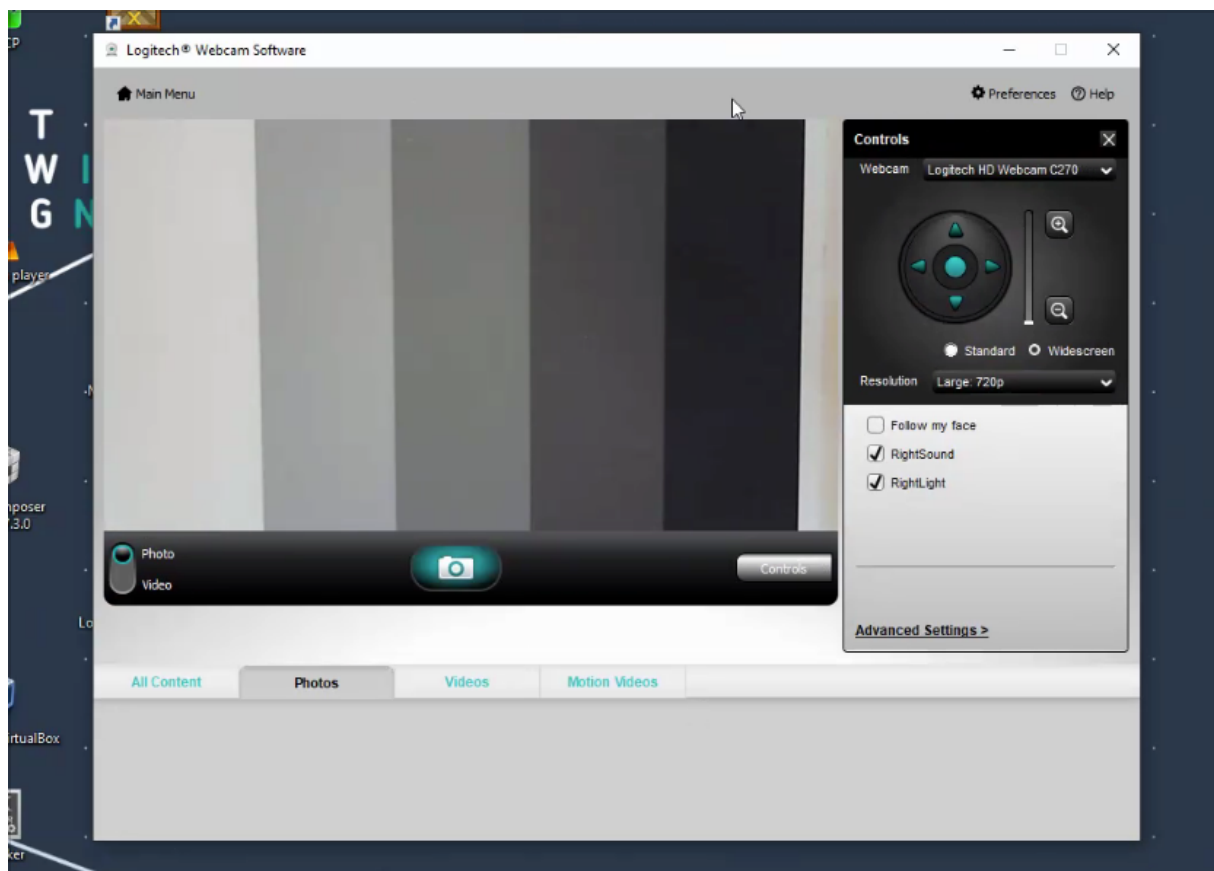
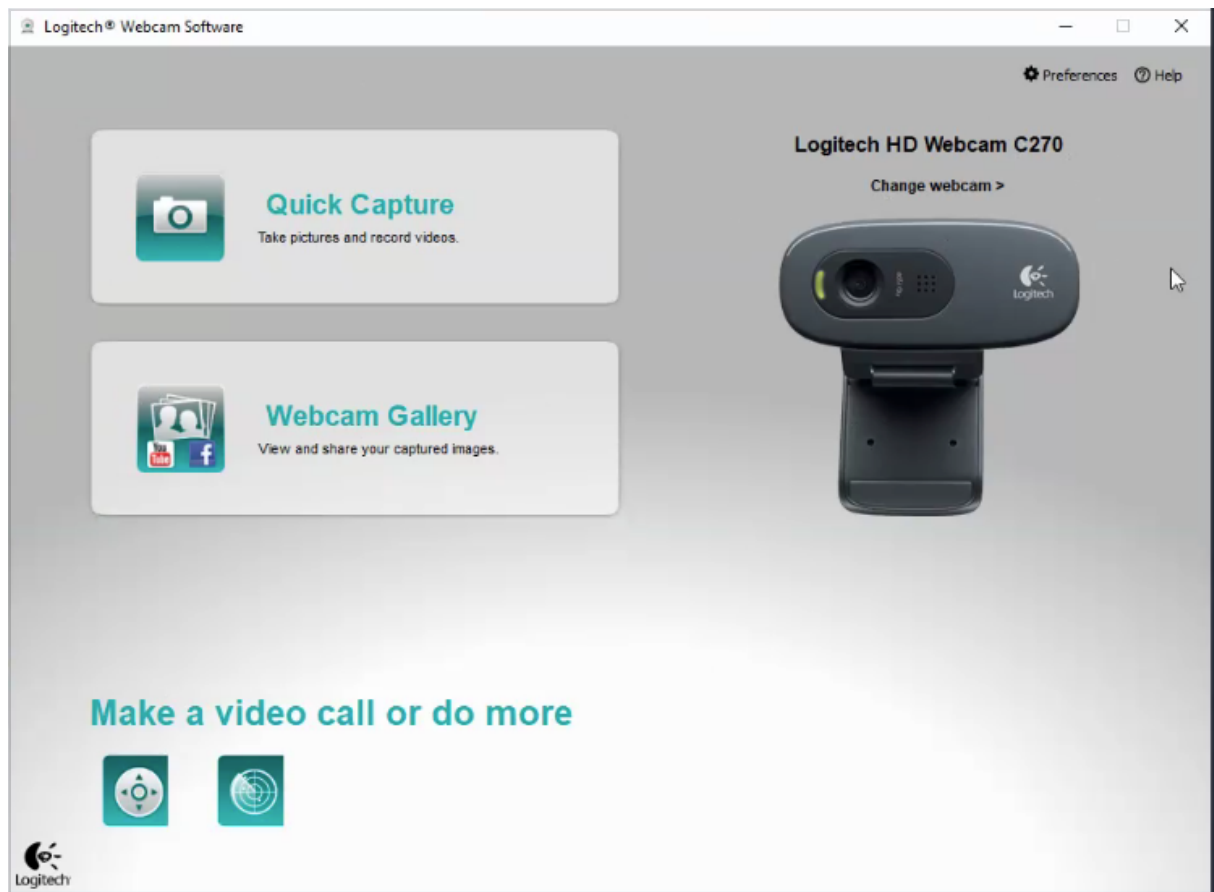
IPython 7.19.0 -- An enhanced Interactive Python.

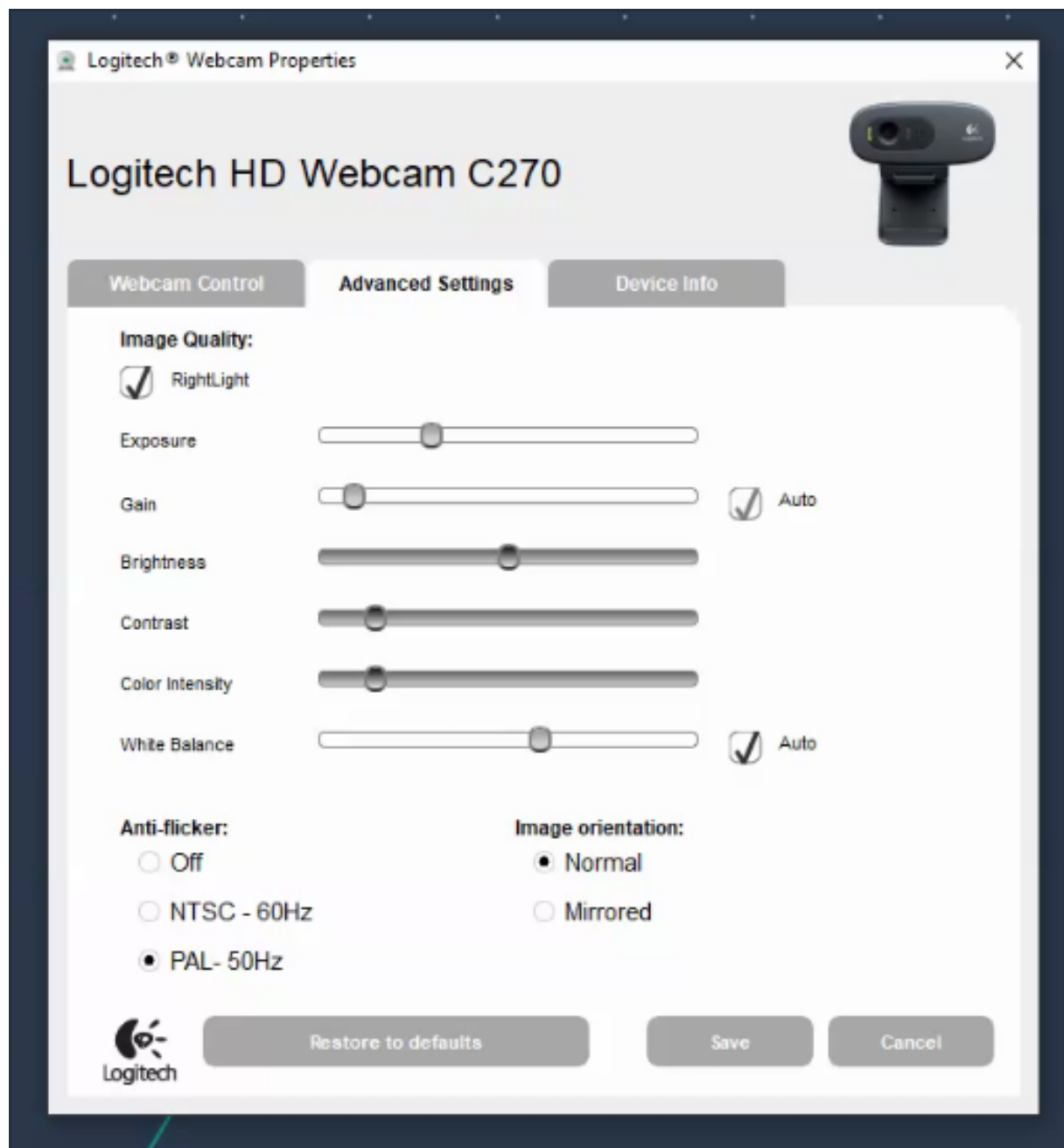
In [1]: runfile('C:/Users/ds-08/.spyder-py3/temp.py', wdir='C:/Users/ds-08/.spyder-py3')
frame width: 1280.0
frame height: 720.0
-----
brightness: 128.0
contrast: 32.0
saturation: 32.0
-----
gain: 17.0
exposure: -3.0
-----
white balance: -1.0

[ WARN:0] terminating async callback

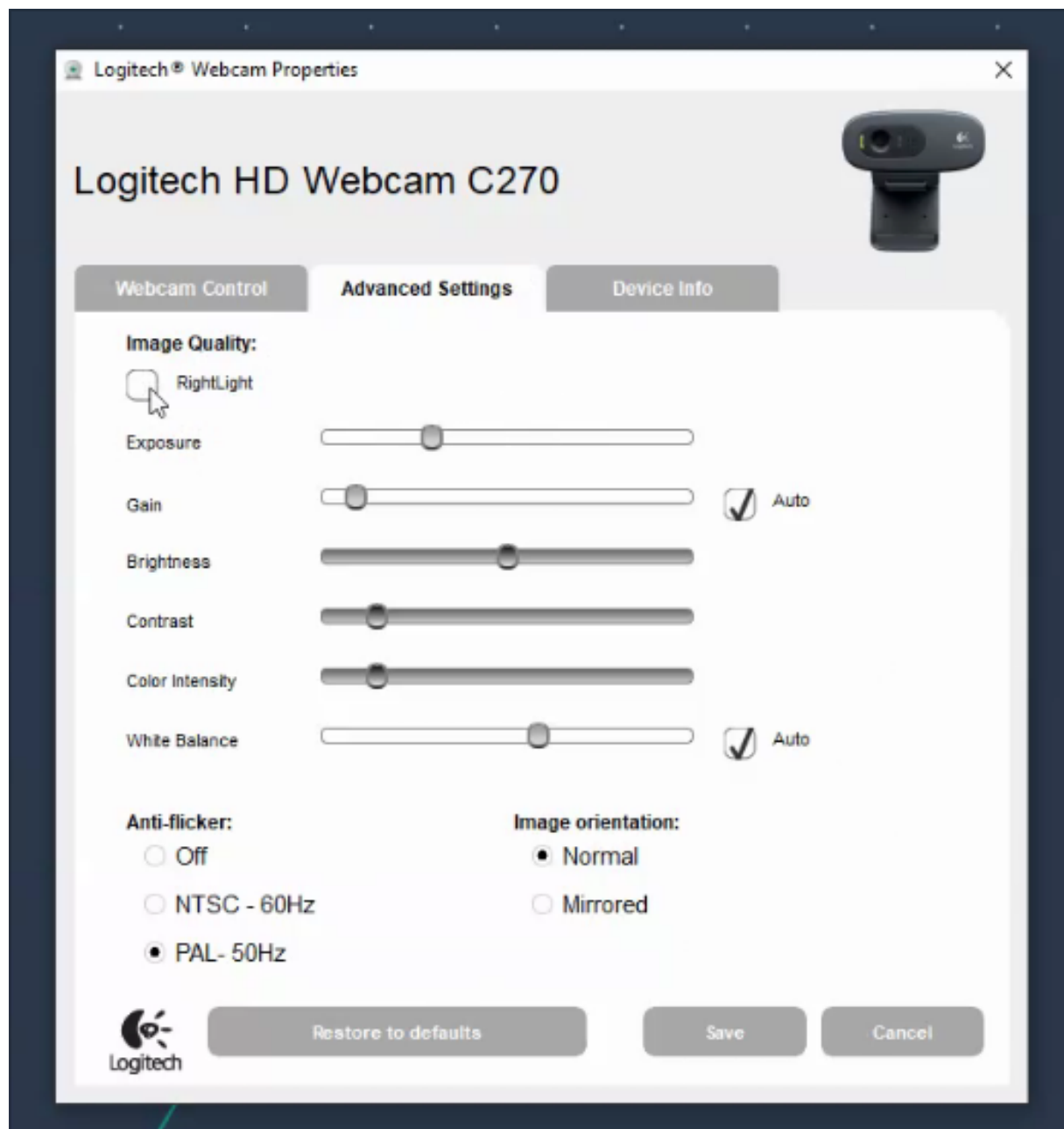
In [2]:
```



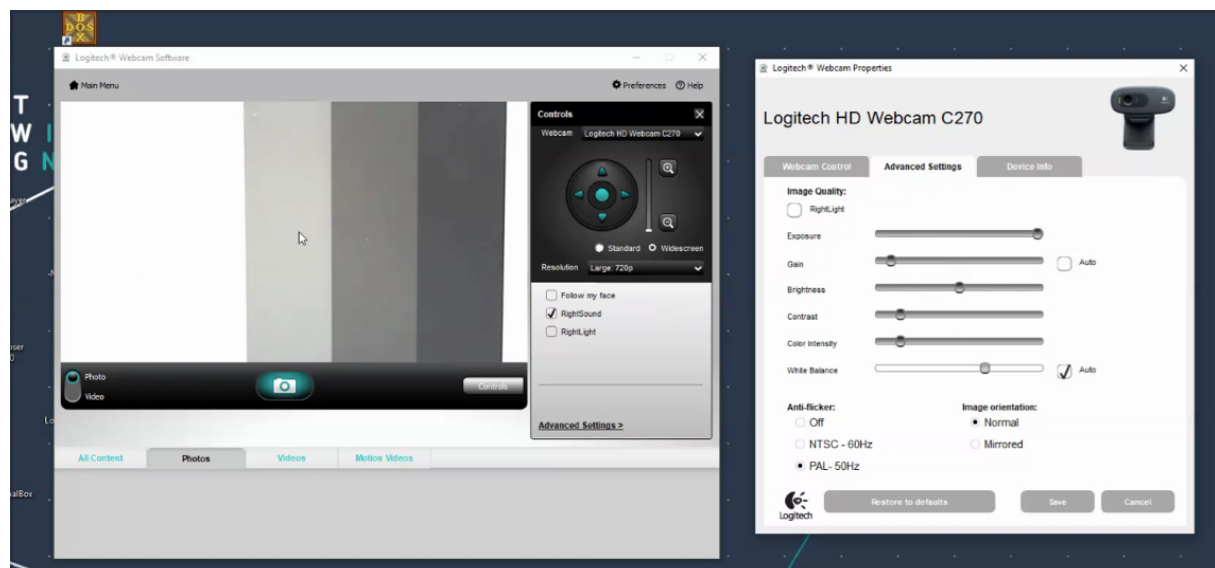




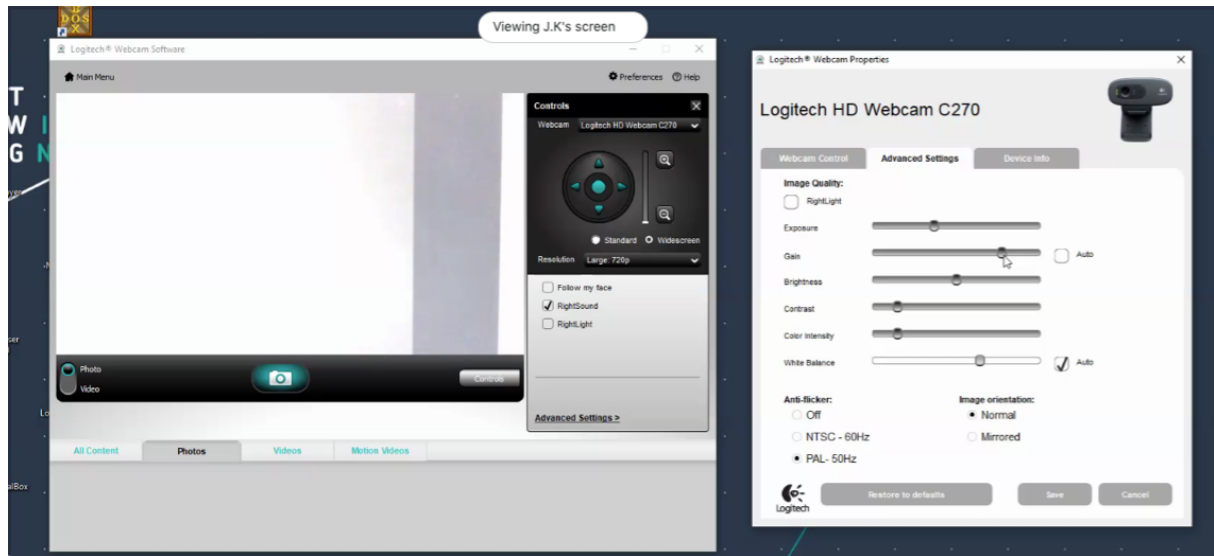
Wird zu:



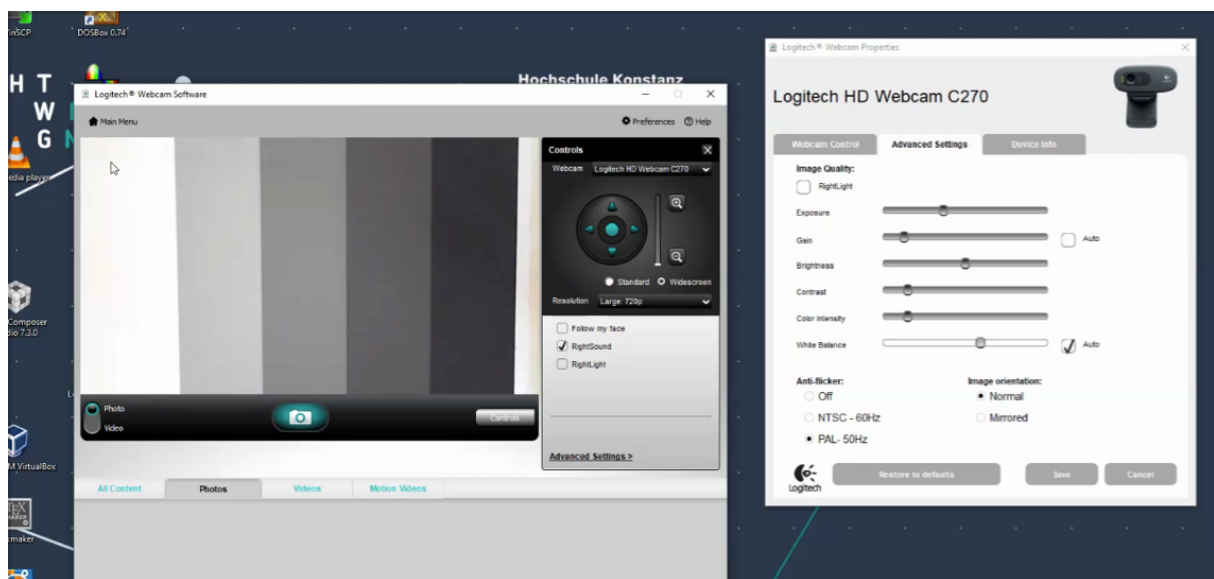
→ Exposure ist Belichtungsdauer

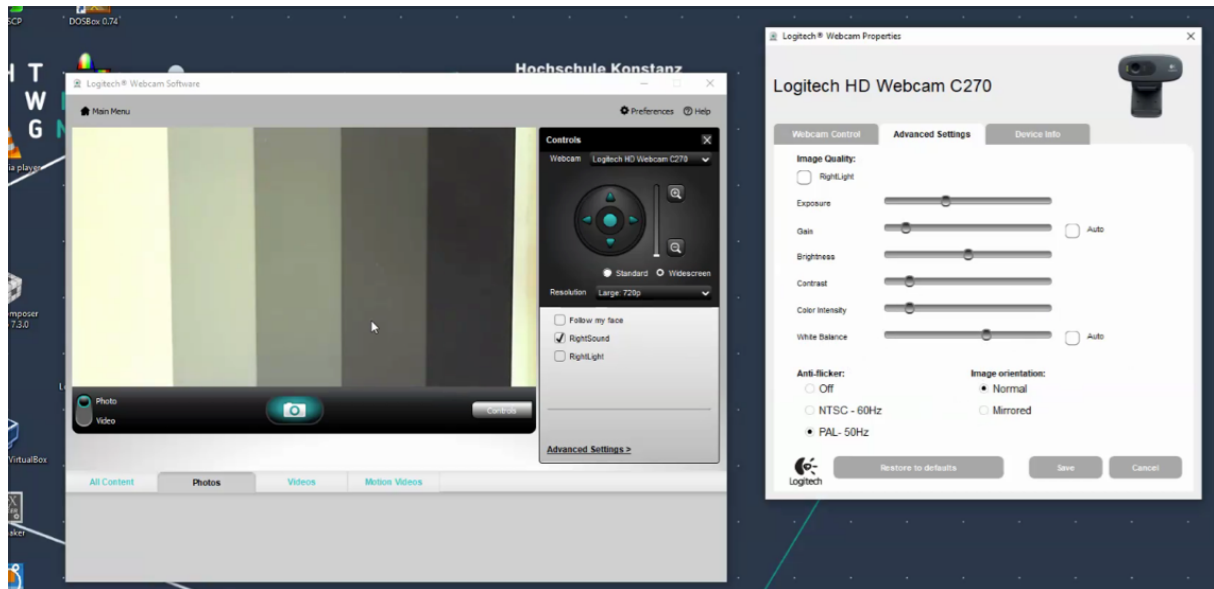


→ Nicht gut



→ Gain verstärkt Spannung die beim Auftreten der Photonen entsteht





→ Stört uns nicht da bei Umwandlung in grau, geht das weg