



# UNIVERSITÀ DEGLI STUDI DI PADOVA

## Compiling the OpenCV Hello world

Stefano Ghidoni





- Compiling Hello world
- Handling compile options
- Basic hands-on experience



```
// OpenImg.cpp
#include <opencv2/highgui.hpp>

int main(int argc, char** argv)
{
    cv::Mat img = cv::imread(argv[1]);
    cv::namedWindow("Example 1");
    cv::imshow("Example 1", img);
    cv::waitKey(0);

    return 0;
}
```



Suppose the file name is  
OpenImg.cpp



- To compile using the command line:

```
g++ OpenImg.cpp -o OpenImg -I/usr/local/include/opencv4  
-lopencv_highgui -lopencv_core -lopencv_imgcodecs
```

- Looks hard to understand?



- To compile using the command line:

g++

OpenImg.cpp

-o OpenImg

-I/usr/local/include/opencv4

-lopencv\_highgui

-lopencv\_core

-lopencv\_imgcodecs



Calls preprocessor,  
compiler, linker



- To compile using the command line:

g++

OpenImg.cpp

-o OpenImg

-I/usr/local/include/opencv4

-lopencv\_highgui

-lopencv\_core

-lopencv\_imgcodecs



Name of the input  
(source file)



- To compile using the command line:

g++

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-lopencv\_highgui

-lopencv\_core

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**Name of the output  
(executable file)**

- No extension (Linux standard)



- To compile using the command line:

g++

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#### Include path

- Where can g++ find header files?
- Uppercase "I"





- To compile using the command line:

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## Libraries to be linked

- List the library files to be linked
- Lowercase "L"



- g++ considers standard directories
- Header files:
  - /usr/include
  - /usr/local/include
- Library files:
  - /usr/lib
  - /usr/local/lib



- Other directories may be specified in the command line
  - Header file location: -I (uppercase "i")
  - Library file location: -L
  - Library file to be linked: -l (lowercase "L")
- In our example we specified -I but not -L
  - Why?



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