

# C/C++ programming with Visual Studio 2015 and OpenCV 2.4.9

## Preparation of the computer

- Download **Visual Studio 2015 Community** and <http://www.ensta-bretagne.fr/lebars/Share/OpenCV2.4.9.zip> , install Visual Studio and extract OpenCV2.4.9.zip in **C:\** (check that the extraction did not create an additional parent folder (we need to get only C:\OpenCV2.4.9\ instead of C:\OpenCV2.4.9\OpenCV2.4.9\), run as administrator if needed).
- In Windows Explorer, right-click on **Computer**, choose **Properties**.
- In the **System** window, click on **Advanced system parameters**. If you do not have administrative rights, on Windows 10 you can press the Windows button, type **path**, and choose **Edit the system environment variables for your account** in the search results to directly access the **Environment variables** window.
- In the **System Properties** windows, click on **Environment variables**.
- In the **Environment variables** window, double-click on the **PATH** variable and add in the end of the **Value** part (without deleting its initial content and add the semi-colons!)  **;C:\OpenCV2.4.9\x86\vc14\bin;**
- Restart.
- If needed, see [http://www.ensta-bretagne.fr/lebars/tutorials/screenshots\\_vs2015\\_cv249\\_win10.pdf](http://www.ensta-bretagne.fr/lebars/tutorials/screenshots_vs2015_cv249_win10.pdf) and [http://www.ensta-bretagne.fr/lebars/tutorials/Complements\\_C-C++.pdf](http://www.ensta-bretagne.fr/lebars/tutorials/Complements_C-C++.pdf) for more information.

## Tricks/common problems OpenCV

- Depending on the functions you need, check all the libraries **opencv\_XXX.lib** you need to add to the project settings.
- Do not call **cvReleaseImage()/cv::Mat::release()** on an **IplImage/cv::Mat** returned by **cvQueryFrame()/cv::VideoCapture::read()**.
- Be careful to check the type and dimensions of an image returned by **cvQueryFrame()/cv::VideoCapture::read()**, they might be unusual depending on the characteristics of the camera.
- Always use **cvWaitKey()/cv::waitKey()** somewhere after **cvShowImage()/cv::imshow()** to display an **IplImage/cv::Mat** in a window, otherwise the image might not be displayed.
- Although several samples use the C API, most of the new functionalities of OpenCV are now in its C++ API.
- See also [http://www.ensta-bretagne.fr/lebars/tutorials/Complements\\_C-C++.pdf](http://www.ensta-bretagne.fr/lebars/tutorials/Complements_C-C++.pdf) .

## Test

[http://www.ensta-bretagne.fr/lebars/Share/ImageOpenCV249\\_vs2015.zip](http://www.ensta-bretagne.fr/lebars/Share/ImageOpenCV249_vs2015.zip)

[http://www.ensta-bretagne.fr/lebars/Share/VideoWebcamOpenCV249\\_vs2015.zip](http://www.ensta-bretagne.fr/lebars/Share/VideoWebcamOpenCV249_vs2015.zip)