Quick Start Imagine++

1. Installing Imagine++

Installation: see http://imagine.enpc.fr/~monasse/Imagine++/

2. Imagine++ Documentation

Online documentation: see http://imagine.enpc.fr/~monasse/Imagine++/

- Graphics library: http://imagine.enpc.fr/~monasse/Imagine++/group___graphics.html
- Images library: http://imagine.enpc.fr/~monasse/Imagine++/group___images.html

See also Appendix C of this text book:

- La programmation pour les élèves ingénieurs
  http://imagine.enpc.fr/~monasse/Info/programmer.pdf

3. Quick Introduction to Imagine++

3.1. Header

```
#include <Imagine/Graphics.h>
#include <Imagine/Images.h>
using namespace Imagine;
```

3.2. Useful types and functions

- small integer (typically for greyscale or color intensity) between 0 and 255: `byte`
- reference to file located in source directory: `srcPath("file_in_src_dir.txt")`
- `Color col(red,green,blue)` predefined: `BLACK, WHITE, BLUE, RED...`
- image class: `Image<byte>`, `Image<float>`
- image creation: `Image<float> I(w,h)`
- image loading: `bool ok = load(I, scrPath("image.jpg"))`
- image access: `I(x,y)=0; return I(x+a,y+b)`
- image size: `I.height()`, `I.width()`
- sub-image creation: `I.getSubImage(x,y,w,h)`
- image enlargement by given factor (with interpolation): `enlarge(I,fact)`
- image blurring with Gaussian of given sigma: `blur(I,sigma)`
- representation of a scalar image (e.g. double) by a greyscale (e.g. byte): `bI=grey(dI)`
- image loading: `bool success=load(I,srcPath("face00R.png"))`
- window opening: `Window W=openWindow(w,h)`
- selecting window for next draw orders: `setActiveWindow(W)`
- image displaying in open window at given offsets: `display(I,x=0,y=0)`
- drawing: `drawLine(x1,y1,x2,y2,color)` `drawRect(x,y,w,h,color)` `display(img,x,y)` `drawString("hello",x,y,color)`
- wait for mouse click in active window: `click()`, in any window: `anyClick()`