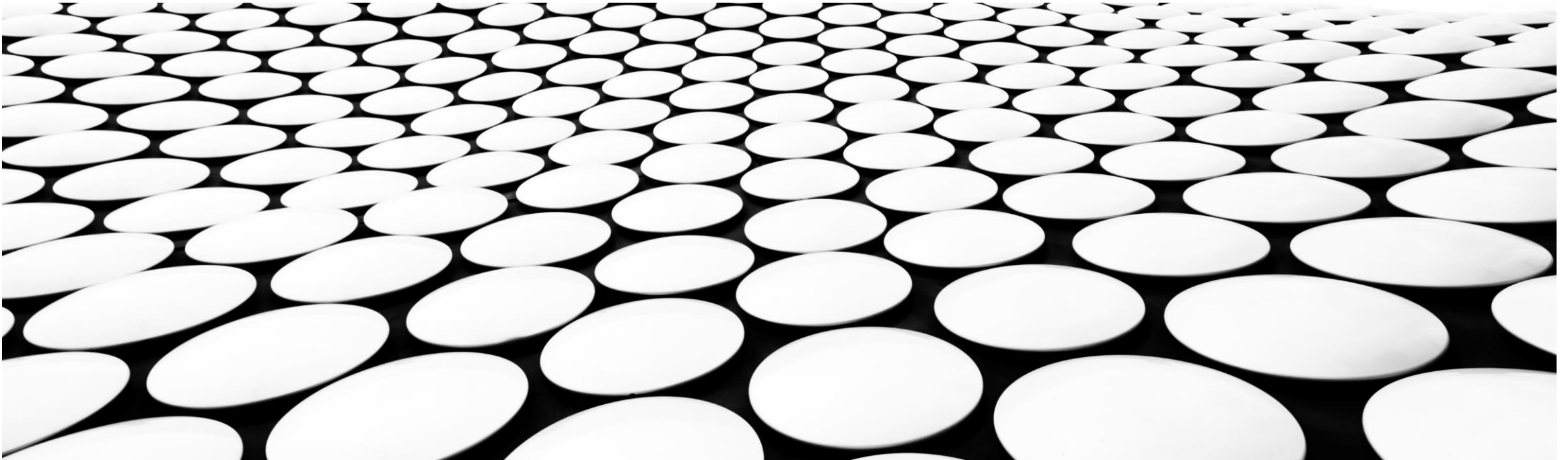


INFO-H-503 – GPGPU Programming – Project

Gauthier Lafruit – Jan Lemeire

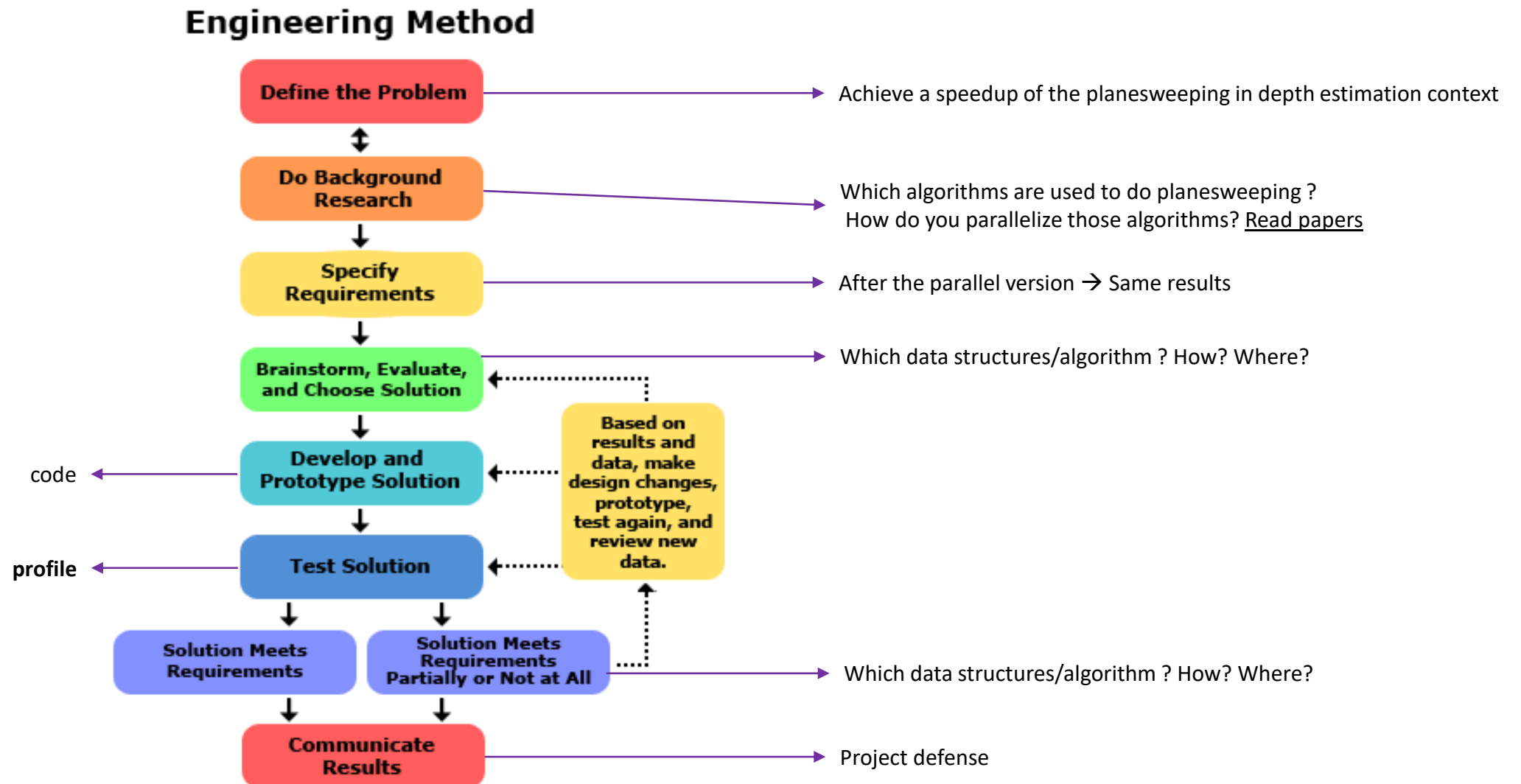
Eline Soetens - Daniele Bonatto



Scientific Method

<https://www.sciencebuddies.org/science-fair-projects/engineering-design-process/engineering-design-compare-scientific-method>

- Follow as much as possible the Engineering Design Process (highly correlated to the scientific method)
- You are not only evaluated on the speed-up but also on how you achieved it

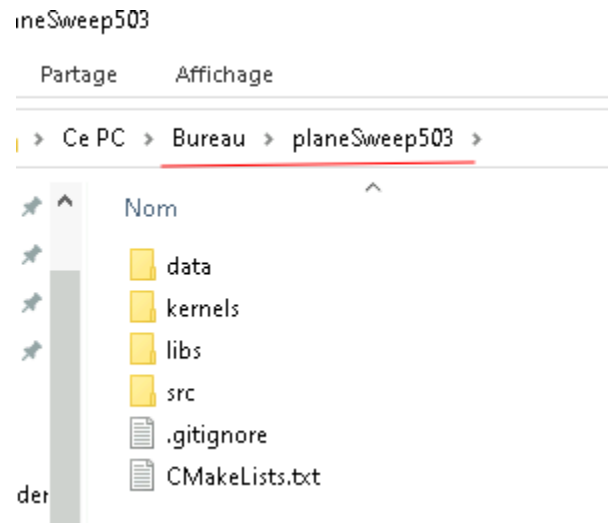


How to compile and START the software

- You need:
 - Visual Studio 2019 (<https://visualstudio.microsoft.com/fr/thank-you-downloading-visual-studio/?sku=Community&rel=16>)
 - Cmake (<https://cmake.org/>)
 - OpenCV (<https://opencv.org/>)
 - CUDA 10 installed (<https://developer.nvidia.com/cuda-10.1-download-archive-base>)
 - Git (<https://git-scm.com/>)
- The software (PlaneSweep) (given)
- Images (given)
- Camera parameter (given)

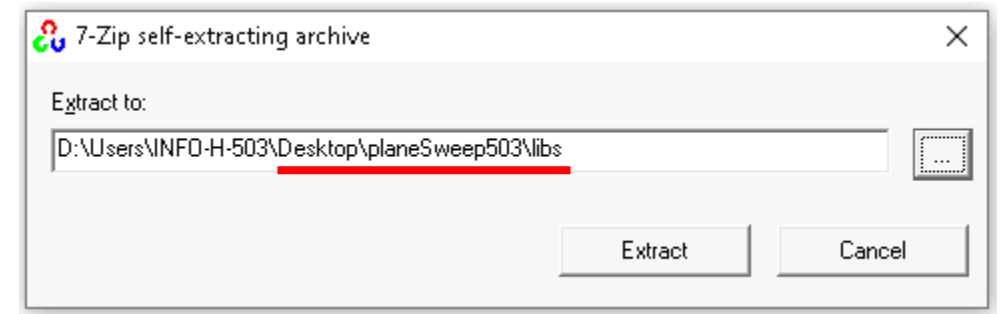
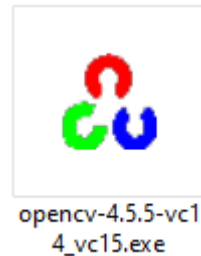
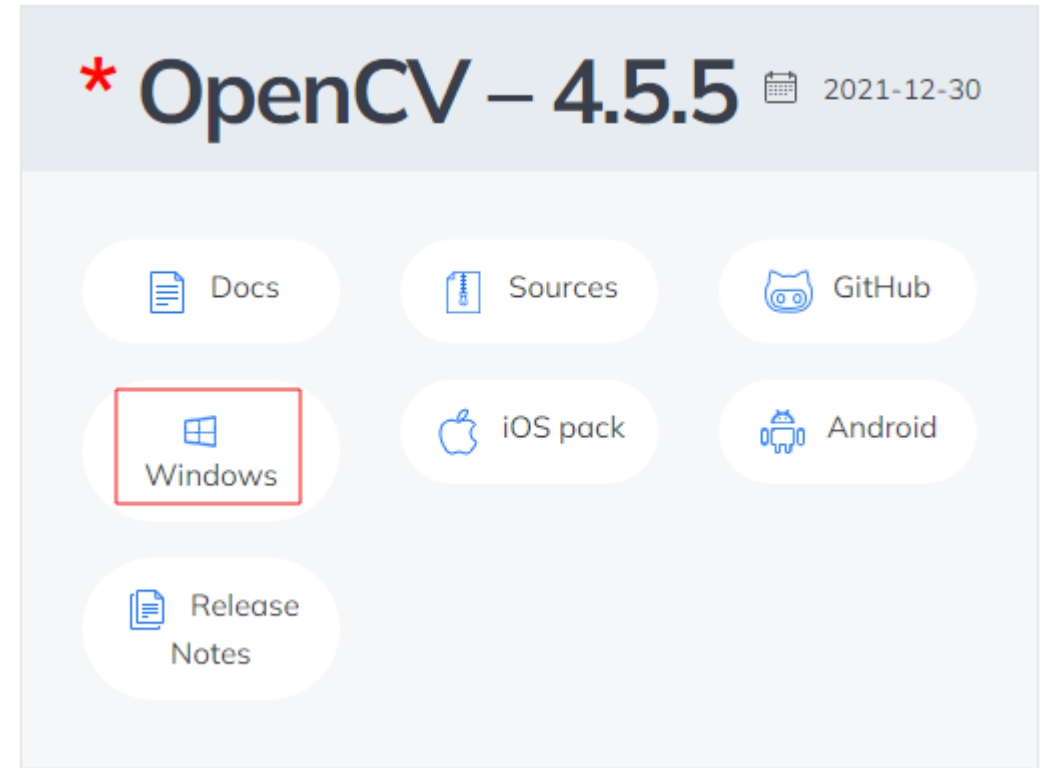
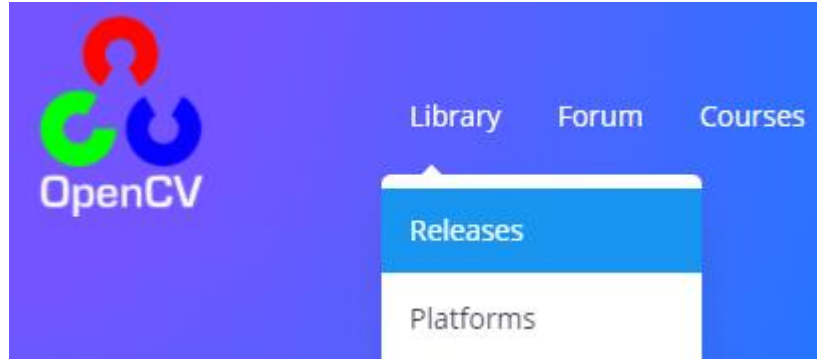
PlaneSweep

- Download the source code for the project:
- Unzip it in the desktop



OpenCV

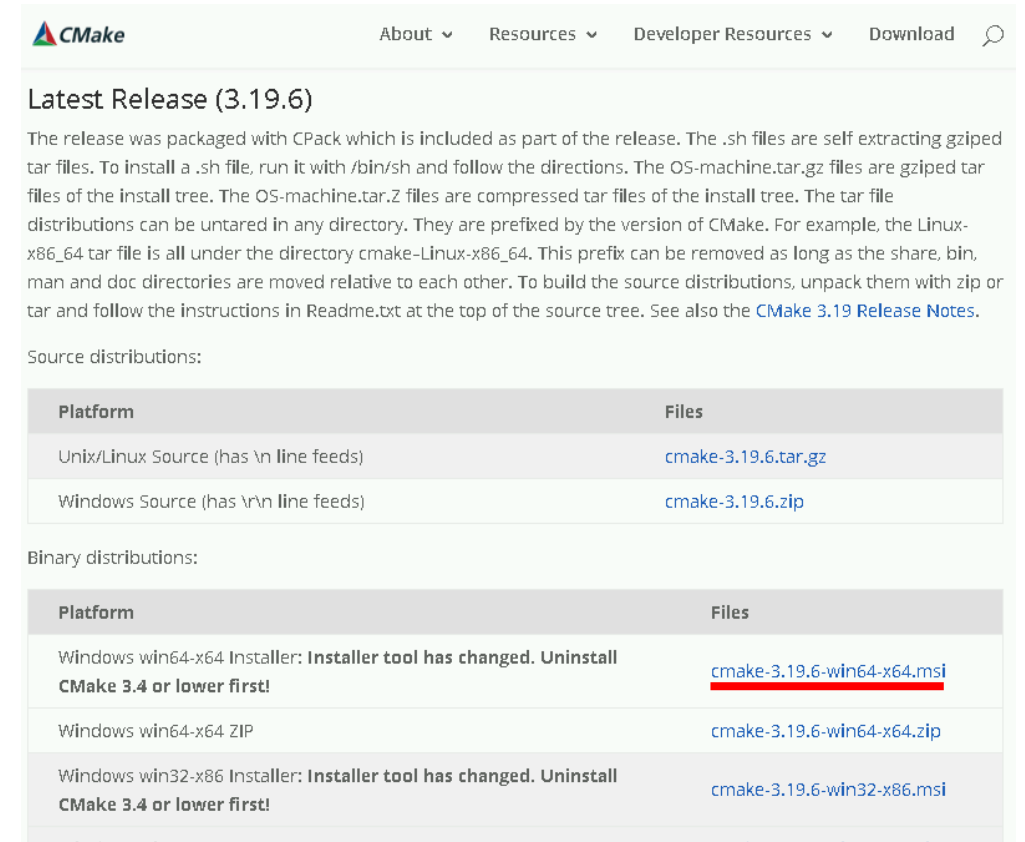
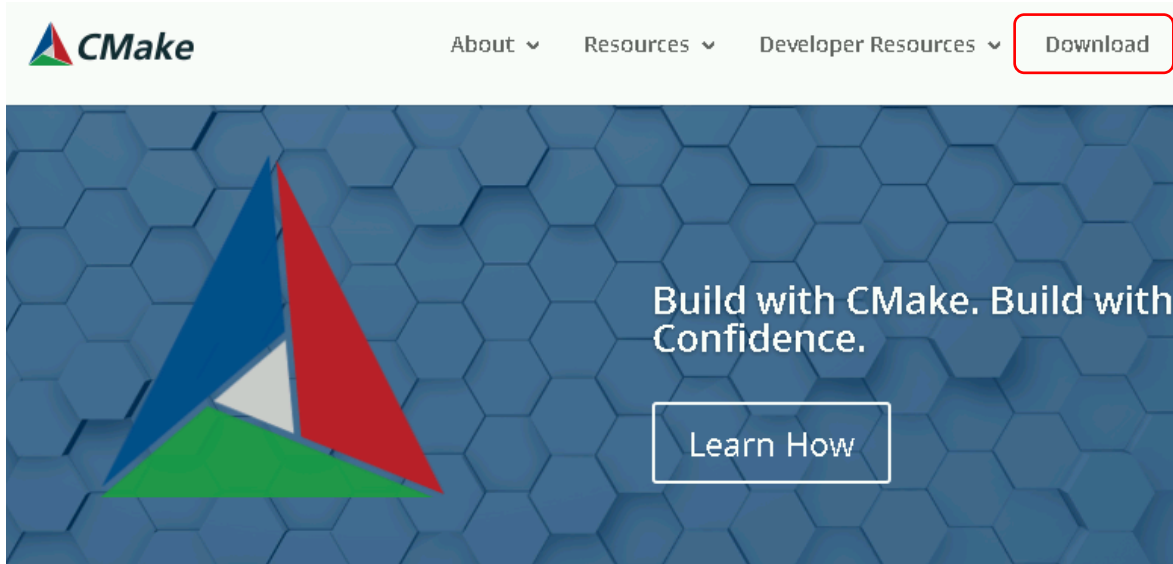
- Go to OpenCV website and download the Windows version



- When you execute the installer, select the subfolder “libs” inside your project

CMAKE

- Download Cmake

The image is a screenshot of the CMake website's 'Latest Release (3.19.6)' page. At the top, there is a navigation bar with the CMake logo and links for 'About', 'Resources', 'Developer Resources', and 'Download'. The main heading is 'Latest Release (3.19.6)'. Below this, there is a paragraph of text explaining the release, mentioning CPack, .sh files, OS-machine.tar.gz files, and OS-machine.tar.Z files. It also mentions that distributions can be untared in any directory and are prefixed by the version of CMake. A link to 'CMake 3.19 Release Notes' is provided. Below the text, there is a section titled 'Source distributions:' followed by a table. The table has two columns: 'Platform' and 'Files'. It lists two source distributions: 'Unix/Linux Source (has \n line feeds)' with the file 'cmake-3.19.6.tar.gz' and 'Windows Source (has \r\n line feeds)' with the file 'cmake-3.19.6.zip'. Below this, there is a section titled 'Binary distributions:' followed by another table. This table also has two columns: 'Platform' and 'Files'. It lists three binary distributions: 'Windows win64-x64 Installer: Installer tool has changed. Uninstall CMake 3.4 or lower first!' with the file 'cmake-3.19.6-win64-x64.msi', 'Windows win64-x64 ZIP' with the file 'cmake-3.19.6-win64-x64.zip', and 'Windows win32-x86 Installer: Installer tool has changed. Uninstall CMake 3.4 or lower first!' with the file 'cmake-3.19.6-win32-x86.msi'.

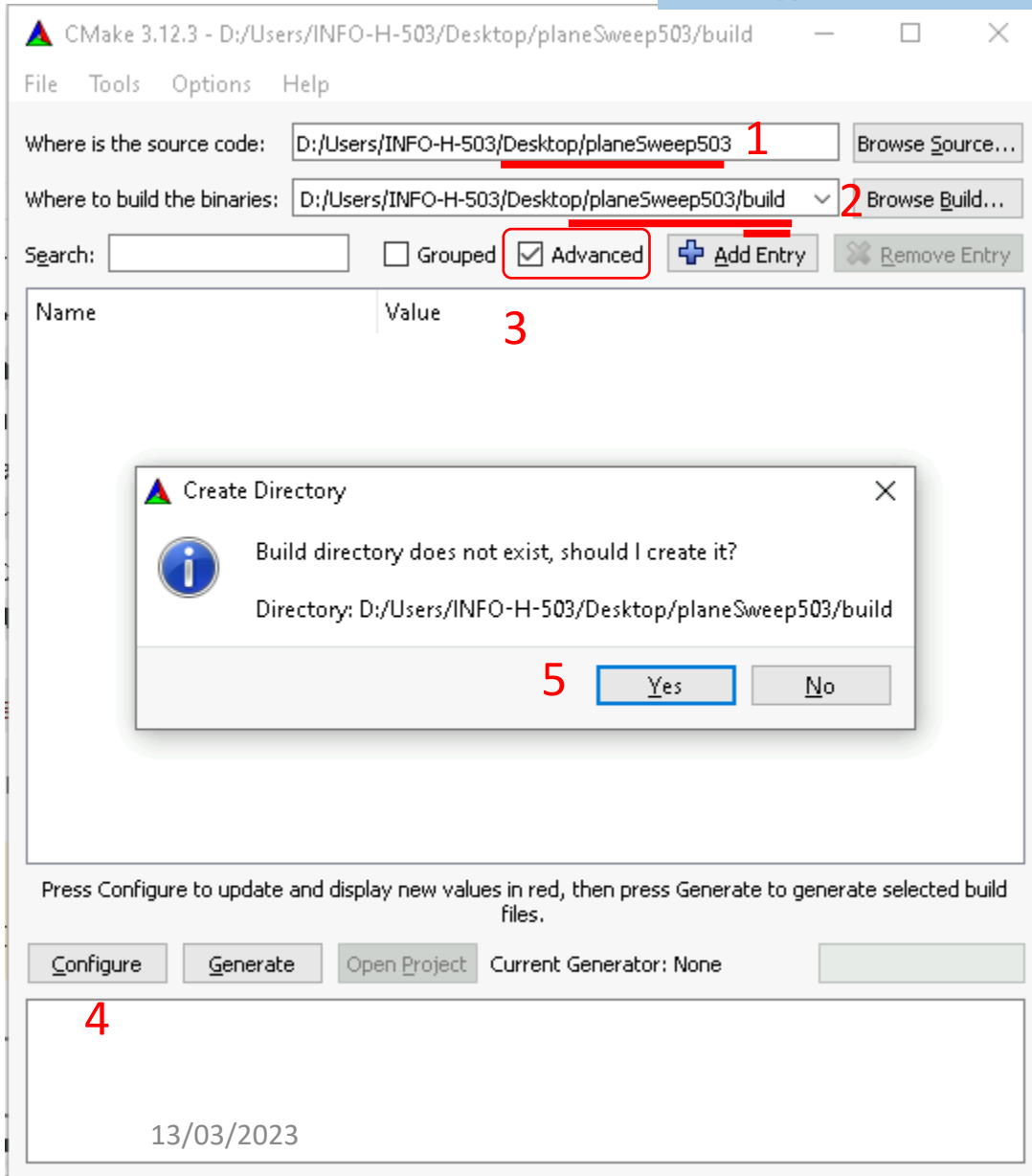
- Install Cmake by “next→accept→next-→...→next”

CMAKE

- Open cmake-gui

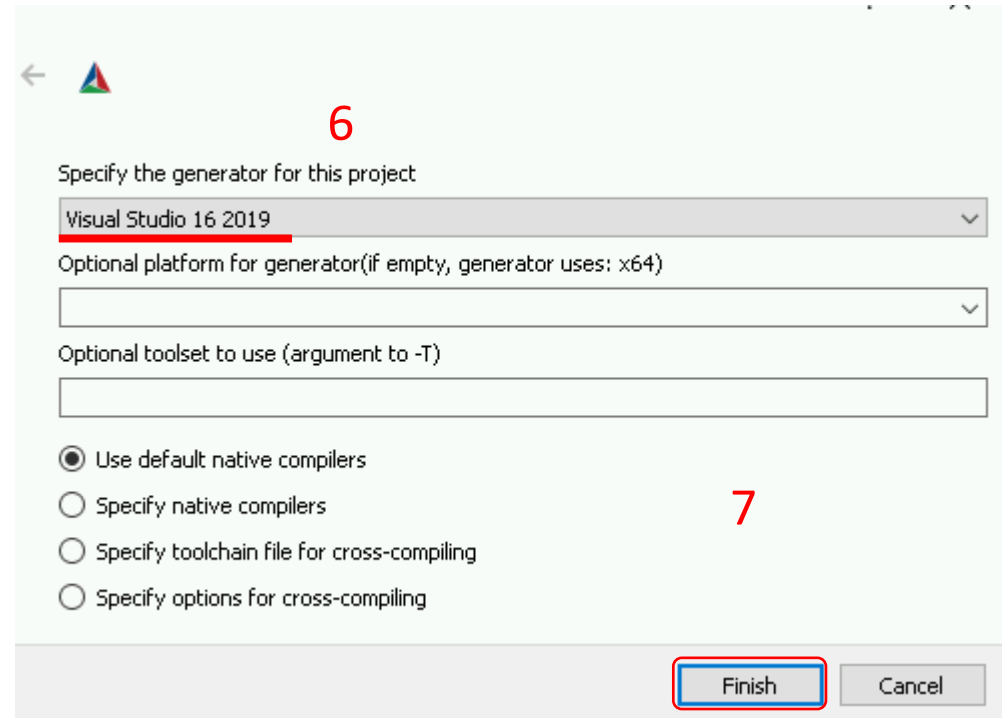


CMake (cmake-gui)
Application

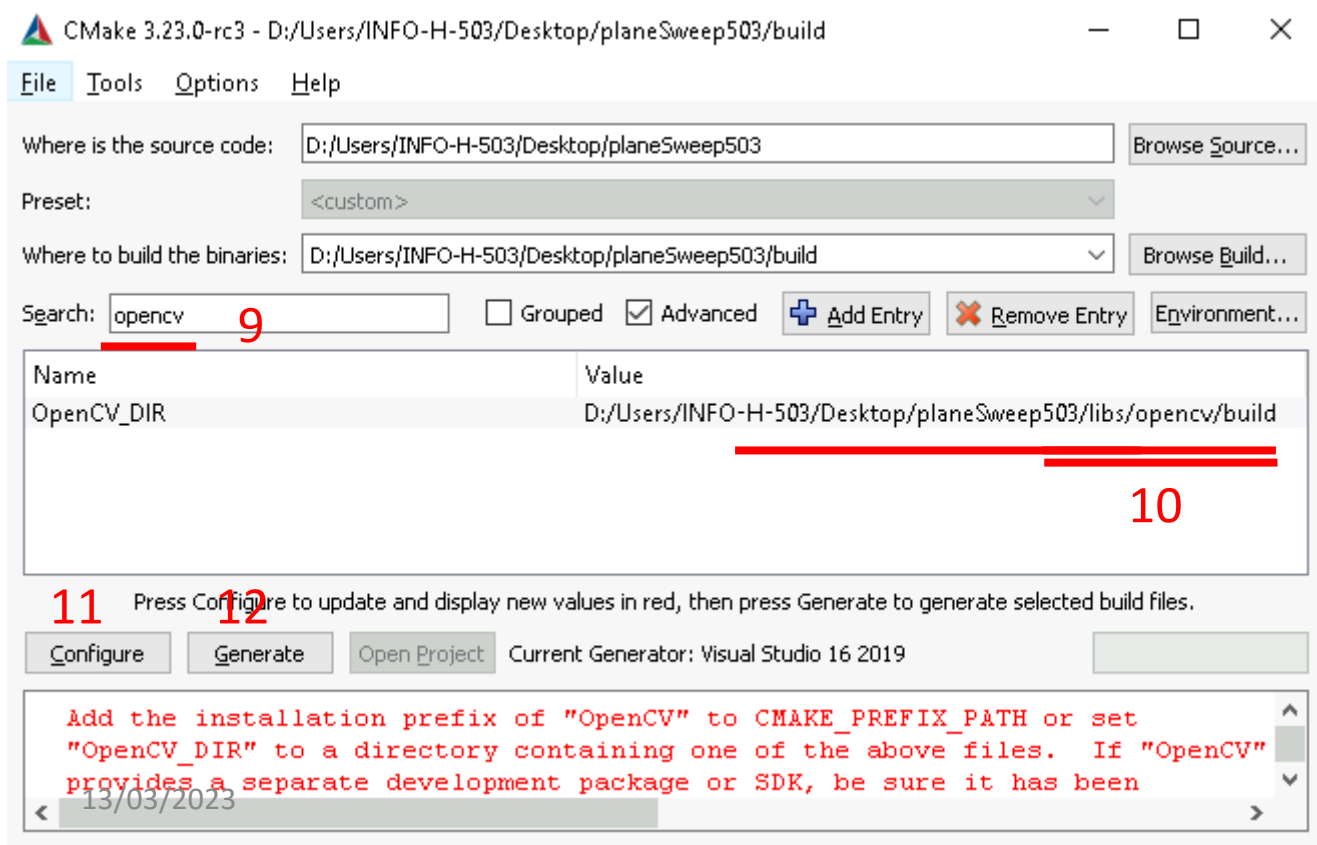
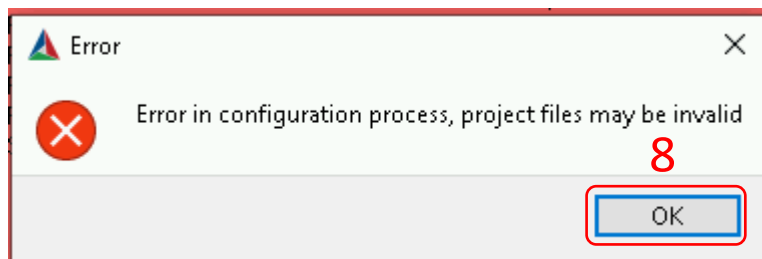


Desktop\project

Desktop\project\build



CMAKE



project\libs\opencv\build

OpenCV

File Explorer path: > Ce PC > Bureau > planeSweep503 > libs > opencv > build > x64 > vc15 > bin

Nom	Modifié le	Type
opencv_annotation.exe	25-12-21 06:01	Application
opencv_interactive-calibration.exe	25-12-21 06:01	Application
opencv_model_diagnostics.exe	25-12-21 06:01	Application
opencv_version.exe	25-12-21 06:01	Application
opencv_version_win32.exe	25-12-21 06:01	Application
opencv_videoio_ffmpeg455_64.dll	25-12-21 05:33	Extension de l'app...
opencv_videoio_msmf455_64.dll	25-12-21 06:01	Extension de l'app...
opencv_videoio_msmf455_64d.dll	25-12-21 05:44	Extension de l'app...
opencv_visualisation.exe	25-12-21 06:01	Application
opencv_world455.dll	25-12-21 06:01	Extension de l'app...
opencv_world455.pdb	25-12-21 06:01	Program Debug D...
opencv_world455d.dll	25-12-21 05:44	Extension de l'app...
opencv_world455d.pdb	25-12-21 05:44	Program Debug D...

File Explorer path: > Ce PC > Bureau > planeSweep503 > build

Nom	Modifié le	Type
CMakeFiles	11-03-22 09:50	Dossier de fichiers
data	11-03-22 09:50	Dossier de fichiers
ALL_BUILD.vcxproj	11-03-22 09:50	VC++ Project
ALL_BUILD.vcxproj.filters	11-03-22 09:50	VC++ Project Filte...
cmake_install.cmake	11-03-22 09:50	Fichier CMAKE
CMakeCache.txt	11-03-22 09:50	Document texte
detect_cuda_compute_capabilities.cu	11-03-22 09:50	Fichier CU
PlaneSweep.sln	11-03-22 09:50	Microsoft Visual S...

1. Copy those files

2. to here

Visual Studio

- Open Visual Studio 2019


Visual Studio 2019

Ouvrir les éléments récents


Ce mois-ci


	Convolution2Dv2.sln C:\Users\INFO-H-503\source\repos\Convolution2Dv2	24-02-21 13:11
	1DStencil.sln D:\Users\INFO-H-503\Desktop\matmult\1DStencil	24-02-21 10:55
	Convolution1D.sln D:\Users\INFO-H-503\Desktop\matmult\Convolution1D	23-02-21 17:14
	comment.sln D:\Users\INFO-H-503\Desktop\matmult\comment	22-02-21 16:17
	Convolution2D.sln D:\Users\INFO-H-503\Desktop\matmult\Convolution2D	21-02-21 20:37
	MatTrans.sln D:\Users\INFO-H-503\Desktop\matmult\MatTrans	20-02-21 15:42
	matmult.sln D:\Users\INFO-H-503\Desktop\matmult\matmult	20-02-21 13:21

Démarrer

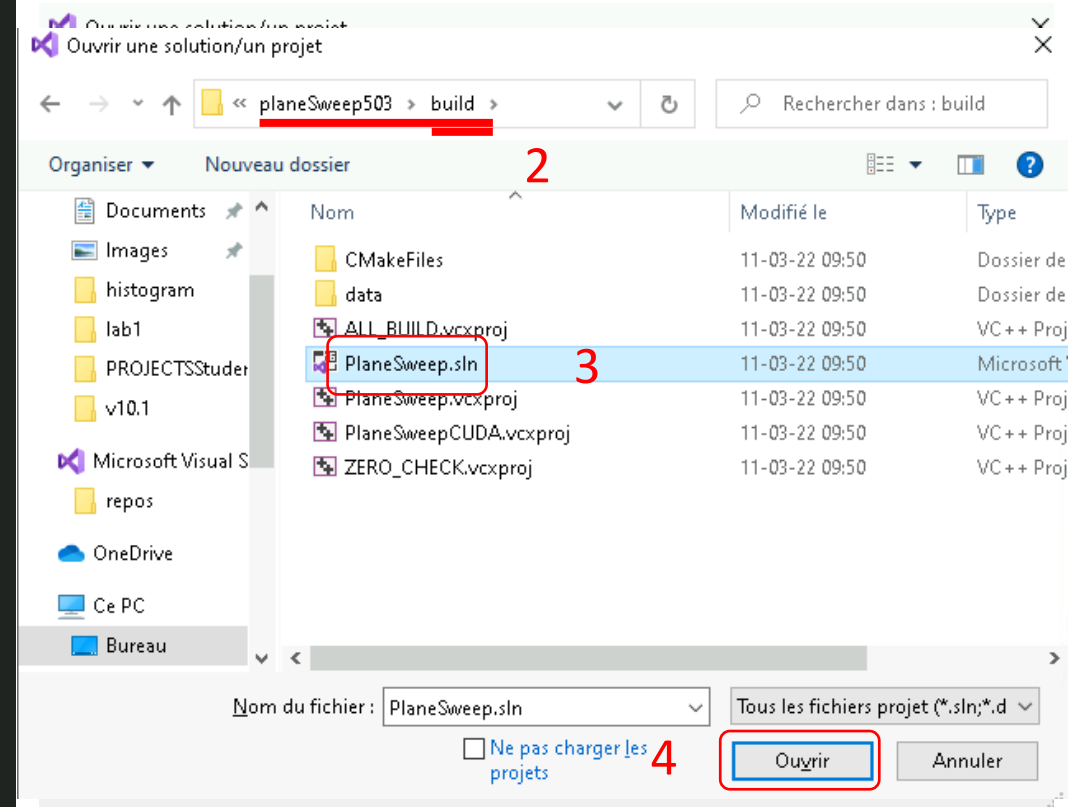
 **Cloner un dépôt**
Obtenir du code à partir d'un dépôt en ligne, par exemple GitHub ou Azure DevOps

 **Ouvrir un projet ou une solution**
Ouvrir un projet ou un fichier .sln Visual Studio local

 **Ouvrir un dossier local**
Naviguer parmi du code et le modifier dans n'importe quel dossier

 **Créer un projet**
Choisir un modèle de projet avec génération de modèles automatique de code pour bien démarrer

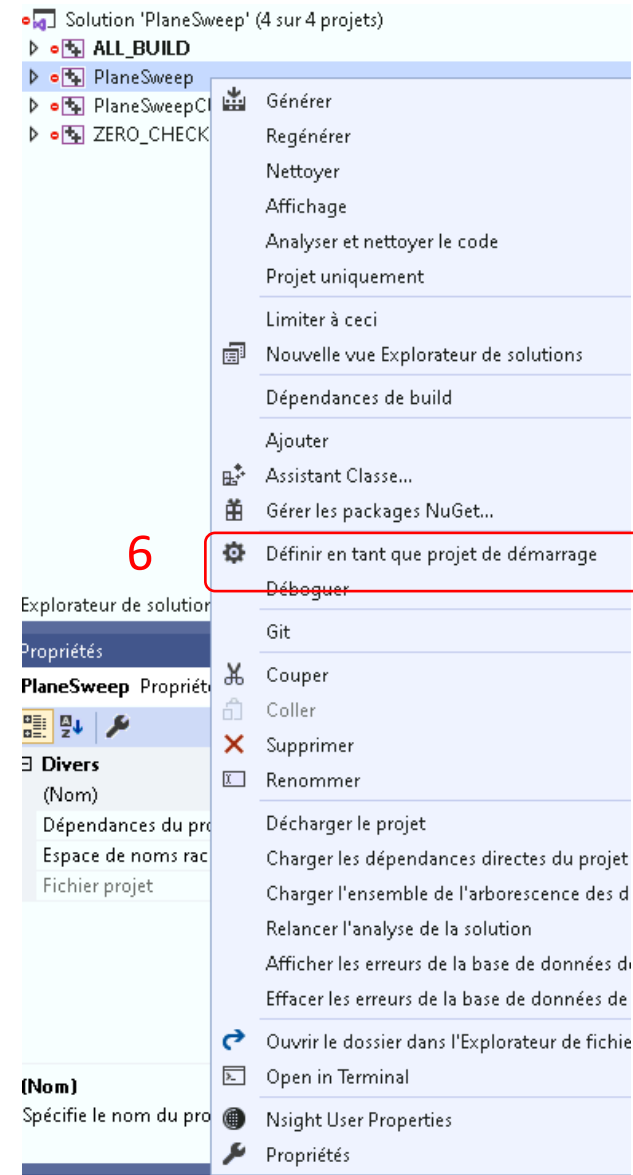
[Continuer sans code →](#)



Visual Studio

- Open Visual Studio 2019

5



13/03/2023

Visual Studio

- Open Visual Studio 2019

