

# Compile XLiFE++ libraries for Visual Studio on Windows, using cmake

Eric Lunéville 

- **XLiFE++ source installed**

*<http://uma.ensta-paristech.fr/soft/XLiFE++/?module=main&action=dl>*

- **Visual Studio installed**

*v14 2015 community free : <https://www.visualstudio.com/fr-fr/downloads/download-visual-studio-vs.aspx>*

- **cmake installed (>2.8.2)** *<https://cmake.org/download/>*
- **paraview installed** *<http://www.paraview.org/download/>*
- **gmsh installed** *<http://gmsh.info/#Download>*

## **Extra libraries (optionnal)**

**blas, lapack, suitesparse, arpack**



The screenshot shows the CMake 3.2.2 GUI. The title bar reads "CMake 3.2.2 - E:/Eric/Eric\_bureau/xlife++\_release/vs15". The menu bar includes "File", "Tools", "Options", and "Help".

Input fields:

- "Where is the source code:"  (circled in red)
- "Where to build the binaries:"  (circled in red)

Buttons: "Browse Source...", "Browse Build...", "Add Entry", "Remove Entry".

Options:  Grouped,  Advanced.

Name	Value
------	-------

Buttons: "Configure", "Generate", "Current Generator: None".

Bottom status bar: "Press Configur...", "enerate selected build files."

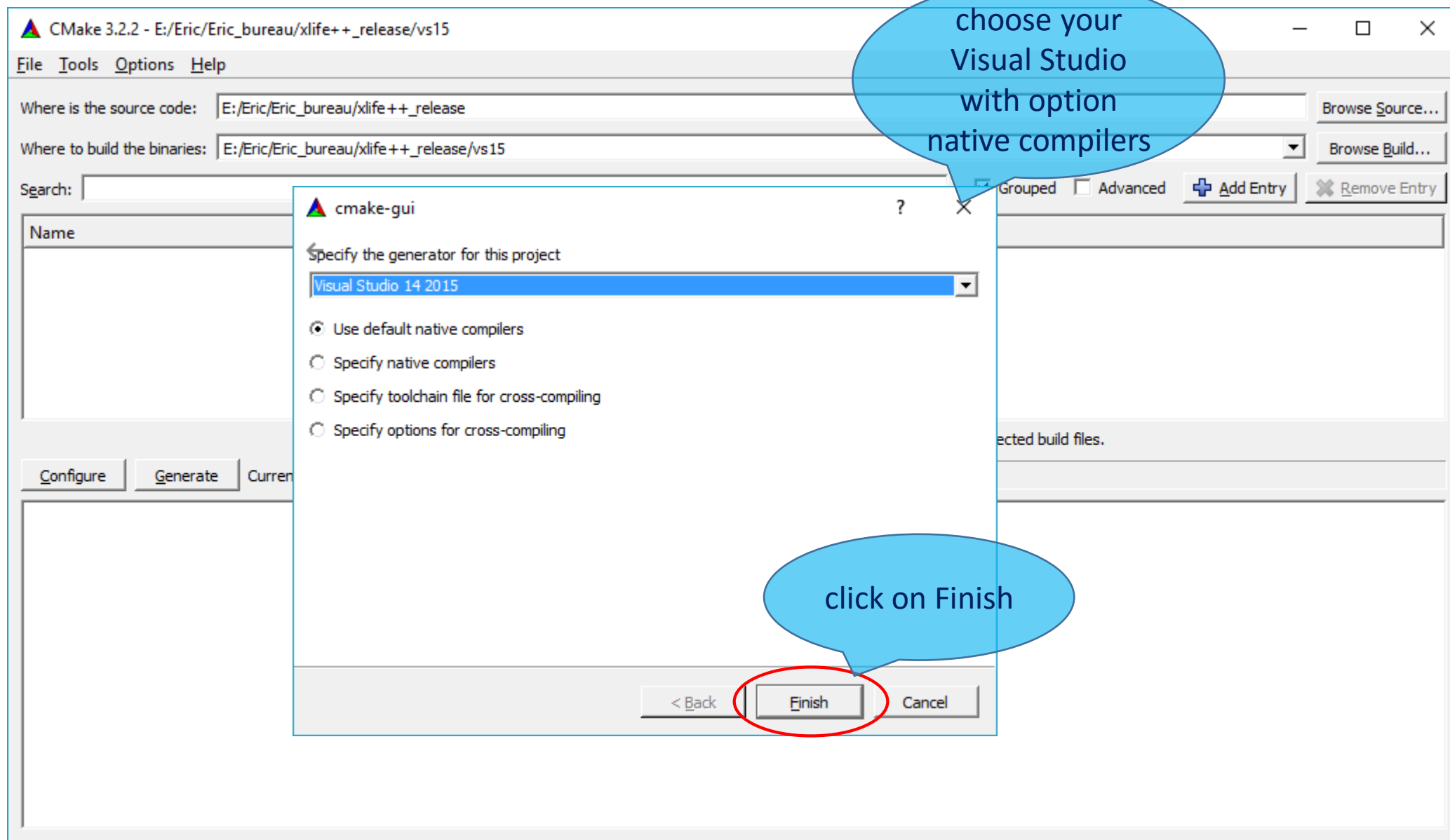
**Dialog Box: Create Directory**

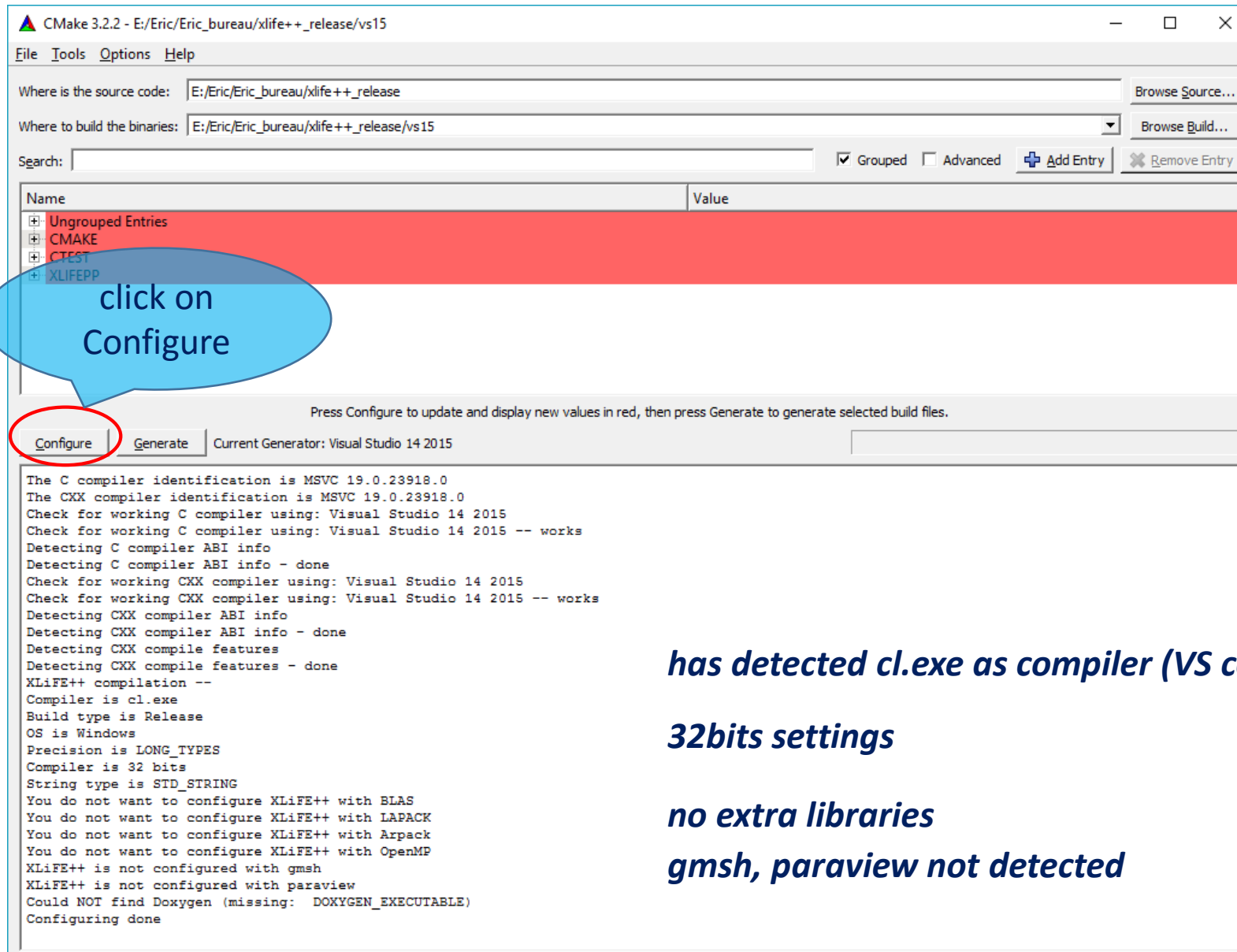
Build directory does not exist, should I create it?  
Directory: E:/Eric/Eric\_bureau/xlife++\_release/vs15

(The "Yes" button is circled in red)

**Annotations:**

- Blue bubble: "set XLIFE++ install dir and buil dir" (points to the source and build paths)
- Blue bubble: "ask to create if build\_dir does not exist" (points to the dialog box)





CMake 3.2.2 - E:/Eric/Eric\_bureau/xlife++\_release/vs15

File Tools Options Help

Where is the source code: E:/Eric/Eric\_bureau/xlife++\_release Browse Source...

Where to build the binaries: E:/Eric/Eric\_bureau/xlife++\_release/vs15 Browse Build...

Search:   Grouped  Advanced + Add Entry x Remove Entry

Name	Value
+ Ungrouped Entries	
+ CMAKE	
+ CTEST	
+ XLIFFPP	

Press Configure to update and display new values in red, then press Generate to generate selected build files.

Configure Generate Current Generator: Visual Studio 14 2015

```
The C compiler identification is MSVC 19.0.23918.0
The CXX compiler identification is MSVC 19.0.23918.0
Check for working C compiler using: Visual Studio 14 2015
Check for working C compiler using: Visual Studio 14 2015 -- works
Detecting C compiler ABI info
Detecting C compiler ABI info - done
Check for working CXX compiler using: Visual Studio 14 2015
Check for working CXX compiler using: Visual Studio 14 2015 -- works
Detecting CXX compiler ABI info
Detecting CXX compiler ABI info - done
Detecting CXX compile features
Detecting CXX compile features - done
XLIFFPP compilation --
Compiler is cl.exe
Build type is Release
OS is Windows
Precision is LONG_TYPES
Compiler is 32 bits
String type is STD_STRING
You do not want to configure XLIFFPP with BLAS
You do not want to configure XLIFFPP with LAPACK
You do not want to configure XLIFFPP with Arpack
You do not want to configure XLIFFPP with OpenMP
XLIFFPP is not configured with gmsh
XLIFFPP is not configured with paraview
Could NOT find Doxygen (missing: DOXYGEN_EXECUTABLE)
Configuring done
```

*has detected cl.exe as compiler (VS compiler)*

*32bits settings*

*no extra libraries*

*gmsh, paraview not detected*

CMake 3.2.2 - E:/Eric/Eric\_bureau/xlife++\_release/vs15

File Tools Options Help

Where is the source code:  Browse Source...

Where to build the binaries:  Browse Build...

Search:   Grouped  Advanced

Name	Value
Ungrouped Entries	
CMAKE	
CTEST	
<b>XLIFEPP</b>	
XLIFEPP_ARPACKPP_INCLUDE_DIR	E:/Eric/Eric_bureau/xlife++_release/ext/ARPACK++/include
XLIFEPP_ARPACK_LIB	
XLIFEPP_ARPACK_LIB_DIR	
XLIFEPP_BLAS_LIB	
XLIFEPP_BLAS_LIB_DIR	
XLIFEPP_ENABLE_ARPACK	<input type="checkbox"/>
XLIFEPP_ENABLE_OMP	<input type="checkbox"/>
XLIFEPP_ENABLE_UMFPACK	<input type="checkbox"/>
XLIFEPP_GMSH_DIR	C:/Program Files/gmsh-2.9.0
XLIFEPP_LAPACK_LIB	
XLIFEPP_LAPACK_LIB_DIR	
XLIFEPP_PARAVIEW_DIR	C:/Program Files (x86)/ParaView 4.3.0-RC1
XLIFEPP_SUITESPARSE_HOME_DIR	
XLIFEPP_UMFPACK_INCLUDE_DIR	
XLIFEPP_UMFPACK_LIB_DIR	

Press Configure to update and display new values in red, then press Generate to generate selected build files.

Current Generator: Visual Studio 14 2015

```

The C compiler identification is MSVC 19.0.23918.0
The CXX compiler identification is MSVC 19.0.23918.0
Check for working C compiler using: Visual Studio 14 2015
Check for working C compiler using: Visual Studio 14 2015 -- works
Detecting C compiler ABI info
Detecting C compiler ABI info - done
Check for working CXX compiler using: Visual Studio 14 2015
Check for working CXX compiler using: Visual Studio 14 2015 -- works
    
```

click again  
on Configure

specify  
gmsh and paraview  
directories

CMake 3.2.2 - E:/Eric/Eric\_bureau/xlife++\_release/vs15

File Tools Options Help

Where is the source code:

Where to build the binaries:

Search:   Grouped  Advanced

Name	Value
Ungrouped Entries	
CMAKE	
CTEST	
XLIFEPP	

Press Configure to update and display new values in red, then press Generate to generate selected build files.

Current Generator: Visual Studio 14 2015

```

XLIFE++ compilation --
Compiler is cl.exe
Build type is Release
OS is Windows
Precision is LONG_TYPES
Compiler is 32 bits
String type is STD_STRING
You do not want to configure XLIFE++ with BLAS
You do not want to configure XLIFE++ with LAPACK
You do not want to configure XLIFE++ with Arpack
You do not want to configure XLIFE++ with OpenMP
Found gmsh : C:/Program Files/gmsh-2.9.0
XLIFE++ is configured with gmsh
Found paraview : C:/Program Files (x86)/ParaView 4.3.0-RC1
XLIFE++ is configured with paraview
Could NOT find Doxygen (missing: DOXYGEN_EXECUTABLE)
Configuring done
    
```

click on Generate

gmsh, paraview are now detected

# Build is completed

CMake 3.2.2 - E:/Eric/Eric\_bureau/xlife++\_release/vs15

File Tools Options Help

Where is the source code:

Where to build the binaries:

Search:   Grouped  Advanced

Name	Value
Ungrouped Entries	
CMAKE	
CTEST	
XLIFEPP	

Press Configure to update and display new values in red, then press Generate to generate selected build files.

Current Generator: Visual Studio 14 2015

```

XLIFE++ compilation --
Compiler is cl.exe
Build type is Release
OS is Windows
Precision is LONG_TYPES
Compiler is 32 bits
String type is STD_STRING
You do not want to configure XLIFE++ with BLAS
You do not want to configure XLIFE++ with LAPACK
You do not want to configure XLIFE++ with Arpack
You do not want to configure XLIFE++ with OpenMP
Found gmsh : C:/Program Files/gmsh-2.9.0
XLIFE++ is configured with gmsh
Found paraview : C:/Program Files (x86)/ParaView 4.3.0-RC1
XLIFE++ is configured with paraview
Could NOT find Doxygen (missing: DOXYGEN_EXECUTABLE)
Configuring done
Generating done
    
```

Ok

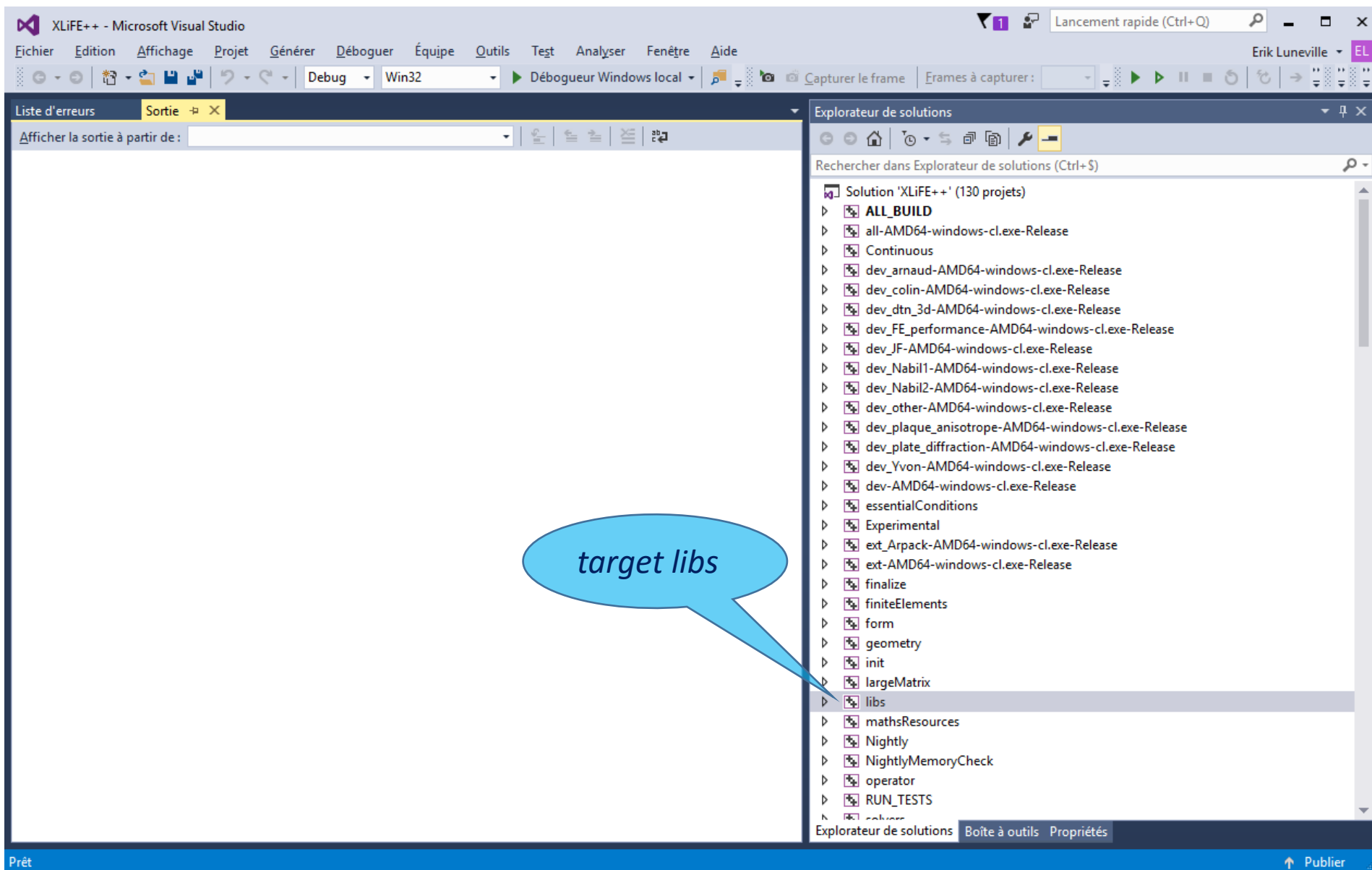
Generating done



Newton > Users (E:) > Eric > Eric\_bureau > xlife++\_release > vs15 >

<ul style="list-style-type: none"> <li>📁 CMakeFiles</li> <li>📁 Testing</li> <li>📁 tests</li> <li>🔗 ALL_BUILD.vcxproj</li> <li>📄 ALL_BUILD.vcxproj.filters</li> <li>📄 cmake_install.cmake</li> <li>📄 CMakeCache.txt</li> <li>🔗 Continuous.vcxproj</li> <li>📄 Continuous.vcxproj.filters</li> <li>📄 CTestTestfile.cmake</li> <li>📄 DartConfiguration.tcl</li> <li>🔗 essentialConditions.vcxproj</li> <li>📄 essentialConditions.vcxproj.filters</li> <li>🔗 Experimental.vcxproj</li> <li>📄 Experimental.vcxproj.filters</li> <li>🔗 finalize.vcxproj</li> <li>📄 finalize.vcxproj.filters</li> </ul>	<ul style="list-style-type: none"> <li>🔗 finiteElements.vcxproj</li> <li>📄 finiteElements.vcxproj.filters</li> <li>🔗 form.vcxproj</li> <li>📄 form.vcxproj.filters</li> <li>🔗 geometry.vcxproj</li> <li>📄 geometry.vcxproj.filters</li> <li>🔗 init.vcxproj</li> <li>📄 init.vcxproj.filters</li> <li>🔗 largeMatrix.vcxproj</li> <li>📄 largeMatrix.vcxproj.filters</li> <li>🔗 libs.vcxproj</li> <li>📄 libs.vcxproj.filters</li> <li>🔗 mathsResources.vcxproj</li> <li>📄 mathsResources.vcxproj.filters</li> <li>🔗 Nightly.vcxproj</li> <li>📄 Nightly.vcxproj.filters</li> <li>🔗 NightlyMemoryCheck.vcxproj</li> </ul>	<ul style="list-style-type: none"> <li>📄 NightlyMemoryCheck.vcxproj.filters</li> <li>🔗 operator.vcxproj</li> <li>📄 operator.vcxproj.filters</li> <li>🔗 RUN_TESTS.vcxproj</li> <li>📄 RUN_TESTS.vcxproj.filters</li> <li>📄 setup.hpp</li> <li>🔗 solvers.vcxproj</li> <li>📄 solvers.vcxproj.filters</li> <li>🔗 space.vcxproj</li> <li>📄 space.vcxproj.filters</li> <li>🔗 term.vcxproj</li> <li>📄 term.vcxproj.filters</li> <li>🔗 utils.vcxproj</li> <li>📄 utils.vcxproj.filters</li> <li>🔗 XLiFE++.sln</li> <li>🔗 ZERO_CHECK.vcxproj</li> <li>📄 ZERO_CHECK.vcxproj.filters</li> </ul>
---	--	--

Visual Studio project



The screenshot shows the Microsoft Visual Studio interface for a project named 'XLIFE++'. The Solution Explorer on the right displays a list of 130 projects under the solution 'XLIFE++'. The 'libs' project is highlighted, and a blue speech bubble points to it with the text 'target libs'. The status bar at the bottom indicates 'Prêt' and 'Publier'.

Menu: Fichier, Edition, Affichage, Projet, Générer, Débugger, Équipe, Outils, Test, Analyser, Fenêtre, Aide

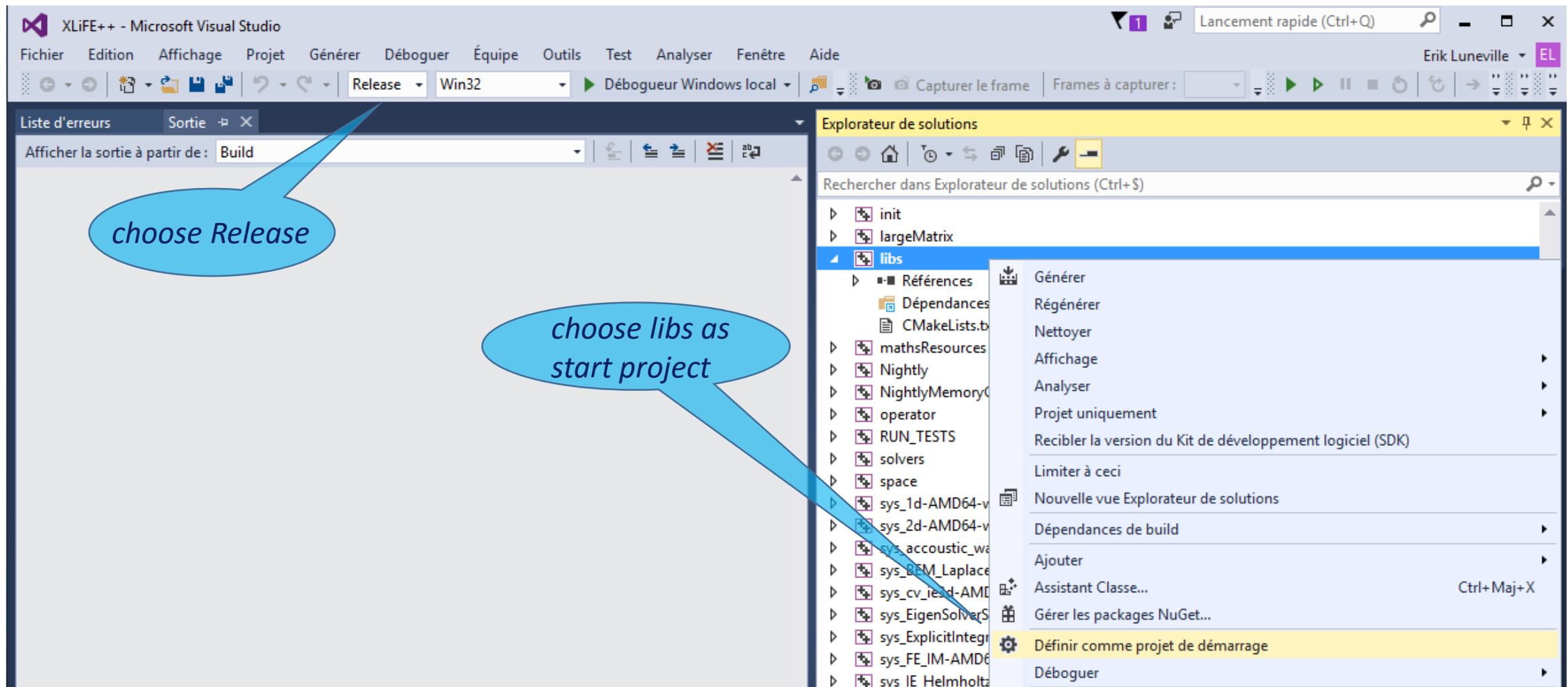
Debug | Win32 | Débugueur Windows local

Rechercher dans Explorateur de solutions (Ctrl+S)

- Solution 'XLIFE++' (130 projets)
  - ALL\_BUILD
  - all-AMD64-windows-cl.exe-Release
  - Continuous
  - dev\_arnaud-AMD64-windows-cl.exe-Release
  - dev\_colin-AMD64-windows-cl.exe-Release
  - dev\_dtn\_3d-AMD64-windows-cl.exe-Release
  - dev\_FE\_performance-AMD64-windows-cl.exe-Release
  - dev\_JF-AMD64-windows-cl.exe-Release
  - dev\_Nabil1-AMD64-windows-cl.exe-Release
  - dev\_Nabil2-AMD64-windows-cl.exe-Release
  - dev\_other-AMD64-windows-cl.exe-Release
  - dev\_plaque\_anisotrope-AMD64-windows-cl.exe-Release
  - dev\_plate\_diffraction-AMD64-windows-cl.exe-Release
  - dev\_Yvon-AMD64-windows-cl.exe-Release
  - dev-AMD64-windows-cl.exe-Release
  - essentialConditions
  - Experimental
  - ext\_Arpack-AMD64-windows-cl.exe-Release
  - ext-AMD64-windows-cl.exe-Release
  - finalize
  - finiteElements
  - form
  - geometry
  - init
  - largeMatrix
  - libs**
  - mathsResources
  - Nightly
  - NightlyMemoryCheck
  - operator
  - RUN\_TESTS

target libs

Prêt | Publier



XLIFE++ - Microsoft Visual Studio

Fichier Edition Affichage Projet Générer Débuguer Équipe Outils Test Analyser Fenêtre Aide

Release Win32 Débugueur Windows local

Liste d'erreurs

Afficher la sortie à partir de: Build

choose Release

choose libs as start project

Explorateur de solutions

Rechercher dans Explorateur de solutions (Ctrl+S)

- init
- largeMatrix
- libs
  - Références
  - Dépendances
  - CMakeLists.txt
- mathsResources
- Nightly
- NightlyMemoryC
- operator
- RUN\_TESTS
- solvers
- space
- sys\_1d-AMD64-v
- sys\_2d-AMD64-v
- sys\_accoustic\_wa
- sys\_BEM\_Laplace
- sys\_cv\_resd-AMD
- sys\_EigenSolverS
- sys\_ExplicitIntegr
- sys\_FE\_IM-AMD6
- sys\_IE\_Helmholtz

- Générer
- Régénérer
- Nettoyer
- Affichage
- Analyser
- Projet uniquement
- Recibler la version du Kit de développement logiciel (SDK)
- limiter à ceci
- Nouvelle vue Explorateur de solutions
- Dépendances de build
- Ajouter
- Assistant Classe... Ctrl+Maj+X
- Gérer les packages NuGet...
- Définir comme projet de démarrage**
- Débuguer

XLIFE++ - Microsoft Visual Studio

Fichier Edition Affichage Projet Générer Débugger Équipe Outils Test Analyser Fenêtre Aide

Release Win32 Débugueur Windows local

Liste d'erreurs Sortie

Afficher la sortie à partir de: Build

```

3>e:\eric\eric_bureau\xlife++_release\src\utils\Timer.hpp(69): warning C4996: 'localtime': This
3> C:\Program Files (x86)\Windows Kits\10\Include\10.0.10240.0\ucrt\time.h(505): note: voir la
3>e:\eric\eric_bureau\xlife++_release\include\..\src\utils\Parameters.hpp(764): warning C4244:
3>e:\eric\eric_bureau\xlife++_release\src\geometry\subdivision\subutil\GeomFigure.hpp(76): warn:
3>e:\eric\eric_bureau\xlife++_release\src\utils\Matrix.hpp(120): warning C4267: 'initialisation
3> e:\eric\eric_bureau\xlife++_release\src\utils\Matrix.hpp(117): note: lors de la compilation
3> e:\eric\eric_bureau\xlife++_release\src\utils\Matrix.hpp(1714): note: voir la référence à 1
3>
3>     with
3>     [
3>         _Ty=xlifepp::real_t
3>     ]
3> e:\eric\eric_bureau\xlife++_release\src\utils\Matrix.hpp(1714): note: voir la référence à 1
3> Génération de code en cours...
3> geometry.vcxproj -> E:\Eric\Eric_bureau\xlife++_release\lib\AMD64-windows\cl.exe\Release\se
12> finiteElements.vcxproj -> E:\Eric\Eric_bureau\xlife++_release\lib\AMD64-windows\cl.exe\Rel
===== Génération : 14 a réussi, 0 a échoué, 1 mis à jour, 0 a été ignoré =====

```

libraries are compiled

Explorateur de solutions


Rechercher dans Explorateur de solutions (Ctrl+S)














- init
- largeMatrix
- libs
  - Références
    - Dépendances externes
    - CMakeLists.txt
  - mathsResources
  - Nightly
  - NightlyMemoryCheck
  - operator
  - RUN\_TESTS
  - solvers
  - space
  - sys\_1d-AMD64-windows-cl.exe-Release
  - sys\_2d-AMD64-windows-cl.exe-Release
  - sys\_accoustic\_waveguide-AMD64-windows-cl.exe-Release
  - sys\_BEM\_Laplace\_Helmholtz\_Dirichlet-AMD64-windows-

Prêt

Publier

*don't worry about warnings (VS is very rigorous)*

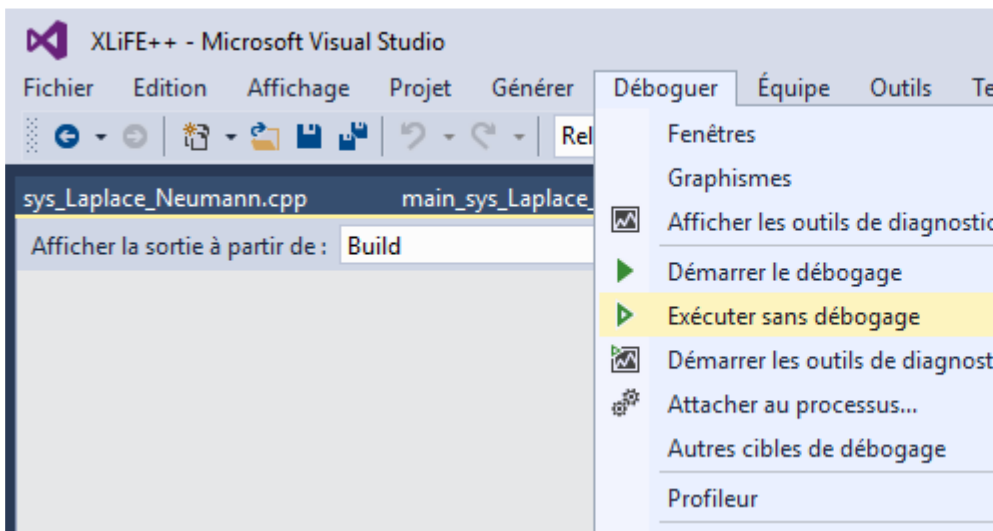

 << xlife++\_release > lib > AMD64-windows > cl.exe > Release > seq > Release

Nom	Modifi�e le	Type	Taille
 essentialConditions.lib	11/06/2016 13:05	Object File Library	2 106 Ko
 finalize.lib	11/06/2016 13:06	Object File Library	3 Ko
 finiteElements.lib	11/06/2016 13:07	Object File Library	4 561 Ko
 form.lib	11/06/2016 13:06	Object File Library	624 Ko
 geometry.lib	11/06/2016 13:07	Object File Library	15 740 Ko
 init.lib	11/06/2016 13:04	Object File Library	128 Ko
 largeMatrix.lib	11/06/2016 13:06	Object File Library	16 183 Ko
 mathsResources.lib	11/06/2016 13:04	Object File Library	1 223 Ko
 operator.lib	11/06/2016 13:04	Object File Library	1 096 Ko
 solvers.lib	11/06/2016 13:04	Object File Library	72 Ko
 space.lib	11/06/2016 13:06	Object File Library	1 429 Ko
 term.lib	11/06/2016 13:06	Object File Library	9 360 Ko
 utils.lib	11/06/2016 13:07	Object File Library	3 286 Ko

The screenshot shows the Visual Studio interface with the following components:

- Output Window (Sortie):** Displays the compilation log for the 'sys\_Laplace\_Neumann' project. The log shows that the build was successful, with 109 files compiled, 0 failed, 14 updated, and 7 ignored.
- Solution Explorer (Explorateur de solutions):** Shows the project structure. The 'sys\_Laplace\_Neumann' project is expanded, showing source files: 'main\_sys\_Laplace\_Neumann.cpp', 'sys\_Laplace\_Neumann.cpp', and 'testUtils.cpp'. A blue callout bubble points to the 'testUtils.cpp' file with the text 'choose test as start project'.
- Toolbar:** Shows the 'Run' button (a green play icon) and the 'Test' button (a magnifying glass icon).

*may take few minutes because template instantiations ...*



Ctrl+F5

```

C:\WINDOWS\system32\cmd.exe
> < | | | | | | | |
  \ / | | | | | | | |
  \ / | | | | | | | |

XLIFE++ v1.4-r26 2016-06-10 running on june 11, 2016 at 13h32 on WIN_NT-6.1-i686 (NEWTON)

# TRIANGULAR mesh: 10 subdivisions, h = 0.02
=====
-> Triangles P2-----
computing FE term intg_Omega grad(u) | grad(v) + intg_Omega u * v, using 1 threads : done
TermMatrix a(u,v) computed, size 9801 X 9801 : SuTermMatrix a(u,v)_sub : block (v, u)
-> matrix 9801 X 9801 of real scalar in symmetric_compressed sparse (csr,csc) (60516 coef
ficients)
computing FE term intg_Omega grad(u) | grad(v), using 1 threads : done
TermMatrix R computed, size 9801 X 9801 : SuTermMatrix R_sub : block (v, u) -> matrix
9801 X 9801 of real scalar in symmetric_compressed sparse (csr,csc) (60516 coefficients)
computing FE term intg_Omega u * v, using 1 threads : done
TermMatrix M computed, size 9801 X 9801 : SuTermMatrix M_sub : block (v, u) -> matrix
9801 X 9801 of real scalar in symmetric_compressed sparse (csr,csc) (60516 coefficients)
cpu time -> compute matrices : 0s.
factorise matrix 9801 x 9801 using LDLt (skyline)
solving linear system a(u,v)_copy * X = f(v) (size 9801) cpu time -> solve system using LD
LT : 0.437s.
----- P2, h=0.02, nb dl=9801 -----
L2 Error = 8.44461e-09, Rel. L2 error = 3.50269e-07
H1 error = 3.24028e-06, Rel. H1 error = 2.95127e-05
C0 error = 1.55733e-07, Rel. C0 error = 3.22979e-06
-> cpu time = 0
sys_Laplace_Neumann : results saved to E:/Eric/Eric_bureau/xlife++_release/tests/res/sys_L
aplace_Neumann.res
total cputime -> Total CPU time : 0.953s.
total chrono -> Total elapsed time : 1.078s.
Appuyez sur une touche pour continuer...
  
```

- **OpenMp : DO NOT ENABLE OMP**  
*because Visual Studio is only compliant with OMP2 and XLiFE++ uses some OMP3 stuff*
- **arpack** : if you want to load arpack (assuming you have somewhere blas, lapack, arpack lib)  
set the variables `XLIFEPP_ARPACK_LIB_DIR`, `XLIFEPP_BLAS_LIB_DIR`, `XLIFEPP_LAPACK_LIB_DIR`  
before the second configure step  
*it may fails if libraries are not compliant*
- **suitesparse** : if you want to load suitesparse  
assuming you have install the suitesparse distribution and compile libraries  
set the variable `XLIFEPP_SUITESPARSE_HOME_DIR`  
*it may fails if libraries are not compliant*
- **Visual Studio 64 bits** : previous install concerns Visual Studio in 32 bits  
It is possible to choose VS 64 bits when choosing the generator  
*it may happen some trouble with the mspd140.dll*









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before the second configure step  
*it may fails if libraries are not compliant*
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*it may fails if libraries are not compliant*
- **Visual Studio 64 bits** : previous install concerns Visual Studio in 32 bits  
It is possible to choose VS 64 bits when choosing the generator  
*it may happen some trouble with the mspd140.dll*

# Create new XLiFE++ application using Visual Studio on Windows,

Eric Lunéville 

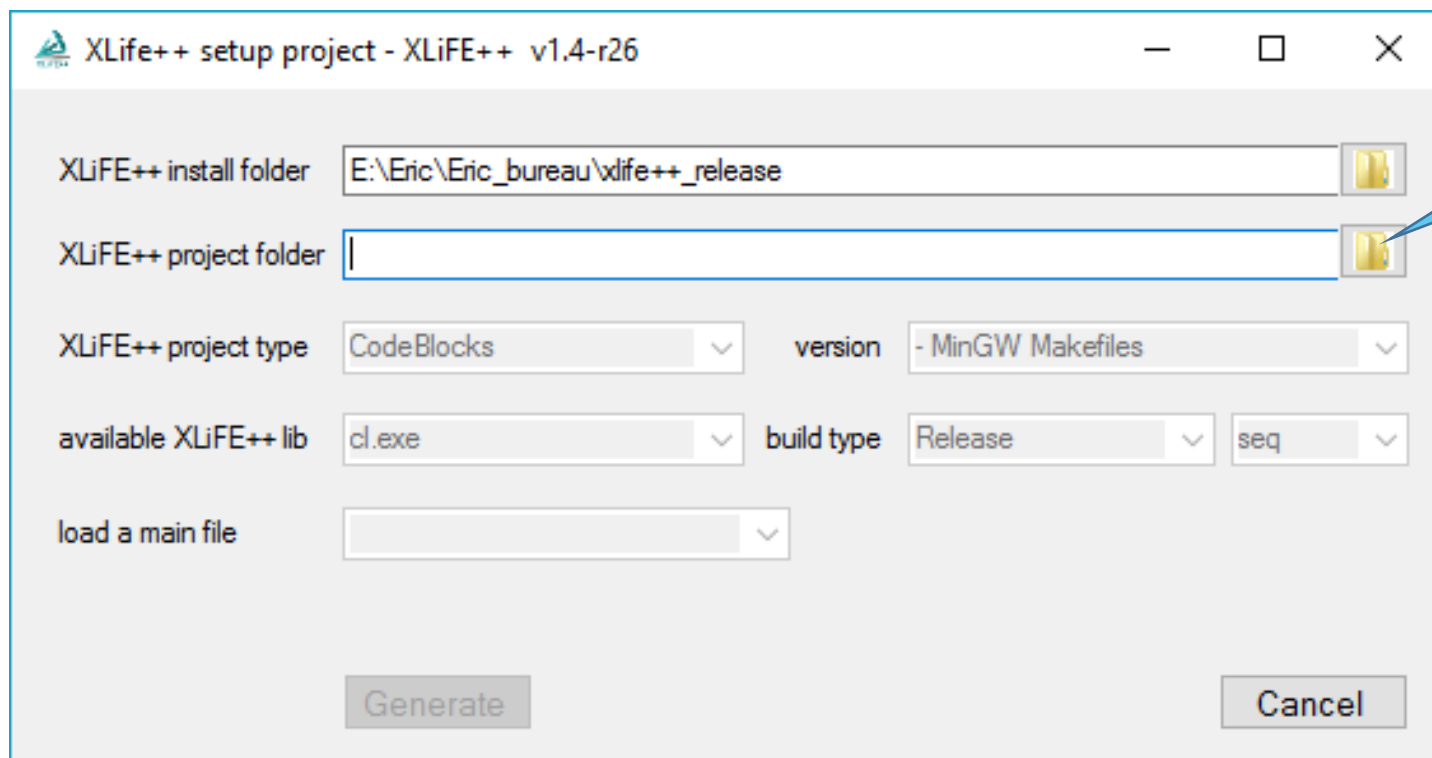
- **XLiFE++ source installed**
- **XLiFE++ libraries built from Visual Studio generator**
- **XLiFE++ libraries compiled with Visual Studio**

Newton > Users (E:) > Eric > Eric\_bureau > xlife++\_release > bin

Nom	Modifié le	Type	Taille
 doxyapi	07/06/2016 18:50	Fichier	1 Ki
 doxyweb	07/06/2016 18:50	Fichier	1 Ki
 xlifepp.bat	11/06/2016 09:11	Fichier de comma...	20 Ki
 xlifepp.sh	11/06/2016 09:11	Shell Script	21 Ki
 xlifepp_new_project_win.exe	11/06/2016 07:50	Application	34 Ki
 xlifepp_test_runner.rb	11/06/2016 08:45	Fichier RB	4 Ki

*double click on*

***XLiFE++ install folder name should be up to date, if not set it yourself***



XLiFE++ setup project - XLiFE++ v1.4-r26

XLiFE++ install folder: E:\Eric\Eric\_bureau\xlife++\_release

XLiFE++ project folder:

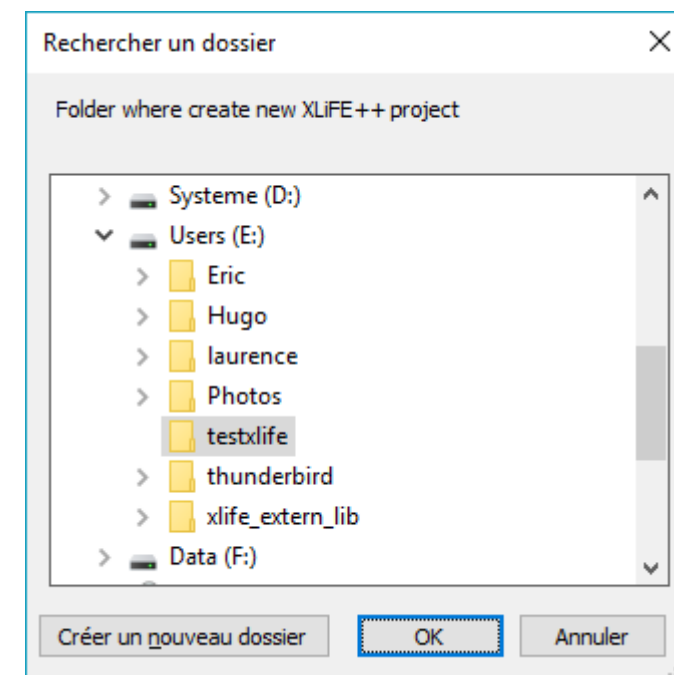
XLiFE++ project type: CodeBlocks version: - MinGW Makefiles

available XLiFE++ lib: cl.exe build type: Release seq

load a main file:

Generate Cancel

*choose folder  
where create  
new application*



Rechercher un dossier

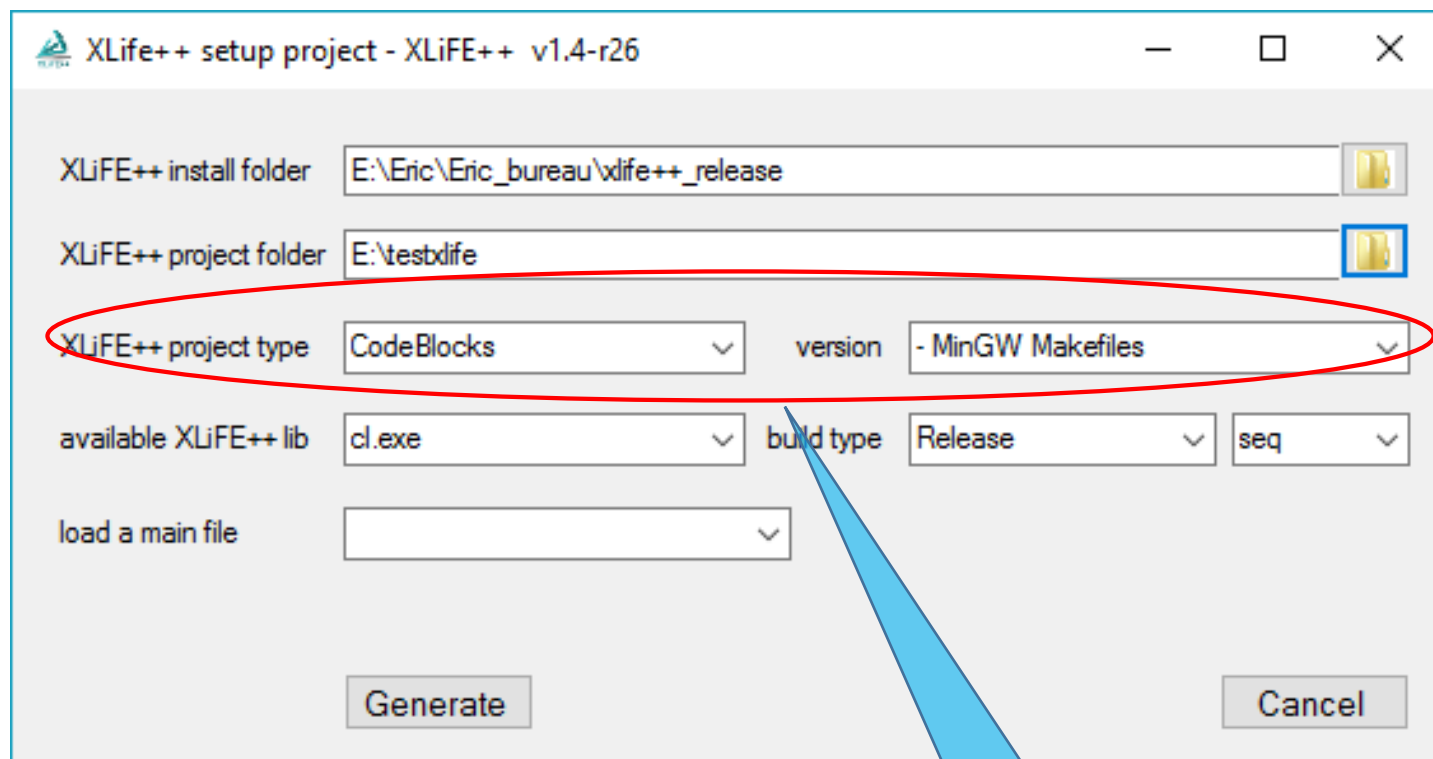
Folder where create new XLiFE++ project

- > Systeme (D:)
- > Users (E:)
  - > Eric
  - > Hugo
  - > laurence
  - > Photos
  - testxlife
  - > thunderbird
  - > xlife\_extern\_lib
- > Data (F:)

Créer un nouveau dossier OK Annuler

***XLiFE++ project folder does not exist, you can create it***

***if XLiFE++ project folder exists and contains some old files, it is recommended to clean it***



The screenshot shows a dialog box titled "XLife++ setup project - XLiFE++ v1.4-r26". It contains several input fields and dropdown menus. A red oval highlights the "XLiFE++ project type" dropdown, which is currently set to "CodeBlocks". A blue callout bubble points to this dropdown with the text "choose Visual studio as project type".

XLiFE++ install folder	E:\Eric\Eric_bureau\xlife++_release		
XLiFE++ project folder	E:\testxlife		
XLiFE++ project type	CodeBlocks	version	- MinGW Makefiles
available XLiFE++ lib	cl.exe	build type	Release
load a main file			seq

*choose Visual studio  
as project type*

XLife++ setup project - XLIFE++ v1.4-r26

XLIFE++ install folder: E:\Eric\Eric\_bureau\xlife++\_release

XLIFE++ project folder: E:\testdife

XLIFE++ project type: Visual Studio version: 14 2015

available XLIFE++ lib: cl.exe build type: Release seq

load a main file:

- minimal main
- elasticity2dP1
- helmholtz2d-Dirichlet\_single\_layer
- helmholtz2dP1-cg
- helmholtz2dP1-DtN\_scalar
- helmholtz2d\_FE\_IR
- laplace1dP1
- laplace2dP0\_RT1
- laplace2dP1-average
- laplace2dP1-dirichlet
- laplace2dP1-periodic
- laplace2dP1\_Neumann
- laplace2dP2-eigen
- laplace2dP2-transmission.cpp
- maxwell2dN1.cpp
- wave\_2d\_leap-frog.cpp

Cancel

*choose main program of project*

**minimal main**

main.cpp - Microsoft Visual Studio

```

1  #include "xlife++.h"
2  using namespace xlifepp;
3
4  int main(int argc, char** argv)
5  {
6      init(_lang=en); // mandatory initialization of xlifepp
7
8      // write your code here
9
10     return 0;
11 }

```

XLIFE++ setup project - XLIFE++ v1.4-r26

XLIFE++ install folder: E:\Eric\Eric\_bureau\xlife++\_release

XLIFE++ project folder: E:\testdlife

XLIFE++ project type: Visual Studio version: 14 2015

available XLIFE++ lib: cl.exe

load a main file: minimal main

**Generate**

Generate output

executed command: "C:/Program Files (x86)/CMake/bin/cmake.exe"E:\testdlife -G "Visual Studio 14 2015" -DCMAKE\_BUILD\_TYPE=Release -DCMAKE\_CXX\_COMPILER="C:/Program Files (x86)/Microsoft Visual Studio 14.0/VC/bin/cl.exe" -B E:\testdlife

```

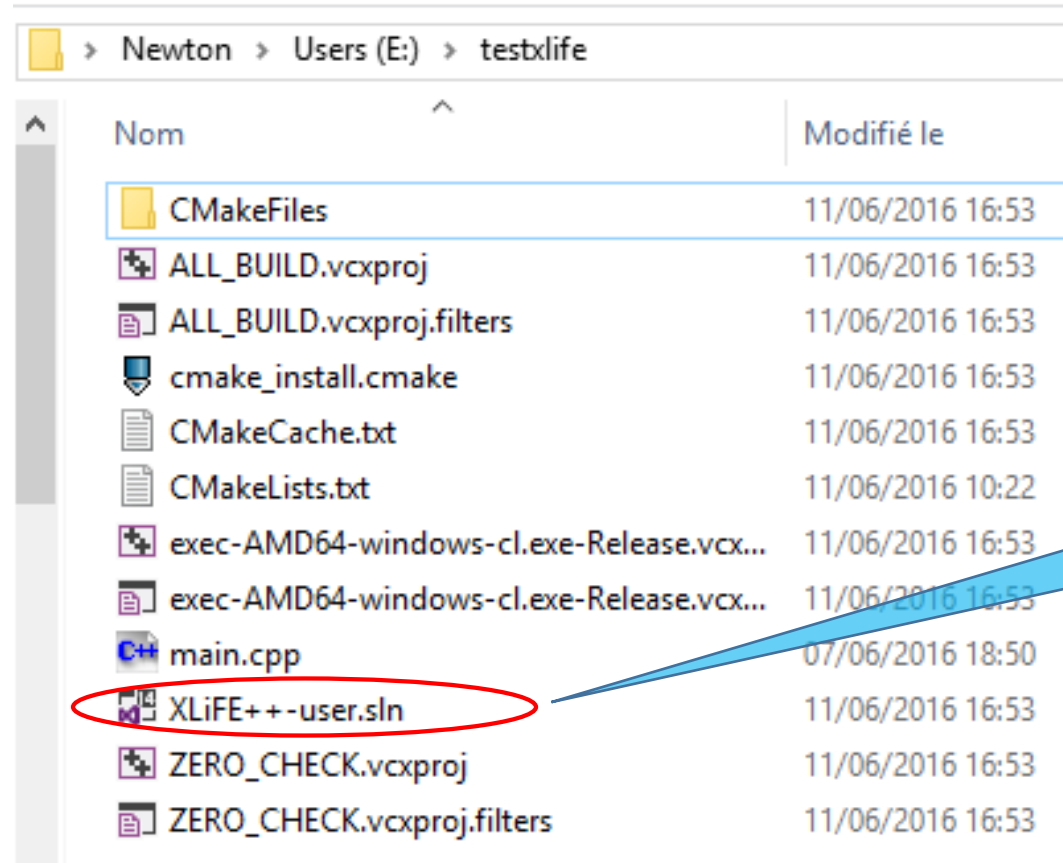
- The C compiler identification is MSVC 19.0.23918.0
- The CXX compiler identification is MSVC 19.0.23918.0
- Check for working C compiler using: Visual Studio 14 2015
- Check for working C compiler using: Visual Studio 14 2015 -- works
- Detecting C compiler ABI info
- Detecting C compiler ABI info - done
- Check for working CXX compiler using: Visual Studio 14 2015
- Check for working CXX compiler using: Visual Studio 14 2015 -- works
- Detecting CXX compiler ABI info
- Detecting CXX compiler ABI info - done
- Detecting CXX compile features
- Detecting CXX compile features - done
- You do not want to use XLIFE++ with OpenMP
- XLIFE++ was compiled with cl.exe
- XLIFE++ was compiled in Release mode
- XLIFE++ libraries found !
- Your program will be compiled without LAPACK
- Your program will be compiled without BLAS
- Your program will be compiled without Arpack and Arpack++
- Your program will be compiled without Umfpack
- Configuring done
- Generating done
- Build files have been written to: E:\testdlife
  
```

click on generate

in log window check that project is created



close all windows of setup project and goto project folder



open  
XLiFE++ project