Technical Courses
Cursos Técnicos

Reg. no.: 01/F1550

Norplan ENGINEERING

DIPLOMA

NORPLAN ENGINEERING SL certifica que ***Andrés Menes Cuervo***

Con N.I.F 71.896.411-K, ha realizado con aprovechamiento el Curso de

C++ aplicado a OpenFOAM

Impartido entre los días 27/01/2021 y 20/02/2021, con una duración de 20 horas.

En Narón, a 20 de febrero de 2021.

INGENIERÍA Y FORMACIÓN
NORPLAN ENGINEERING S.L.
NIF: B70458955
ENGINEERING AND TRAINING

NORPLAN

Isabel Lamas (Tutora)

Carlos Rodríguez (Director)

Programa del Curso:

Chapter 1: Introduction to C++. Application to OpenFOAM

1.1 Introduction
1.2 C++
1.3 Basic structure of a C++ program
1.4 Preprocessor directives
1.5 Variables
1.6 Operators
1.7 Inputs and outputs
1.8 Control structures

Chapter 2: C++. Application to OpenFOAM

2.1 Introduction
2.2 Typedefs
2.3 Functions
2.4 Pointers
2.5 Data structures
2.6 Classes
2.7 Constructors
2.8 Destructors
2.9 Friends
2.10 Inheritance
2.11 Virtual member functions
2.12 Abstract classes
2.13 Templates
2.14 Namespaces
2.15 Solving partial differential equations in OpenFOAM
2.16 Programation in OpenFOAM

Chapter 3: Development of own code in OpenFOAM

3.1 Development of a new solver
3.2 Compilation of applications and libraries
3.3 Development of a new boundary condition
3.4 Development of a new turbulence model
3.5 Development of a new transport model
3.6 Development of a new thermophysical model
3.7 Development of a new postprocessing utility

EXERCISES

1 C++ program 1
2 C++ program 2
3 C++ program 3
4 C++ program 4
5 C++ program 5