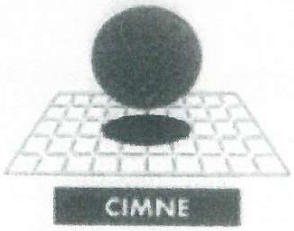
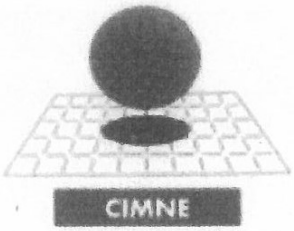


Any change in the information contained in the internship agreement must be authorized by the local master coordinator.

Date:

Student's signature	External supervisor'signature	Internal advisor Riccardo Rossi



Master on Numerical Methods in Engineering

ACCEPTANCE OF INTERNSHIP WORK PLAN

Name of the student	**SEYED MOHAMMAD REZA** ATTAR SEYED

Company/Institution/ Department	**CASE Department (BSC-CNS)**
Name of the external supervisor	**Guillaume Houzeaux & Paula Córdoba**
Start and end dates	**25/11/17 - 31/1/17**
Total number of hours	**450**

Topic: Algorithms for Computing Eigenvalues in Sparse Matrices

Main tasks:

1. Searching different algorithms used to compute the eigenvalues of matrices (Power Method, Jacobi, QR etc.)

2. Choose one or two of them and program it.

3. Test different matrices (dense VS sparse, sizes etc.) and compare the performance of the methods (number of iterations, CPU time)

Additional remarks:

This introductory work will be part of Reza's master thesis, which will consist in the implementation of one of these algorithms in Alya code and test it with real cases.