



#### **AAA Tutorials**

## 9. Abaqus analysis and stress extraction

**Grand Roman Joldes Senior Research Fellow** 

Intelligent Systems for Medicine Lab. (ISML) Vascular Engineering Crawley, WA, 6009, AUSTRALIA

Phone: + (61) 8 6488 3125

Email: grand.joldes@uwa.edu.au



#### Software installation

Have Abaqus installed and available via command line.

Copy the files AAA\_RunAbaqus.bat, AAA\_ExtractStress.bat,

ExtractResults.py and abaqus\_v6.env in the folder where AAA.inp (which you want to analyze) is located.

## **Software configuration**

You can modify abaqus\_v6.env to change configuration of Abaqus, especially the scratch folder (where temporary files will be placed).



# **Expected inputs**

The AAA.inp (which includes Wall.inp and, depending on case, ILT.inp).

The configuration of the Abaqus model is done in AAA.inp and can be modified.

## Running the software

Run AAA\_RunAbaqus.bat and then AAA\_ExtractStress.bat.

Another option is to use the Abaqus CAE to import AAA.inp, review the configuration, create a job, perform the analysis, then run the python script ExtractResults.py to extract stress information.



# **Expected outputs**

An output database with the analysis results, AAA.odb. A file with the AAA wall geometry including info about von-Mises and max. principal stresses at the nodes, stress.vtk.

#### **School of Mechanical and Chemical Engineering**



# Thank You!

grand.joldes@uwa.edu.au