# Installations needed to run the new Lorenzo’s script (faster than the previous).

## 0. R and R studio

First download R (http://cran.rstudio.com/) and then R studio (<http://www.rstudio.com/ide/download/desktop>).

## 1.  OSGEO4W Setup

This is needed to have access to gdal and proj4 libraries

1)      If not already installed, install the OSGeo4W suite (<http://trac.osgeo.org/osgeo4w/>). Use the “Advanced Installation” option and select the following packages:

a.       In the “Commandline\_Utilities” section

                                                               i.      Gdal

                                                             ii.      Libgeotiff

                                                            iii.      Proj

                                                           iv.      Shell

b.      In the “Libs” section:

                                                               i.      Gdal

                                                             ii.      Gdal-autotest

                                                            iii.      Gdal-filegdb

                                                           iv.      Gdal-mrsid

                                                             v.      Gdal-python

                                                           vi.      Gdal-oracle

                                                          vii.      Hdf4

                                                        viii.      Hdf5

                                                           ix.      Libgeotiff

                                                             x.      Libjpeg

                When prompted, let OSGEO4W install other needed packages

(IF OSGEO is already installed, just check that the needed packages are already installed on the system, by running the OSGEO4w installation .exe using the “advanced” option

2)      Add a new “GDAL\_DATA” system variable to windows

a.       Go to “Control Panel  System Advanced System Settings Environment Variables

b.      In “System Variables”, click “New”

c.       Variable name = GDAL\_DATA; Variable Value = Path to the gdal\_data folder (a folder within the OSGEO4W main folder, containing the file “gdal\_datum.csv”') (e.g., “C:\OSGeo4W64\share\gdal”)

d.      Click Ok

3)      Add the path to the gdal “ bin” folder to the Windows “Path” system variable

a.       Go to “Control Panel  System Advanced System Settings Environment Variables

b.      In “System Variables”, click on “Path”  and then “Edit”

c.       Go at the end of the current string, add a semicolumn (”;”) and then the path to the gdal bin folder (the one where, for example, “gdalwarp resides) (e.g., “C:\OSGeo4W64\bin”)

d.      Click Ok

## 2.  MRT (MODIS Reprojection Tool) Setup

This is needed to have access to the MODIS Reprojection Tool software (<https://lpdaac.usgs.gov/tools/modis_reprojection_tool>) used for SDS extraction and mosaicking of MODIS tiles. The installation files for MRT can be found in the “MRT\_Install” subfolder of the FRG Tool Main Folder.

1)      If MRT is not already installed (search for the file “ModisTool.bat”), extract the ZIP file to a folder WITHOUT SPACES (e.g., C:\MRT)

2)      Execute the “mrt\_install.bat” batch file and follow the instructions. (NOTE Java development Toolkit v >1.5 is needed! If not already present on the machine install it beforehand! To check if Java is installed, search for the file “java.exe” in C: !) http://www.oracle.com/technetwork/java/javase/downloads/index.html

3)      Check if the software was correctly installed by executing “ModisTool.bat” within the “bin” subfolder of the main MRT  folder and see if the GUI appears correctly

# 3. Download and install the downloader

Download the latest version of the download utility (this is the tool that makes the code run faster than using standard http protocol) from

<http://sourceforge.net/projects/aria2/files/stable/aria2-1.18.3/>

and put the executable (aria2c.exe) in c:/aria32/aria2c.exe.