EFDA

EUROPEAN FUSION DEVELOPMENT AGREEMENT

Task Force
INTEGRATED TOKAMAK MODELLING

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IMP5: ITM tools – very quick start

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SVN

- Lots of ITM “stuff” (codes, webpages…) is stored under SVN (subversion)
- SVN is a *version control system* (keeps track of new/old versions of the files)
- SVN data is stored on a server; in *repositories*

SVN Server

Repositories e.g.
…itm/imp5…/gray
…itm/imp5…/ascot
…itm/imp5…/toriq

Communication

- usually via terminal

```
> svn <arg>
```

- also possible with webinterface

SVN example

- Examples, to fetch the XML schema definitions of the 4.08b datastructures

```
svn checkout  –username  <your name> http://gforge.efda-itm.eu/svn/fpsim
```

- …modify something e.g. in fpsim.f90…
- Compare your version with the one on the SVN repository

```
svn diff fpsim.f90
```

  will tell you what every line in fpsim.f90 that has been change and show the old and new version of the edited lines
- Share your changes with every developing FPSIM by “checking in” your changes, i.e. storing them on the SVN server (in the SVN repositry)

```
svn ci –m ‘a comment describing your change’ fpsim.f90
```

  (Note that the old data is still there; every checkin generate a new version)

SVN example

- Good place to put documentation of your progress, e.g. on integration, is on the new DocBook-webpages, https://www.efda-itm.eu/~wwwimp3/TEST/ITM/html/index.html.
- As an example of such documentation, see Christian IMP12 pages. https://www.efda-itm.eu/~wwwimp3/TEST/ITM/html/imp12_public.html
- These pages are stored in SVN; you can check out a copy of the source code using:

```
svn checkout  –username  <your name> http://gforge.efda-itm.eu/svn/doc_test
```

- There's lot of help for how to modify these webpages on https://www.efda-itm.eu/~wwwimp3/TEST/ITM/html/itm_howtos.html
- Once you've made your changes, commit your changes to the SVN repositry (on the SVN server)

SVN – create a project

To help you set up your own SVN project for your code under GFORGE, then there's an excellent webpage by Christian Konz

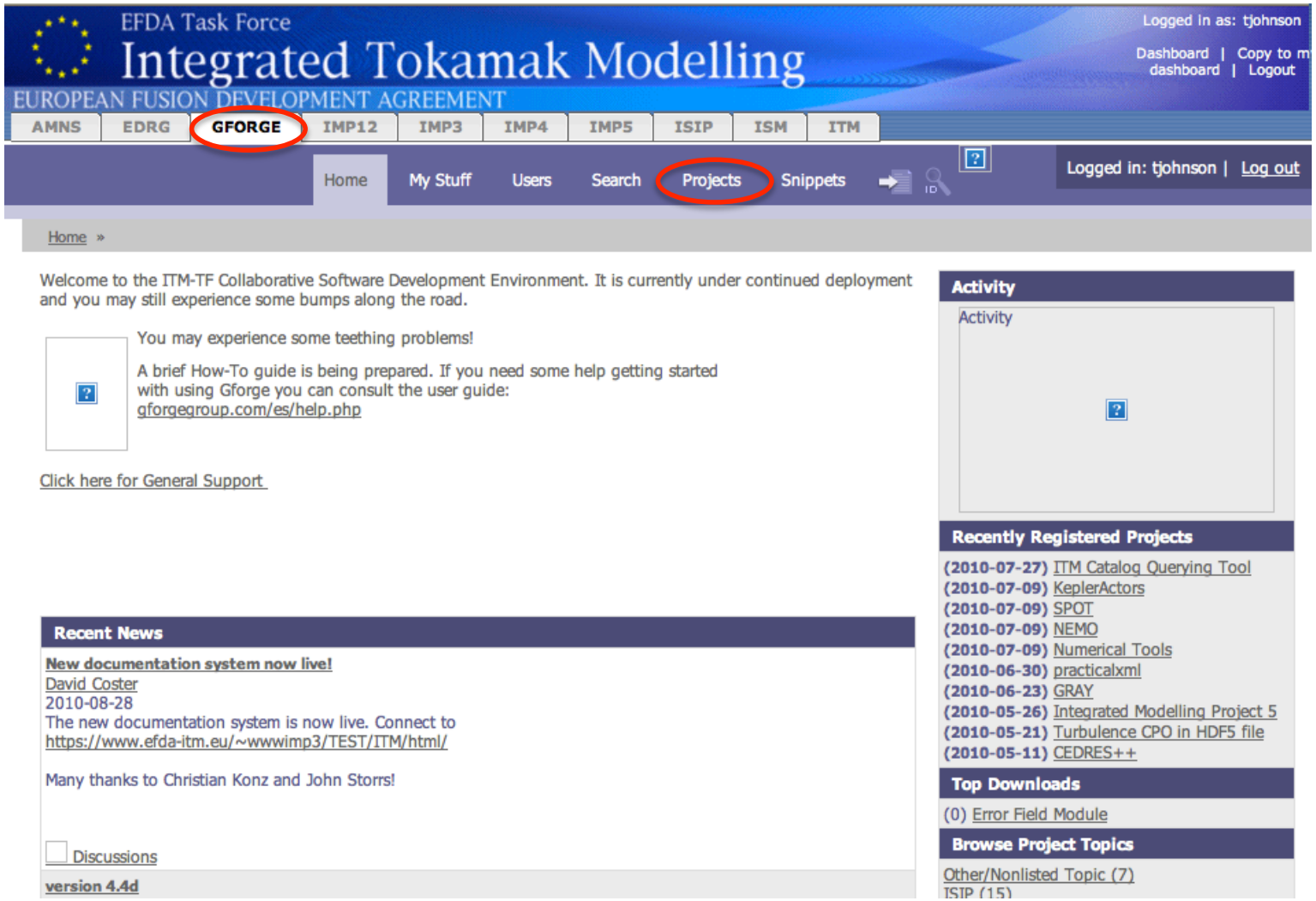
https://www.efda-itm.eu/~wwwimp3/TEST/ITM/html/itm_subversion.html#itm_subversion

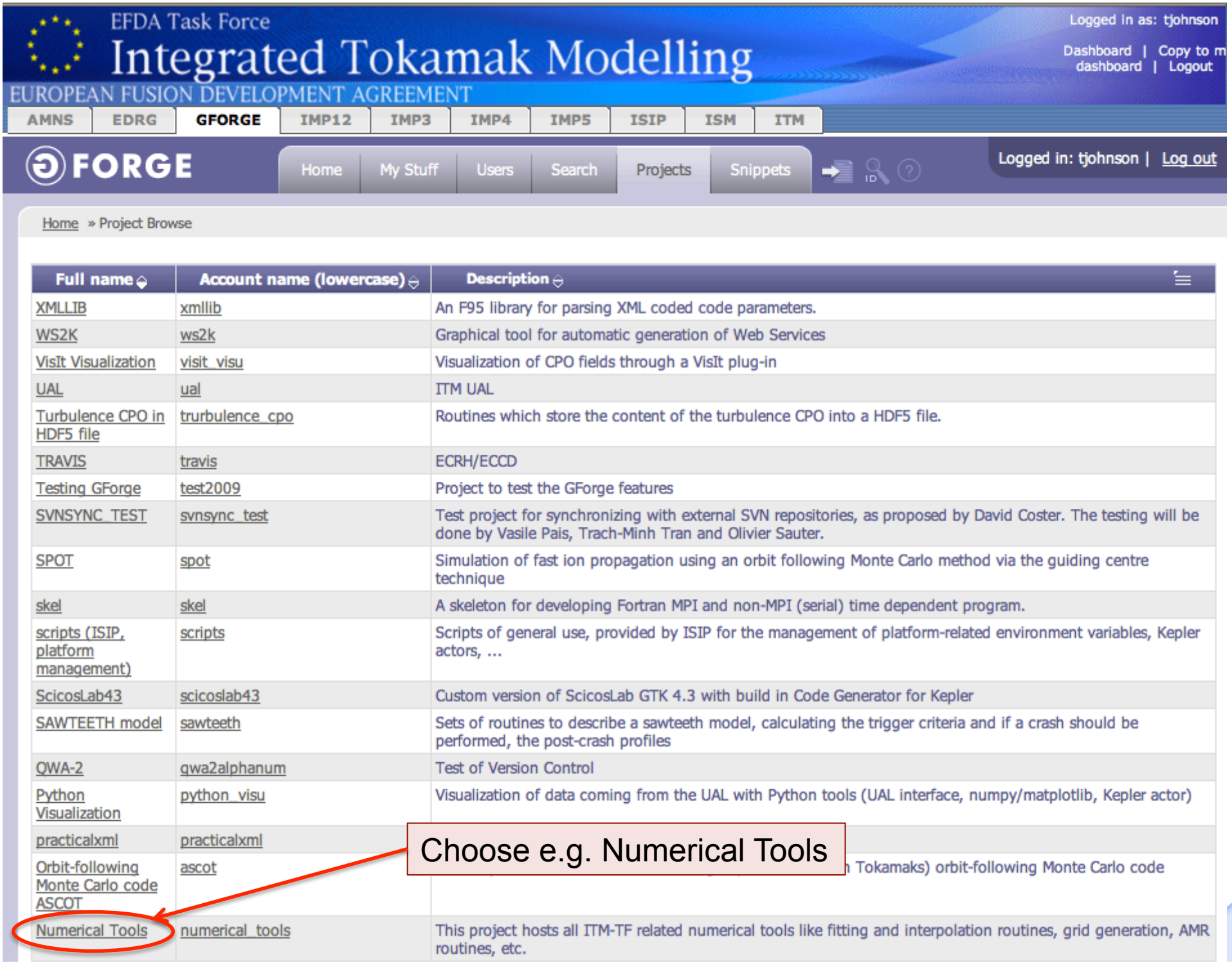
with detailed description on where to click and what you can do – very useful!

Useful that can be found in GFORGE:
•If you want to check out a copy an ITM code, or any other SVN project under ITM.
•For each project you can find the command line for *svn checkout* on the GFORGE web pages.

The following pages will tell you how to find this command line for the numerical_tools project:

Log on to : https://portal.efda-itm.eu/
…and choose GFORGE
…then PROJECTS

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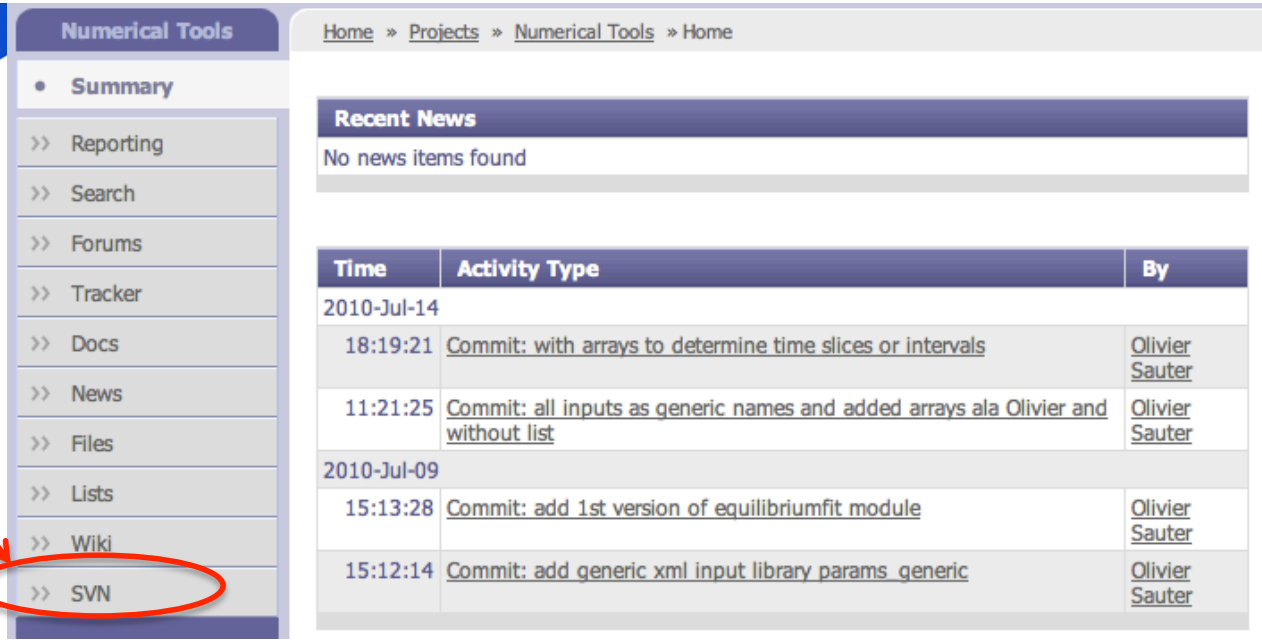
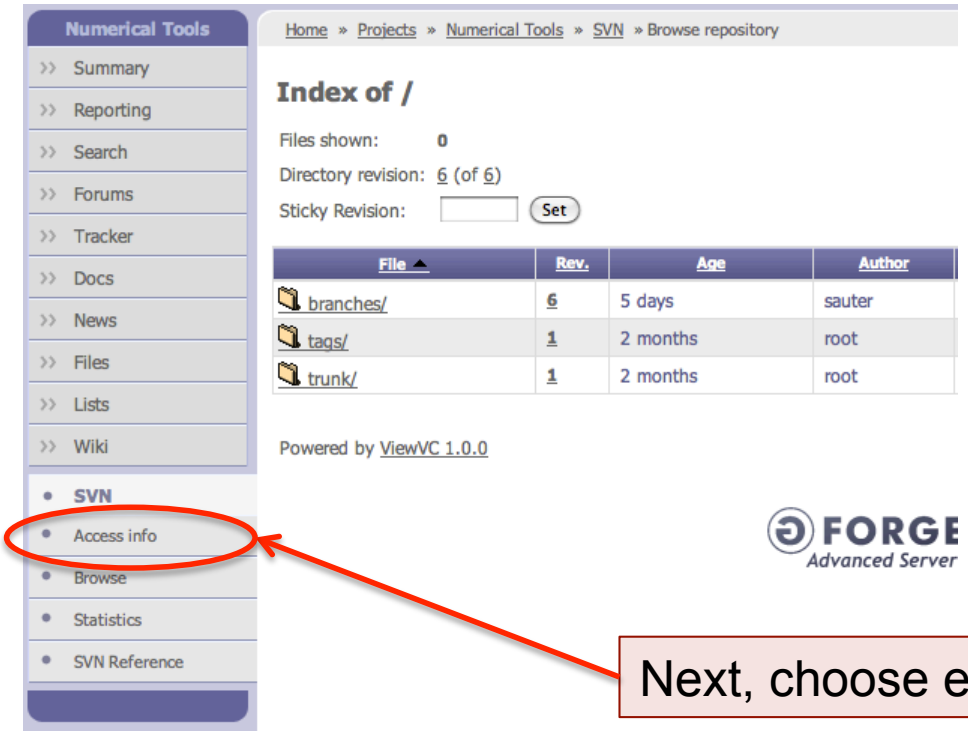
Logged in as: tjohnson
Dashboard | Copy to m
dashboard | Logout
AMNS EDRG GFORGE IMP12 IMP3 IMP4 IMP5 ISIP ISM ITM
FORGE
Home My Stuff Users Search Projects Snippets
Logged in: tjohnson | Log out
Home » Project Browse
Full name
Account name (lowercase)
Description
XMLLIB xmllib An F95 library for parsing XML coded code parameters.
WS2K ws2k Graphical tool for automatic generation of Web Services
VisIt Visualization visit_visu Visualization of CPO fields through a VisIt plug-in
UAL ual ITM UAL
Turbulence CPO in HDF5 file trurbulence_cpo Routines which store the content of the turbulence CPO into a HDF5 file.
TRAVIS travis ECRH/ECCD
Testing GForge test2009 Project to test the GForge features
SVNSYNC_TEST svnsync_test Test project for synchronizing with external SVN repositories, as proposed by David Coster. The testing will be done by Vasile Pais, Trach-Minh Tran and Olivier Sauter.
SPOT spot Simulation of fast ion propagation using an orbit following Monte Carlo method via the guiding centre technique
skel skel A skeleton for developing Fortran MPI and non-MPI (serial) time dependent program.
scripts (ISIP, platform management) scripts Scripts of general use, provided by ISIP for the management of platform-related environment variables, Kepler actors, ...
ScicosLab43 scicoslab43 Custom version of ScicosLab GTK 4.3 with build in Code Generator for Kepler
SAWTEETH model sawteeth Sets of routines to describe a sawteeth model, calculating the trigger criteria and if a crash should be performed, the post-crash profiles
QWA-2 qwa2alphanum Test of Version Control
Python Visualization python_visu Visualization of data coming from the UAL with Python tools (UAL interface, numpy/matplotlib, Kepler actor)
practicalxml practicalxml
Orbit-following Monte Carlo code ASCOT ascot Tokamaks) orbit-following Monte Carlo code
Numerical Tools numerical_tools This project hosts all ITM-TF related numerical tools like fitting and interpolation routines, grid generation, AMR routines, etc.
Choose e.g. Numerical Tools



Choose SVN

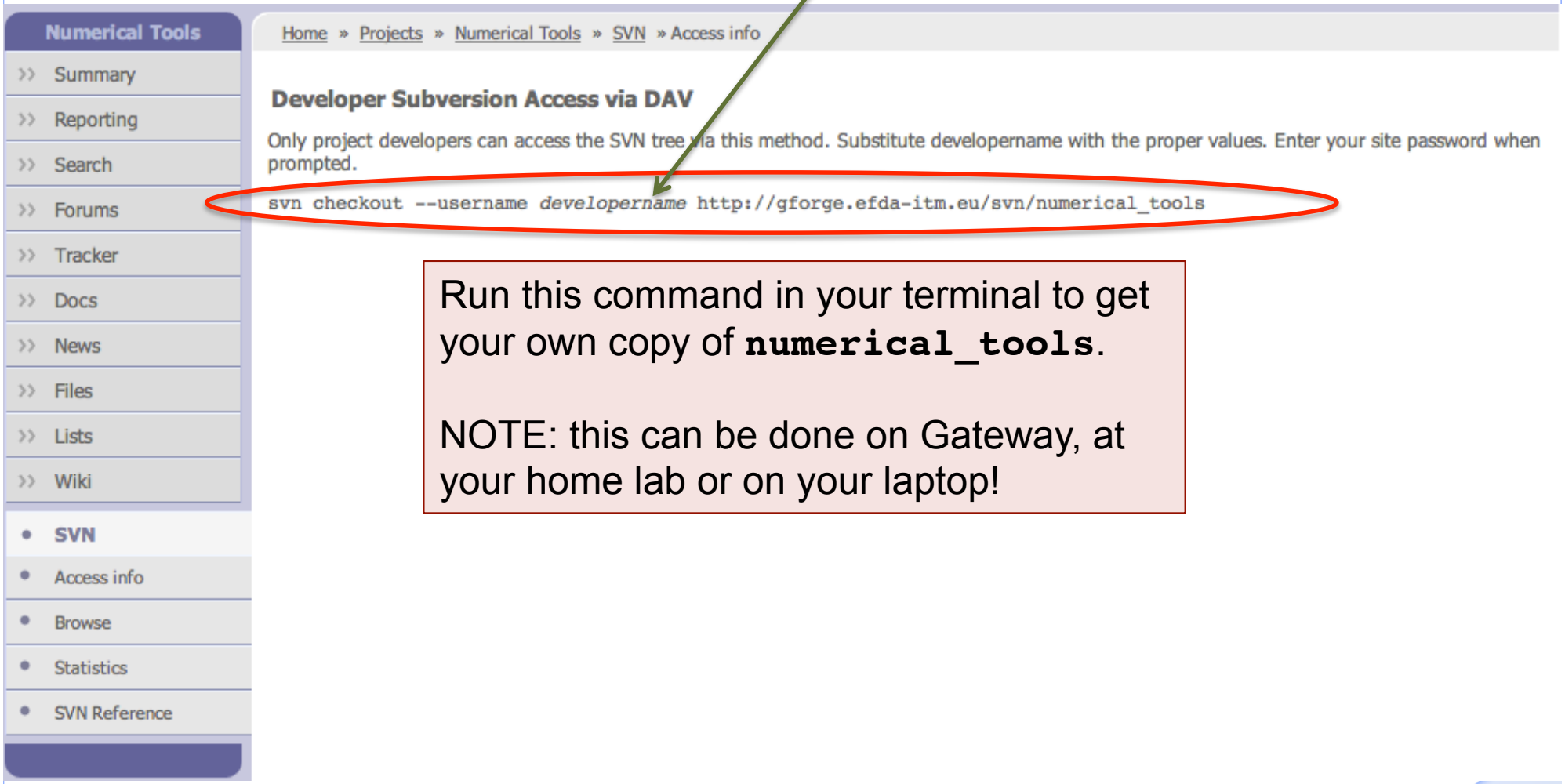


Click on
- **branches/** (temporary for development)
- **tags/** (stored versions, e.g. 4.07c/ 4.08a/ of the datastructures)
- **trunk/** (present version)

You can see all files in the project and all previous versions of each file!

Next, choose e.g. Access info

Your ITM user name



Run this command in your terminal to get your own copy of **`numerical_tools`**.

NOTE: this can be done on Gateway, at your home lab or on your laptop!