

**ENSTTI TUTORING
PROPOSAL 2011-001**

Tutor(s) name and affiliation: K. Velkov, A. Pautz, GRS

Title and short description of the tutoring work :

Coupled Code Analysis of selected DBA and BDB transients for existing LWR and GEN-III plant designs.

In this tutoring activity, the candidate will get acquainted with the handling of large coupled neutronics/thermal-hydraulics system codes for transient and accident analysis of relevant DBA and BDBA events. The code system to be used will be based on the GRS system code ATHLET and the reactor physics computational chain (lattice code, core simulator) of GRS. Selected transients like Main Steam Line Break (MSLB) or Reactivity Initiated Accidents (RIA) can be studied by means of these codes, and the choice of the reactor system (existing LWR, VVER, Gen-III) will be based on both the availability of data for the plant type and the priorities of the candidate.

Background and experience of the candidate:

The tutee should have a reasonable background in thermal-hydraulics and some basic knowledge on reactor dynamics. Experiences with a thermal-hydraulics system code would be helpful, but are not necessarily required.

English required

Duration and location of the tutoring :

Location: Garching (Munich area), Germany

Duration: 4-6 months depending on candidate's previous experiences