



## FUMACS-G, a Graphical User Interface for FUMACS Code Package

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### ***Abstract***

The FUMACS (FUel MAnagement Code System) code package has been developed at Ruđer Bošković Institute in year 1991 with the aim to enable in-core fuel management analysis of the NPP Krško core for nominal conditions. Due to modernization and uprating of the NPP Krško core in year 2000 and the original 1991 FUMACS inadequacy in simulating NPP Krško core in these uprated conditions, in the year 2001 a new version of FUMACS code package has been developed - FUMACS/FEEC 2001. The code package upgrading procedure consisted of two main aspects: modifications of master files, libraries and codes necessary for proper modeling of the uprated NPP Krško core and development of the code package structure suitable for Windows-32 environment. The latter included upgrading the source of the code from FORTRAN F77 to F90 level and development of a graphical, user-friendly interface with fully integrated electronic help system. Since the original FUMACS code package has been developed as a DOS based application, running of the code package on a Windows operating system proved to be rather inefficient and lacking in advantages of a standard Windows application. Therefore, FUMACS-G has been developed as a user friendly environment for handling off all project input and output files, as well as for easier overall project management. The design of FUMACS-G shell has been based on Microsoft application design guidelines.

### ***Key words***

FUMACS code package, in-core fuel management, graphical user interface, application