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Datum: 17.04.2024

Aushang

Einladung zum Seminar über „Nukleare Energieerzeugung“

Zeit: **Montag, 6. Mai 2024, 11:00 Uhr**

Ort: Karlsruher Institut für Technologie, Hermann-von-Helmholtz-Platz 1
76344 Eggenstein-Leopoldshafen, INR, Bau 521, Kolloquiumsraum (R. 302)

Referent: Herr **Yoshiharu Tobita**, Karlsruher Institut für Technologie, INR

Titel: Analysis of severe accidents using SIMMER code in the licensing of experimental fast reactor JOYO

Abstract:
Since the fast reactor core is not in the maximum reactivity configuration, a hypothetical core disruptive accident could lead to the prompt criticality due to a change in the core material configuration, and the resulting energy generation has been one of the issues in fast reactor safety, and therefore appropriate measures are needed to mitigate and contain the effects of the energy generated in the accident. In order to assess the effectiveness of these mitigation measures, a set of computer codes for the analysis of event progression and energy generation behavior in the ATWS of fast reactors has been developed, maintained, and improved under international collaboration at JAEA.
Since the important physical phenomena governing the event progression vary as the accident progresses, the entire accident process in accident analysis is divided into several phases in the analysis of accident, and dedicated analysis methods are provided for each phase to analyze the event progression in each phase. The organization and overview of these analysis methods will be presented in this seminar.
As a representative example of the validation approaches in the application of these analysis methods to the reactor safety assessment in the licensing procedure in Japan, the validation studies to confirm the applicability to reactor analysis of the SIMMER code for the analysis of core material movement and reactor power, which is important for the analysis of energy generation in the accident, will be presented. The validation studies of the SIMMER code have confirmed the applicability of SIMMER to the reactor analysis, while at the same time identifying the critical phenomena whose effect of their uncertainty in the reactor analysis should be checked.

Hinweis: Alle auswärtigen Besucher des Seminars werden gebeten, ihren gültigen Personalausweis oder Reisepass mitzubringen