

Seminarium Zakładu Energetyki Jądrowej i Analiz Środowiska (UZ3)
Departament Badań Układów Złożonych (DUZ)
Wtorek: 28.05.2019, 11:30
CYFRONET (bud. 39), sala 172 (III piętro)

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Transient Calculations for the Dual Fluid Reactor

Abstract:

One of the most crucial point of a nuclear reactor's safety is behaviour during severe transient and withstand them. This is even more important in case of new concepts of reactors, especially when LWR's (Light Water Reactors) regulations have to be modified to be appropriate for others designs.

Dual fluid reactor (DFR) is a novel concept of a reactor which is a kind of hybrid of Molten Salt Reactor and Lead Fast Reactor. To investigate optimal geometry or transient behaviour of new types of reactors (like this one) new mathematical models or codes has to be developed.

For that purpose TRACE (TRAC/RELAP Advanced Computational Engine) – NRC (Nuclear Regulatory Commission) flagship code, was chosen. DFR requires new types of structures materials and fluids. The idea of developing this tool, results and some obstacles regarding that, will be presented.

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