TRANSFORM: A Solution for Advanced System Modeling

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The TRANSient Simulation Framework Of Reconfigurable Modules (TRANSFORM) is an ORNL-developed component library created using the Modelica programming language for the investigation of dynamic thermal-hydraulic systems and other multi-physics systems. The TRANSFORM library has been successfully used for a variety of advanced energy applications including investigations into the performance of nuclear hybrid energy systems, liquid metal and gas cooled reactors, and molten salt applications including kinetic behavior and fission product transport. This presentation will introduce the audience to the TRANSFORM library by providing an overview of capabilities and applications.

https://youtu.be/esUoh9zBK-M

Generate Custom Components — Nuclear Subchannel

Perform Experimental Benchmarking — UC Berkeley Compact Integral Effects Test Facility

Investigate Advanced Reactor Behavior — Liquid-Fueled Molten Salt Reactor