

Jacobian-Free Newton-Krylov (JFNK) Methods for Nonlinear Neutronics/Thermal-Hydraulic Equations

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Outline

- 1 Introduction
 - Formulating the Nonlinear Problem
- 2 Governing Equations
- 3 Solvers
- 4 Results
- 5 Conclusions

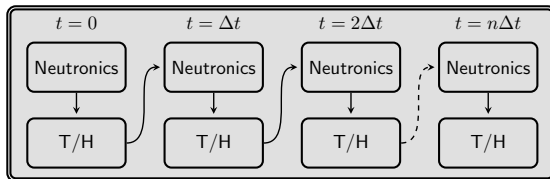
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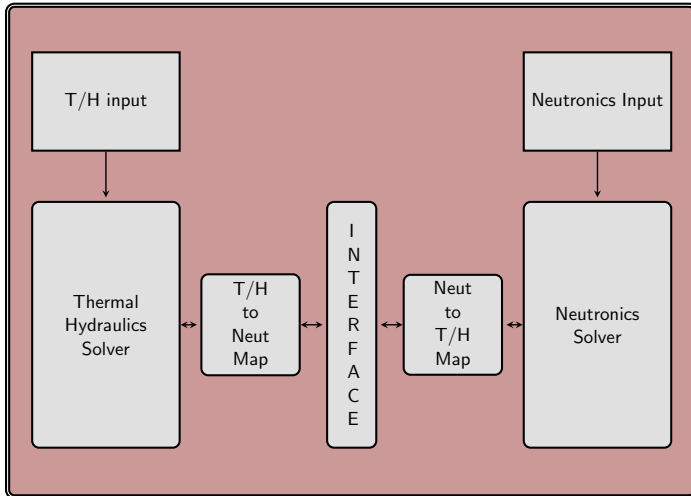
Motivation

- Research is key

Common Approach to Coupling - Operator Splitting



PARCS Coupling



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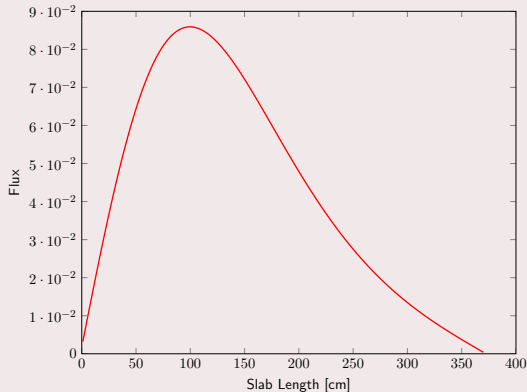
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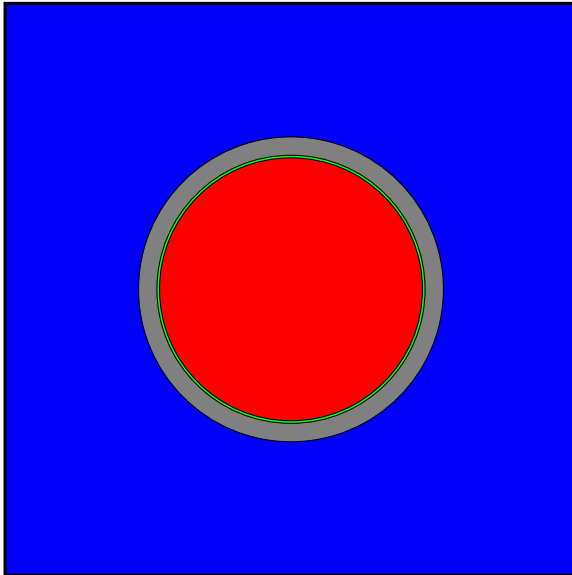
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Flux Results - Steady Solution

Flux Results



Animation



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