

# 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

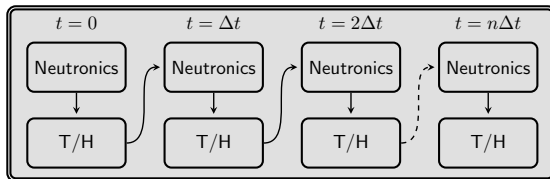
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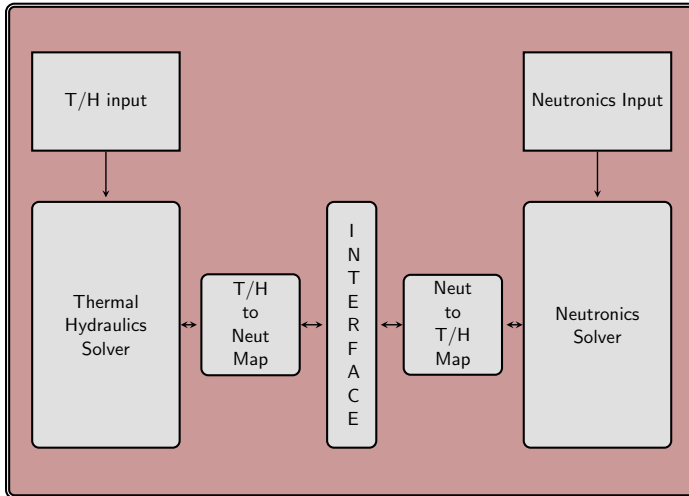
# Motivation

- Research is key

# Common Approach to Coupling - Operator Splitting



# PARCS Coupling



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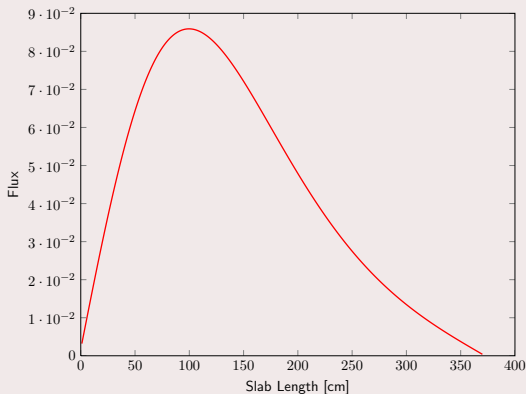


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# Flux Results - Steady Solution

## Flux Results



# Animation

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