

# Adaptive Remeshing in Abaqus/Standard

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## Agenda

- **Lecture 1** Introduction to Adaptive Remeshing
- **Workshop 1** Plate with a Circular Stress Riser
- **Lecture 2** Remeshing Rules for Adaptivity
- **Workshop 2** Heat Transfer Analysis of a Reactor Pressure Vessel
- **Lecture 3** Error Indicators and Mesh Sizing

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## Revision Status

Lecture 1	5/11	Updated for 6.11
Lecture 2	5/11	Updated for 6.11
Lecture 3	5/11	Updated for 6.11
Workshop 1	5/11	Updated for 6.11
Workshop 2	5/11	Updated for 6.11



# Introduction to Adaptive Remeshing

Lecture 1

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L1.2

## Overview

- **Adaptivity Techniques in Abaqus**
  - Arbitrary Lagrangian Eulerian (ALE) adaptive meshing
  - Mesh-to-mesh solution mapping
  - Adaptive remeshing
- **Basic Elements of Adaptive Remeshing**
- **Applicability and Restrictions**

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# Remeshing Rules for Adaptivity

Lecture 2

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L2.2

## Overview

- Remeshing Rules: The Basics
- Multiple Remeshing Rules
- Example: Thermal-Stress Analysis of a Reactor Pressure Vessel
- Manual Adaptivity

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# Error Indicators and Mesh Sizing

Lecture 3

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L3.2

## Overview

- Basics of Error Indicators
- Considerations in Error Indicator Selection
- Interpreting Error Indicator Output
- Mesh Sizing Methods
- Constraints on Mesh Sizing

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