

# ANSYS

Welcome to the Powerful Technology of ANSYS® Revision 5.0!

This video is a 26-minute overview of some of the many new capabilities of Revision 5.0,\* the latest version of the ANSYS program. Developed, marketed, and supported by Swanson Analysis Systems, Inc. (SASI), the program is used for solutions to mechanical, thermal, and electronic problems.

While the video effectively covers the many new enhancements of ANSYS Revision 5.0, it does not cover all of the capabilities that make up the ANSYS program. Standard ANSYS analysis types include statics, dynamics, heat transfer, magnetics, coupled field, and piezoelectrics. The chart provides a quick overview of ANSYS analysis options.

*\*Note that all of the annotation sequences (with the exception of the transition screens) were done with the new annotation capabilities of ANSYS Revision 5.0.*

## **ANSYS Analysis Options**

### **Design Optimization**

#### **Structural Static Analysis**

#### **Structural Dynamic Analysis**

- Transient Dynamic
- Modal
- Harmonic Response
- Response Spectrum
- Random Vibration

#### **Structural Buckling Analysis**

- Linear Buckling
- Nonlinear Buckling

#### **Structural Nonlinearities Analysis**

- Material Nonlinearities
- Geometric Nonlinearities
- Element Nonlinearities

#### **Static & Dynamic Kinematic Analysis**

#### **Thermal Analysis**

- Steady-State
- Transient
- Phase Change

#### **Magnetic Field Analysis**

- Static Magnetic Fields
- Time-Varying Magnetic Fields

#### **Fluid Flow &**

#### **Acoustic Analysis**

- Pipe Flow
- Potential Flow
- Seepage
- Acoustics

#### **Coupled Field Analysis**

- Thermal-Stress Analysis
- Magnetic-Thermal Analysis
- Magnetic-Structural Analysis
- Fluid Flow-Thermal Analysis
- Fluid Flow-Structural Analysis
- Thermal-Electric Analysis
- Piezoelectric Analysis
- Electromagnetic Skin-effect Analysis

#### **Substructuring**

#### **Submodeling**

The ANSYS element library contains over 90 distinct structural, heat transfer, electromagnetic, fluid, and coupled field elements. Composites, fracture mechanics, and kinematics capabilities are also provided in this one package.

Support services for the ANSYS program include extensive documentation, a telephone hotline, and training seminars. ANSYS Support Distributors provide licensing and other assistance in major cities across the United States and throughout the world.

ANSYS FEA. Helping You Design a Better Tomorrow.™

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