# NEi Works™

# **New 2.1 Features**

# New Analysis Types:

### Nonlinear Transient Response:

- Damping
  - Material
  - Structural
- Time stepping
  - Adaptive
  - Discrete
- Time dependent loads
  - Force
  - Moment
  - Pressure
  - Gravity
  - Rotational force
  - Displacement
  - Velocity
  - Acceleration

# **New Element Types:**

PBARL:

- User dimensioned cross-section
  - Save
  - Load
- Defined profile selection
- Section offset
  - Centroid
  - Reference point
  - User defined
  - Individual element offset

### PBEAML:

- User dimensioned cross-section
  - Save
  - Load
- Defined profile selection
- Section offset
  - Centroid
  - Reference point
  - Shear center
  - User defined
  - Individual element offset
- Tapered Beam

# **New Load Types:**

#### From Output:

Temperature loads

#### Variable Loading:

- Uses 3D interpolation surface
  - All applicable load types supported
  - Function dependence capable

# **New Post-Processing Features:**

#### Performance Increase for Post-Processing:

- Shorter result load times
- Short wait times between result selection

#### **XY Plot Enhancements:**

- Logarithmic axis
- Hover over data points

## **Usability Enhancements:**

- 3D cross-section view of shell elements
- 3D cross-section view of beam and bar elements using cross-section definition
- 1D element direction visualization
- Failure theories for isotropic material
  - Von Mises
  - Max Shear Stress
- Combined shell and beam/bar meshing
- Added automatic bolt creation
- Simplification of feature tree
  - Add / remove extra items in the tree that are not used
- New access to all advanced nonlinear analysis settings and parameters
- Support for SolidWorks 2010

# **Optimization:**

## New Optimization Objective:

Eigenvalue for buckling solutions

**NEi Software, Inc.** is committed to the success of our customers. Detailed documentation, customized on-site training, and comprehensive technical support ensures that you will see immediate return on your investment.

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