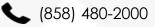


Webinar: **Working with Femap Data Surfaces**

Frank Fan, ATA Engineering December 10th, 2020

13290 Evening Creek Drive S, San Diego CA 92128





in ata-engineering

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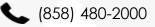




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in ata-engineering



Femap Data Surface Webinar

Agenda



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Femap Data Surface

Introduction

A Femap data surface is a table of values defined on coordinates

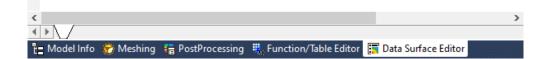
➢ Data surface can be 1-D, 2-D or 3-D

- Useful for creating loads with the "Data Surface" method
 - Convert load to an output for visualization as a color contour

Enables manipulation of load sets and output data

- ➤ Load set combination
- ➤ Output result set processing

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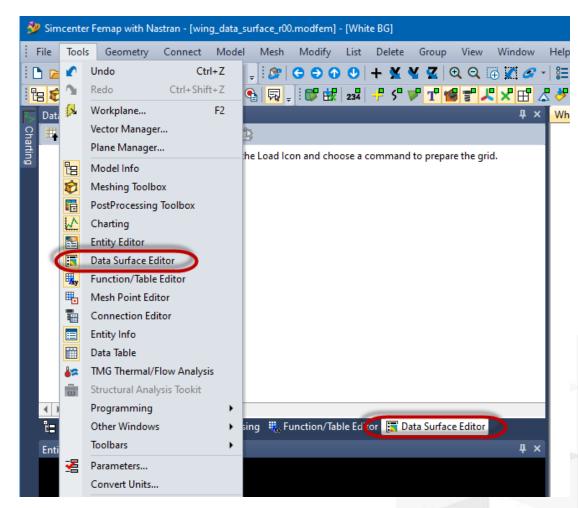


Femap Data Surface Editor

Introduction

Data Surface Editor is a tool to help create Data Surfaces

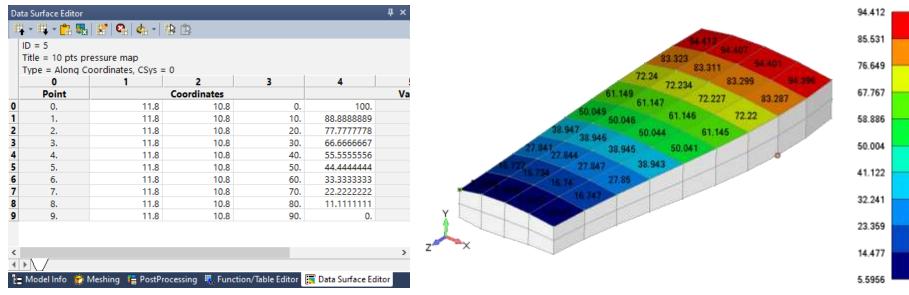
- Data Surface Editor is a Dockable Pane listed under Tools
- Predefined methods to create Data Surfaces
 - Transfer a Data Surface between different models
- > Displays the values in a tabular format
 - ➤ Values can be edited
- New for 2020.2: Transfer table values to Excel





Femap Data Surface Demo 1 – Along Coordinate Method

- The following features are used in this demonstration:
 - ➤ Data Surface Editor
 - >Interface with external program (Excel)
 - ➢ Create Load Set using Data Surface
 - ➢ Visualize the Load Set

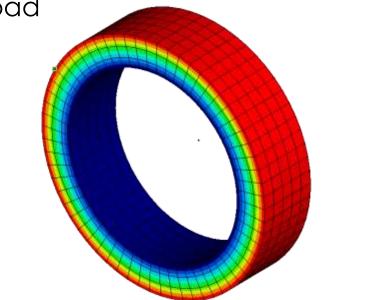


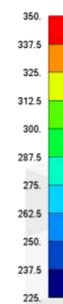


Femap Data Surface Demo 2 – Mesh Data Surface Method

- The following features are used in this demonstration:
 - Create Data Surface directly from the Load command
 - ≻ Use Femap Function in an equation (e.g. XND(!i))
 - ≻ Mesh Data Surface
 - ➤ Update Data Surface and Load









Femap Functions

See Appendix C of Femap User Guide

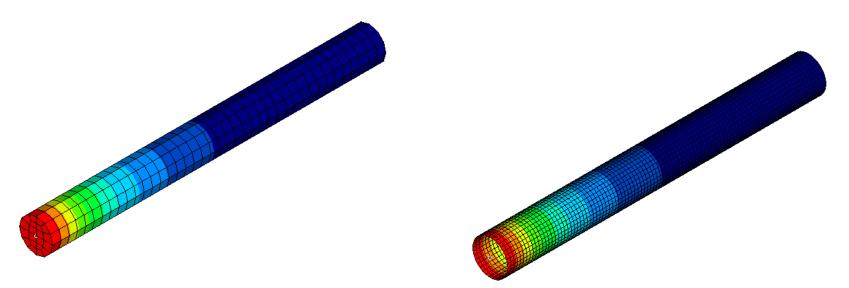
- Femap Functions can be used in equations to define values for numeric input (Ctrl-E)
- ≻Math functions such as LN(x), LOG(x), EXP(x), SIN(x), etc
- Model query functions such as FNI(functionID;x), XND(nodeID), YND(nodeID), ZND(nodeID), etc

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Femap Data Surface Demo 3 – Mapping Between Models

- The following features are used in this demonstration:
 - ➤ Output Map Data Surface command
 - ➢ Data Surface Copy and Paste commands
 - > Output to input mapping between different models
 - ➤ Align and View Output Map commands

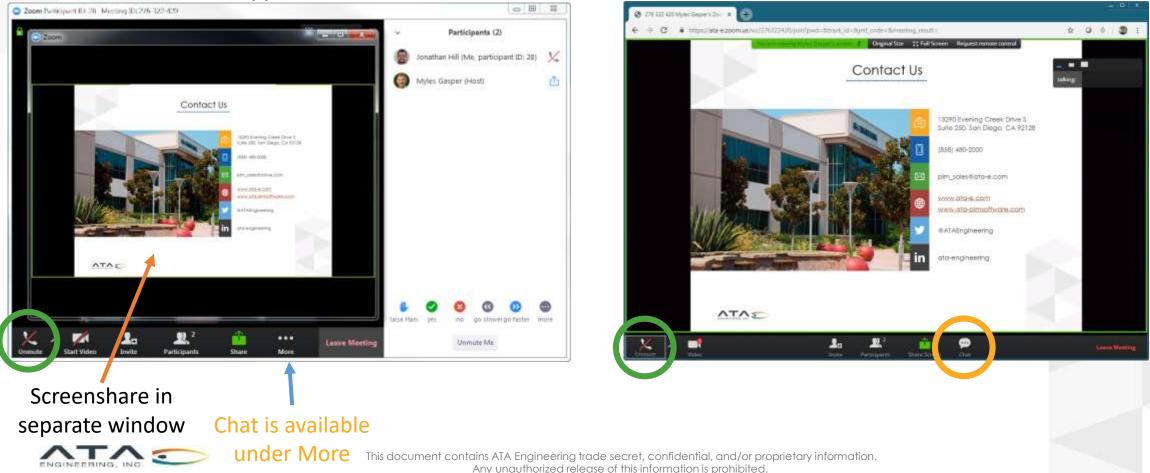




Questions?

Submit questions in the chat or unmute yourself now

Zoom Application



Web Interface

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