



# Electric field with Flux<sup>®</sup>

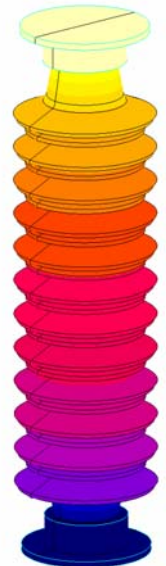
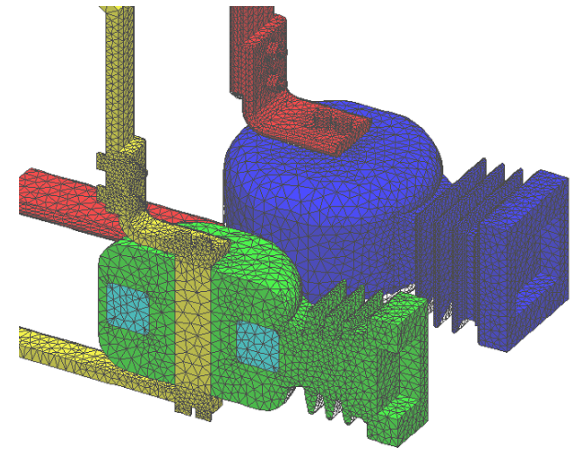
# Electric field applications

- Applications:

- » High voltage devices
- » Spark-gaps
- » Cable bushings
- » HV insulators
- » ...

- For computation of:

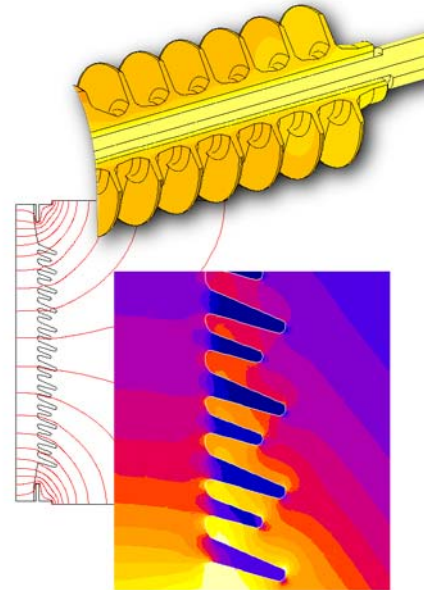
- » Electric potential ( $V$ ) space distribution
- » Electric field ( $E$ ) space distribution
- » Electric charge ( $q$ ) on conductors



# Electric field applications

- Example of use:

- » Design and optimize electric devices
- » Proceed to virtual prototyping
- » Study the electric field distribution on different parts of the device
  - ✓ Air / Insulator / Triple points
- » ...



# Benefits of using Flux

- Advanced CAD import capabilities:

- » Capabilities to import neutral and native CAD formats:

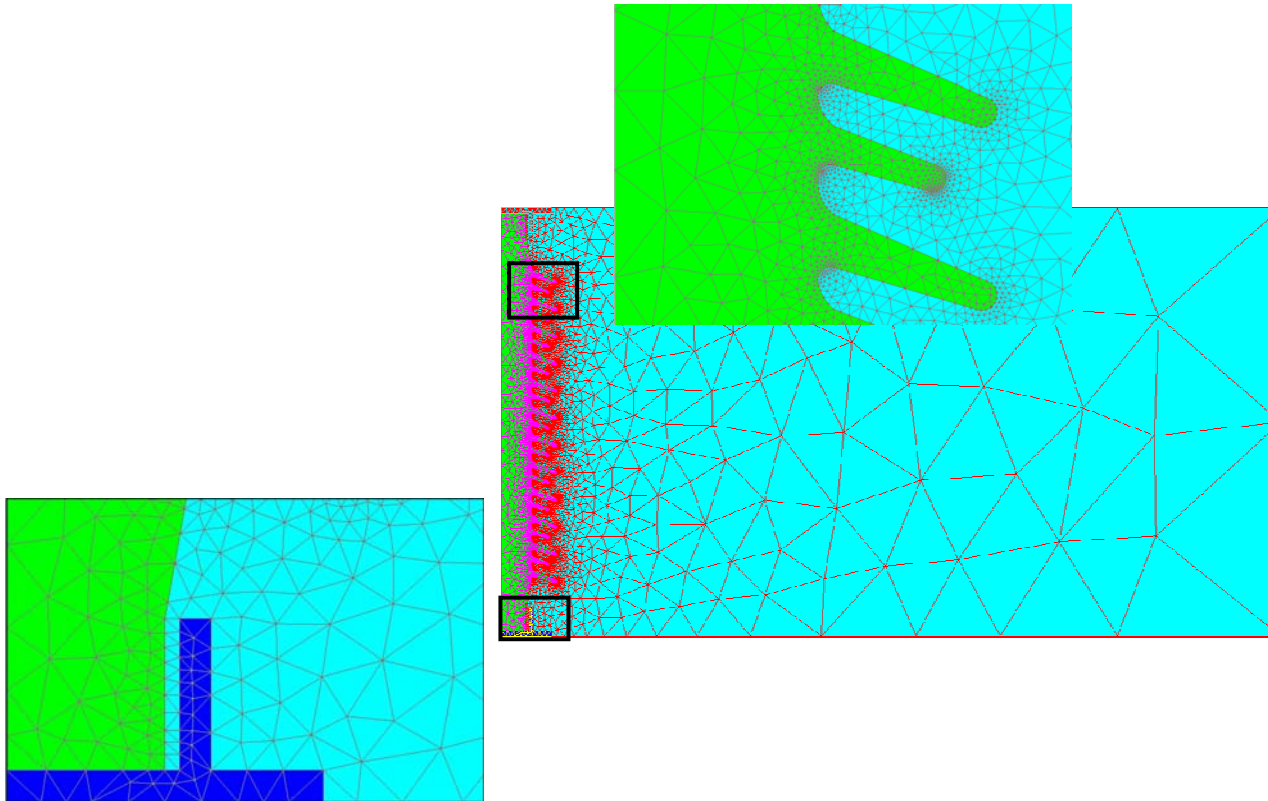
- ✓ STEP, IGES, DXF, STL, SAT, Inventor, Pro\_E, CATIA V4, CATIA V5

- » Advanced correcting functions to adapt the initial CAD draw to FEM calculation:

- ✓ Automatic healing (for possible intersections,...)
- ✓ Automatic faces stitching
- ✓ Automatic solid assembly

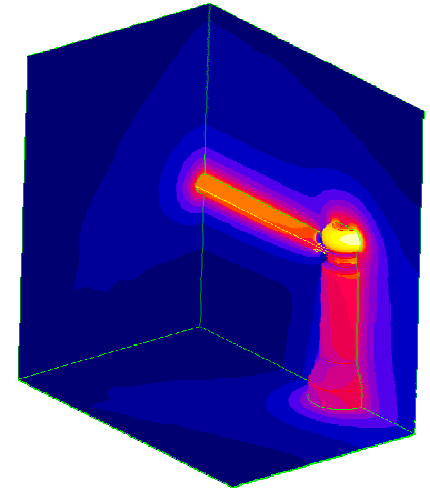
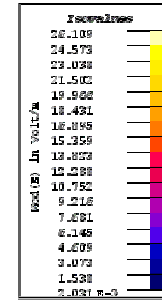
# Benefits of using Flux

- Automatic mesh generator based on geometry:
  - » Easy mesh generation for complex geometries

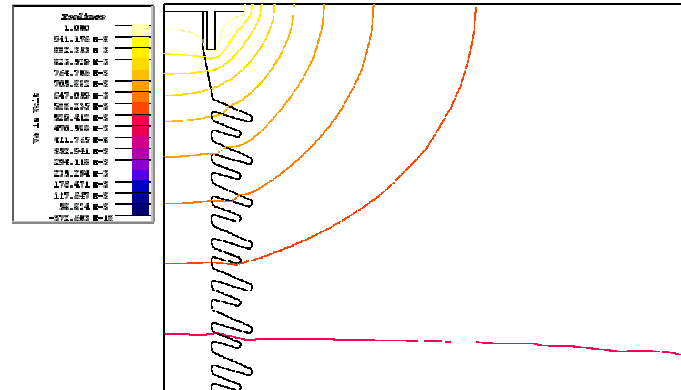


# Electric field applications

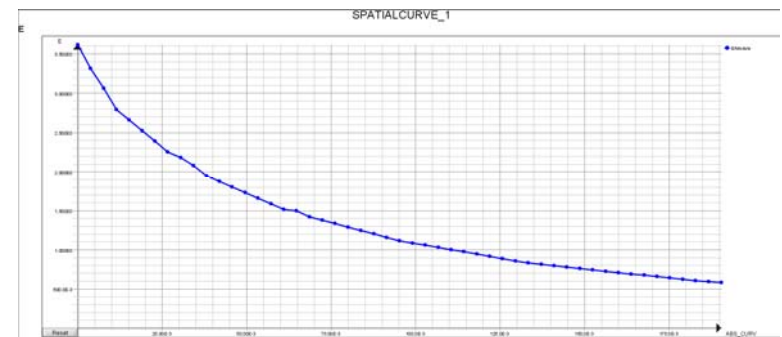
- Results:
  - » Electric field color map distribution:



- » Electric potential isolines:



- » Electric field 2D curves along paths



# Benefits of using Flux

- And also:
  - » Full scripting and customizing capabilities thanks to Pyflux<sup>®</sup> command language
  - » Easy multiparametric studies
  - » A user-friendly graphical user interface
  - » ...

