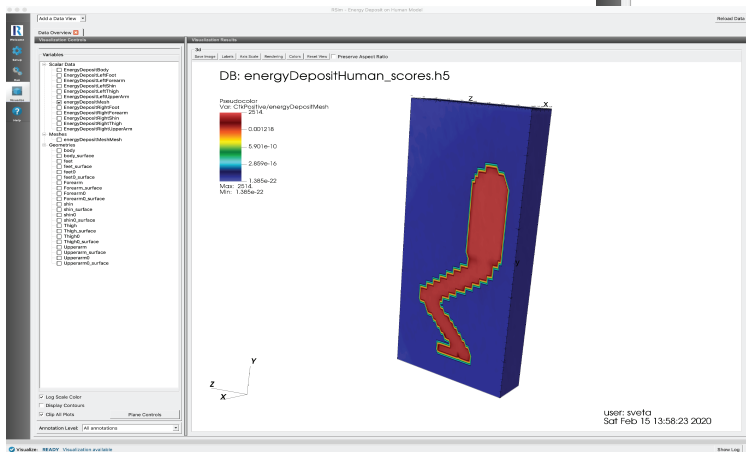
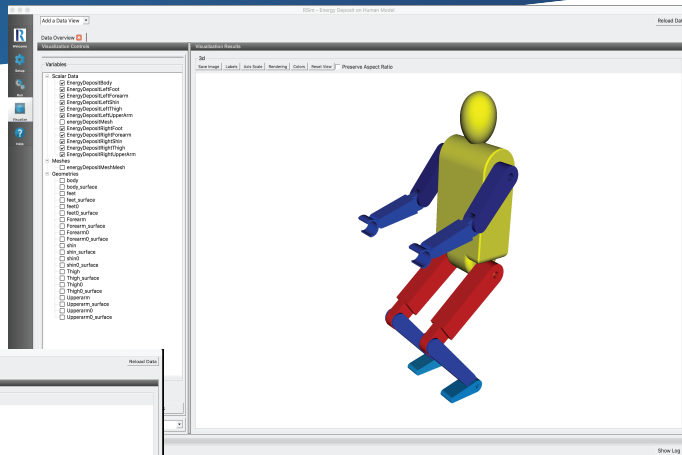




# Radiation Modeling using Geant4

*A Monte Carlo Application with a GUI and CAD Integration*



Use the power of Geant4 through an easy to use GUI

Model complex geometries

Set your simulation without C++ programming or manual editing of input files

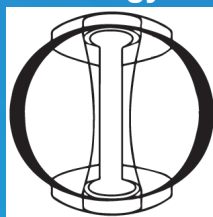
*RSim is a cross platform application with a user friendly GUI that runs Monte Carlo simulations of radiation transport. Based Geant4, a well established radiation transport model, RSim offers an interactive GUI for design set-up and visualization. The powerful graphical analysis tool, VisIt, is embedded to provide qualitative and quantitative visualization capabilities.*

## RSim Applications

**Nuclear Medicine**



**Nuclear & Fusion Energy**

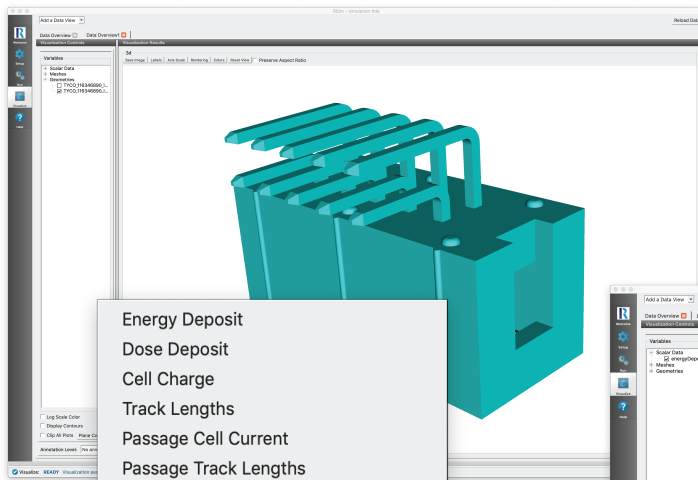


**Radioactive Waste Management**



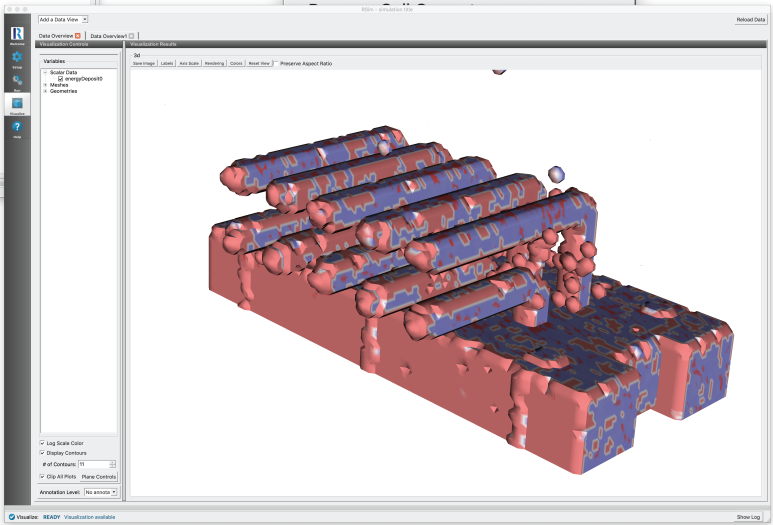
**Space Missions**





- Energy Deposit
- Dose Deposit
- Cell Charge
- Track Lengths
- Passage Cell Current
- Passage Track Lengths
- Population
- Number of Tracks
- Number of Terminated Tracks
- Minimum Kinetic Energy at Generation
- Number of Steps
- Number of Secondaries

- Dose Deposit
- Flat Surface Flux
- Flat Surface Current
- Passage Cell Flux
- Number of Collisions
- Cell Flux
- Energy Deposit
- Cell Charge
- Track Lengths



Top Left: CAD data for solenoid valve  
 Top right: Mesh scoring choices  
 Bottom Left: Volume scoring choices  
 Bottom right: Visualization of energy deposit on a mesh

## RSim Features

|   |  |  |
|---|--|--|
| 700 Material Database                       | New materials creation                                 | Material annotation through the GUI and text |
| Boolean and array operations on CSG and CAD | General particle source support                        | Constructive solid geometry                  |
| CAD (STEP, GDML, H5M, and STL) import       | Geometry export to STL, GDML, H5M, and Tetgens formats |  |
| Multiple mesh and volume scorers            | Volume and mesh scoring visualization                  |  |



### ABOUT TECH-X

TECH-X is committed to technical excellence and innovation. We combine academic research with a commercial company sensibility to deliver high quality, cutting-edge software that takes advantage of the latest hardware

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