Sandia National Laboratories

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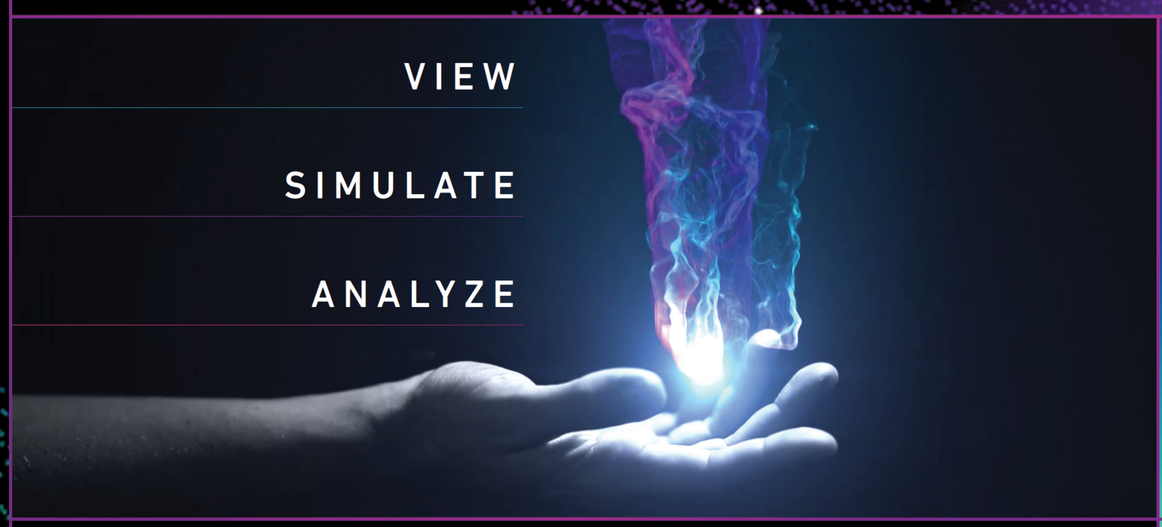
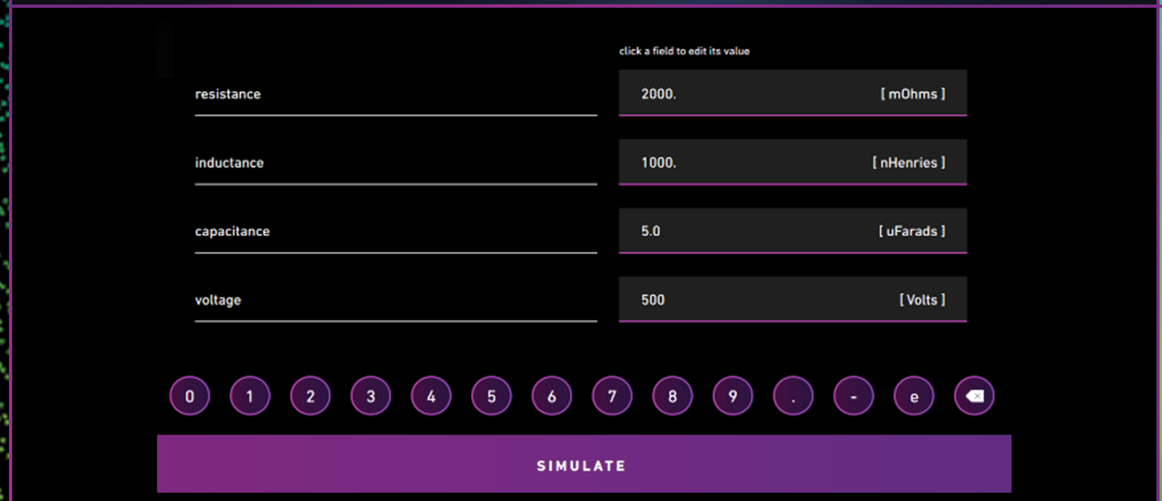
THE MEDEA EXPERIMENT

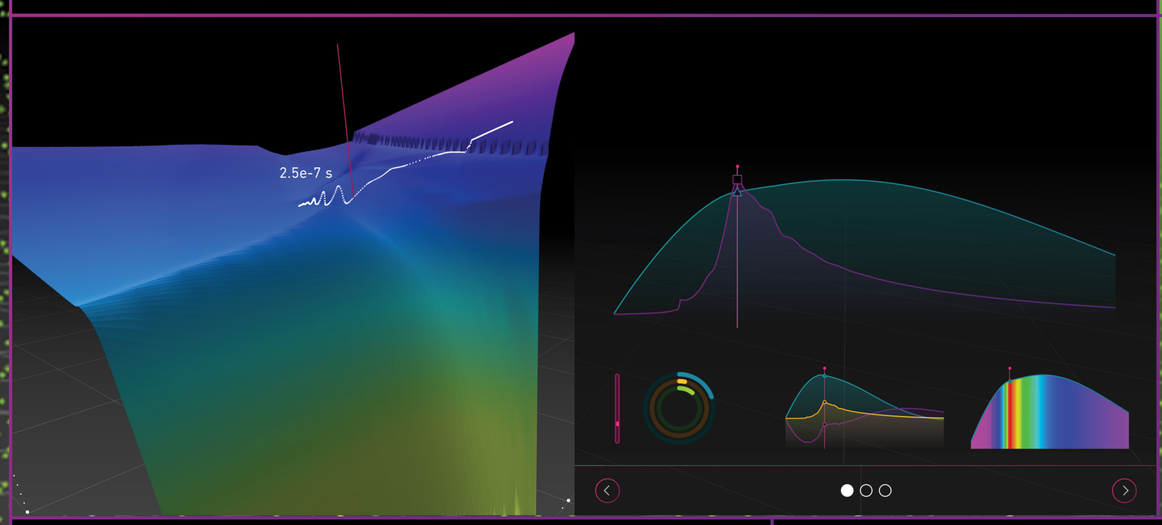
CAN YOU ACCELERATE SIMULATION-BASED LEARNING BY COMBINING INFORMATION VISUALIZATION AND INTERACTION DESIGN PRINCIPLES?



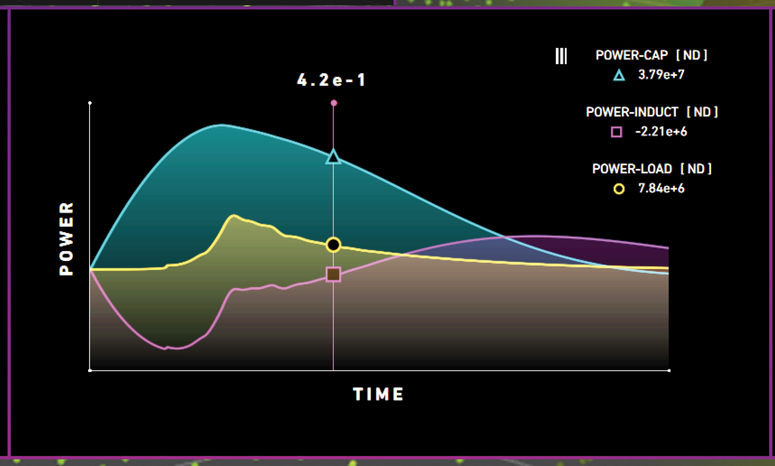
Children learn how to play by interacting and experimenting when power is placed in their hands to create and explore. In the world of high-performance physics simulations, the user interface consists of hundreds of lines of text based input to setup and run the simulation. Our efforts focused on attempting to reconcile these two worlds.

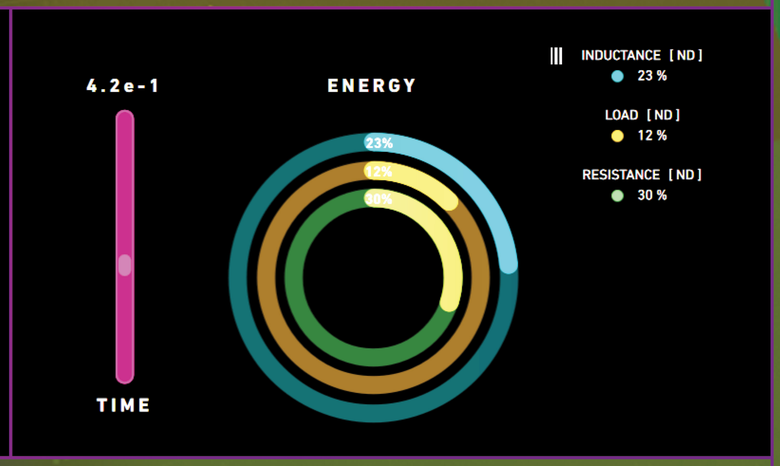


MEDEA provides a clean graphical interface for users to view complex material datasets or both run and analyze physics simulation results with ease.



Interactive analysis views can be constructed in order to correlate variables in time and in space, allowing the user to understand and visualize energy flow and phase changes.





A MEDEA USER CAN ESTABLISH MULTIPLE ANALYSIS VIEWS USING XML DESCRIPTORS FOR A SEAMLESS USER EXPERIENCE