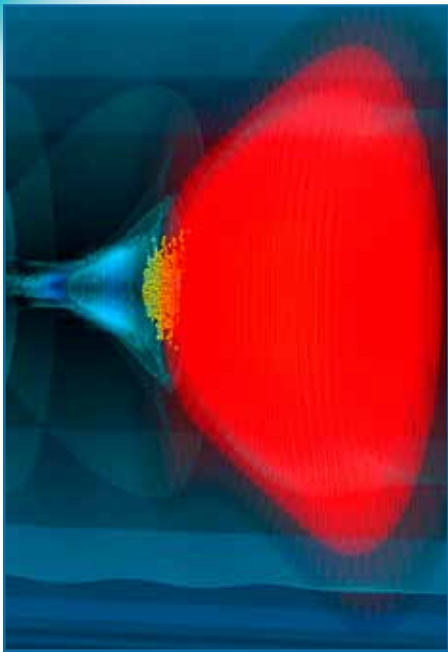


Professional Services

With our expertise, Tech-X researchers can enable you to make better use of your computational resources and gain better understanding of the designs for your devices and processes.

Tech-X Corporation implements technologies that make computing accessible to scientists and engineers. Our areas of expertise include electromagnetic modeling, plasma physics, accelerator physics, nuclear fusion, high-performance computing, numerical modeling and algorithm development, and data analysis. Our staff has in-depth knowledge of science, applied mathematics, and engineering which allows us to provide software and consulting services to assist you in developing new, more robust designs for physical devices and processes.



MULTIPHYSICS SIMULATIONS

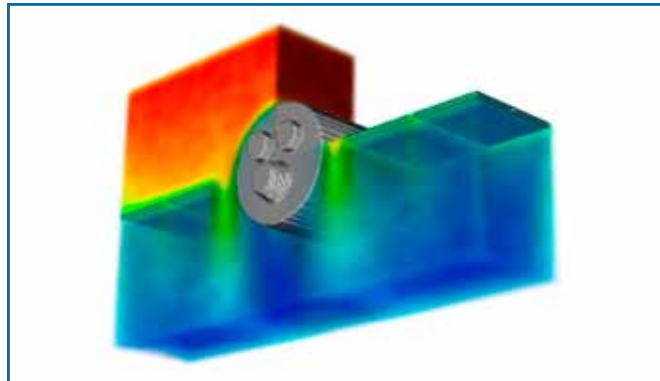
Tech-X develops software solutions for multiphysics simulations, focusing on architectures from desktop systems to massively parallel high-performance computing platforms. Tech-X provides training and consulting to support your simulation needs including providing input file development or full analysis results for your application or adding your special physics models to our software.

COMPUTATIONAL INFRASTRUCTURE

Visualization tools make viewing and understanding simulation results easier. Expertise with libraries of numerical algorithms and distributed computing enable our researchers to provide you with faster analyses on your computing resources. Tech-X is capable of developing application-specific graphical user interfaces, accessing remote computing resources, and delivering data fusion requirements including visualizing remote data, Web-enabling workflows, supporting Service Oriented Architectures (SOAs), or providing state-of-the art middleware.

COMPOSER TOOLKIT

The Composer Toolkit facilitates the construction of high-quality, cross-platform graphical user interfaces suitable for interacting with high-performance computational applications running locally, on clusters, or on remote resources such as leadership class computers with hundreds of thousands of processor cores. Users of computational applications in High Performance Computing (HPC) environments are hampered by the difficulties of aggregating the various operations involved in running simulations such as input setup, run management, visualization, and other post-processing analysis. The Composer Toolkit provides a foundation for building high-quality, cross-platform, graphical user interfaces that overcome these difficulties.



CUSTOM VISUALIZATION AND ANALYTICS WITH VisIt

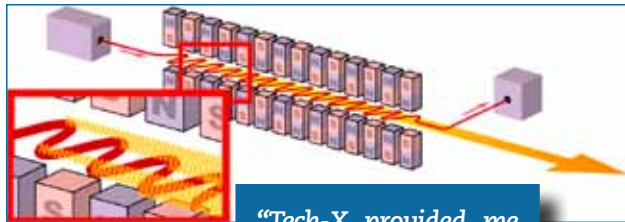
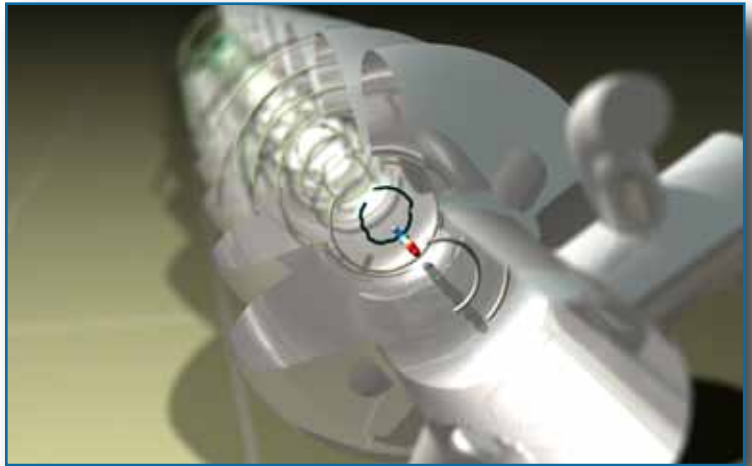
Tech-X provides support, plug-in development, and custom implementations for VisIt, the interactive parallel visualization and graphical analysis tool for viewing scientific data, developed by the Department of Energy.

DATA ANALYSIS

Using techniques based on high-level programming languages such as C++, fourth-generation languages like IDL and MATLAB, popular scripting languages such as Python, advanced visualization tools, and new architectures like Graphics Processing Units (GPUs), we develop workflows and solutions to assist in your data discovery process.

DISTRIBUTED AND HIGH-PERFORMANCE COMPUTING

Tech-X can develop computational solutions targeting shared-memory parallel processing on multi-core processors; distributed memory parallel processing, including typical cluster computing up to petascale computing; and GPU computing on many-core Graphics Processing Units. We can also perform code analyses to help you remove computational bottlenecks from your software.



"Tech-X provided me with an interface to the PETSc library built to my specifications. Using this new solver accelerated my code by a factor of 80."

– Dr. Henry Freund
Los Alamos National Laboratory

APPLIED MATHEMATICS

Tech-X can leverage our expertise in numerical modeling and algorithm implementation to improve the efficiency of your computational solutions. We have extensive knowledge of commonly used libraries such as BLAS, ScaLAPACK, and FFTW, as well as success in integrating algorithms from robust numerical solutions such as the Portable, Extensible Toolkit for Scientific Computation (PETSc), developed at Argonne National Laboratory, and Trilinos, developed at Sandia National Laboratories.

ABOUT TECH-X CORPORATION

Tech-X Corporation is committed to technical excellence and innovation. We are dedicated to advances in science, mathematics, and engineering. Our staff addresses specific research questions and delivers quantifiable results, culminating in specialized skills, advanced technologies, and commercial products that enable large-scale computing solutions and offer a greater understanding of physical processes.

REFERENCES

VisIt Web Site: <https://wci.llnl.gov/codes/visit/>

PETSc Web Site: <http://www.mcs.anl.gov/petsc/petsc-as/>

Trilinos Web Site: <http://trilinos.sandia.gov/>

TECH-X WORLDWIDE SALES AND CONSULTING

Contact sales@txcorp.com to discuss your specific computing needs.

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