the future of Ohio jobs

Technology Careers

Ralph Regula School of **Computational Science**
an initiative of the Ohio Supercomputer Center

Ohio companies using **Computational Science**

Many well-known companies with ties to Ohio employ computational science to increase their industrial productivity. Computational science allows these companies to compete in the global marketplace by reducing costs and time-to-market, while increasing the quality of product and service development. The following are a few of those industries that already use computational science:

Procter & Gamble
(Cincinnati)
Redesign Pringles potato crisps so they don't flutter off moving conveyor belts during production

Ford Motor Company
(Avon, Cleveland, Lima, Maumee, Batavia, Sharonville)
Predict noise, vibration and harshness (NVH) performance of powertrain assemblies

Whirlpool
(Clyde, Marion)
Design packaging that saves millions annually on shipping damage and product returns

Medical Device Solutions
(Cleveland)
Perform complex computational modeling to create new medical devices

The Kroger Company
(Cincinnati)
Use biometric finger scanning technology to pilot retail point-of-sale transactions

Goodyear Tire & Rubber Co.
(Akron)
Reduce the cost of physical tire prototypes from 40 percent to 15 percent

General Motors
(Cincinnati, Columbus, Defiance, Lordstown, Toledo, Moraine, Parma, Mansfield)
Search for ways to convert a vehicle's waste heat into usable electricity

GE Aviation
(Evendale, Cincinnati, Peebles, Dayton)
Model complex turbomachinery to create better, faster, more fuel-efficient jet engines

J.P. Morgan Chase & Co.
(Columbus)
Use grid computing to develop mathematical models for pricing, hedging and risk measurement of derivative securities

Timken
(Canton)
Develop improved NASCAR suspension system components and steering system geometries

Military Researchers
(Wright-Patterson AFB, NASA Glenn Research Center)
Design energy-absorbing seats for armored vehicles to protect soldiers' ability to survive a mine blast

Simulate how chemicals bind to amino acids to develop more effective chemical warfare agent antidotes

Rolls-Royce Energy Systems, Inc.
(Mount Vernon)
Model the effects of jet engines striking birds in flight and engine behavior following the collisions

Ohio CAE Inc.
(Cincinnati, Hudson)
Develop advanced analysis tools for applications such as elastic artery modeling for stent design

Cedar Fair Entertainment Co.
[parent company of Cedar Point and King's Island] (Sandusky)
Design roller coasters, analyzing structural integrity, biodynamic impacts and aesthetic appeal

Nationwide Mutual Insurance Co.
(Columbus)
Use risk modeling techniques by creating regional climate forecasts to estimate future losses

Jo-Ann Fabric & Craft Stores
(Cleveland)
Evaluate workforce skills, labor pool depth and transportation options for choosing the location of a distribution hub

Forensic Bioinformatics DNA Consulting Services
(Fairborn)
Provide automated analysis and expert review of forensic DNA evidence

The Boeing Company
(Heath)
Design a Delta IV rocket to launch satellites into space