Research & Geospatial Technology Services

Research & Geospatial Technology Services (RGTS) is a directorate of Tufts Technology Services (TTS). RGTS enables the university and its diverse academic communities to realize their vast potential in teaching, learning, and research through the innovative design and meaningful integration of technology to meet broad and local goals.

Research Technology Infrastructure

- **Research High Performance Computing:** For researchers in need of computing power, we currently offer an IBM 170+ node cluster with over 2000 64-bit cores (Red Hat Enterprise Linux 6.2, 16 to 128GB RAM per node, 10GigE interconnect). This central service is offered at no cost to clients.
  Request a cluster account here: http://research.uit.tufts.edu. Go to http://go.tufts.edu/cluster for more details.

- **Research Storage:** Researchers who need backed-up network-accessible storage for their research data can ask for storage shares from 50GB to 1TB and beyond. This is exclusively for research storage and it does not overlap with existing personal (P:) and departmental (Q:) drives where non-research documents should be stored. This central service is offered at no cost to clients. Current total storage is over 200TB. Access to research storage by outside collaborators can be granted.
  Request research storage here: http://researchstorage.uit.tufts.edu.

- **Software Licensing:** We provide many commercial software packages on our research cluster (Abaqus, Ansys, Comsol, Fluent, IDL, Maple, Matlab, Mathematica, and Stata), as well as network concurrent licensing for the desktop on a per product basis. This central service is offered at no cost to clients. If software needs to be run on the cluster rather than on a desktop, a cluster account will be needed and a form needs to be completed to request a cluster account.

Research Technology Tools

- **Tools for Visualization:** The Tufts Center for Scientific Visualization was inaugurated in 2008 (see http://sciviz.tufts.edu and http://www.tufts.edu/home/feature/?p=visualization). Using a dedicated graphics workstation, this new facility allows researchers to display stereo high-resolution images (4096x2160) on a 15ft x 8ft screen using either Red Hat Linux Enterprise, Windows or OS X environments. Users can also bring their personal laptop and display their images at a quarter of the max resolution (2048x1080). In order to access this facility, each user will be given card access and an R25 account for scheduling. In addition, each new user will be required to complete a one-hour training session.

- **Tools for Bioinformatics:** Bioinformatics incorporates techniques from multiple disciplines to solve biological problems in areas that include applied mathematics, informatics, statistics, and computer science. Tufts TTS Bioinformatics Server offers a gene sequencing package Emboss/wEmboss (http://emboss.uit.tufts.edu/). Request an Emboss account here: http://research.uit.tufts.edu.

- **Tools for Collaboration:** The Tufts Center for Scientific Visualization may be used for Video Conferencing. Please contact via email viswall-support@tufts.edu to discuss arrangements.

Research Consulting Services

- **Statistical Consulting:** We provide statistical consulting assistance to faculty and graduate students for both research technology and instructional projects.

- **Technology Consultation and Planning:** We assist faculty and departments with research, information, and recommendations concerning appropriate technologies for research.

- **Monitoring, design, implementation and application of emerging technologies for research applications:** We constantly investigate how Tufts researchers can excel in their fields by leveraging new technologies.

Geographic Information Systems

- **GIS Center:** We manage GIS services across the Tufts campuses, including the GIS Center, located in the Tisch Library, which provides access for the Tufts community to the latest GIS technology. See http://gis.tufts.edu for details.

- **Instructional and Research Services:** At the GIS Center and throughout the university, we offer several GIS-related services including GIS training for faculty and students through workshops and courses, assistance with incorporating GIS modules into Tufts' courses, and individual and project-based research consulting.

- **Specialty Services:** We also provide specialty services such as map design, geo-processing, spatial analysis, application development, data conversion and development, software licensing, etc.

- **GeoData@Tufts:** Tufts is collaboratively developing an open source, federated web application to discover, preview, and retrieve geospatial data. GeoData@Tufts combines an intuitive, map-based search interface along with traditional text-based metadata search tools for rapid data discovery and for use in teaching, learning, and research. It is comprised of several universities and organizations and makes thousands of geospatial data layers available through a single open source interface.

These tools and services are offered at no cost to clients.

Research & Geospatial Technology Services is a directorate of Tufts Technology Services, Tufts University.

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