NETWATCH

edited by MITCH LESLIE

NET NEWS

Networking to Beat the Shakes

Engineers who design earthquake-resistant buildings and bridges will soon be able to reach into cyberspace to, say, run a shake table or a tsunami-generating tank. The Network for Earthquake Engineering Simulation will not only give earthquake engineers access to data and software, it will also allow them to operate experiments at some 20 engineering centers over a speedy broadband Internet 2 link. That means these experts will join other scientific communities—such as astronomers and microscopists—already operating instruments remotely on the Web. The National Center for Supercomputing Applications (NCSA) at the University of Illinois, Urbana-Champaign, just received a $10 million grant from the National Science Foundation to lead the design of the network.

Applications scientist Tom Prudhomme of NCSA says that the project aims to promote cooperation between groups that normally work apart: the structural engineers who design buildings and bridges, the geotechnical engineers who understand earth movements, and the tsunami experts who are worried about big waves. The network begins operating in the fall of 2004.

RESOURCES

Science's Top Hits

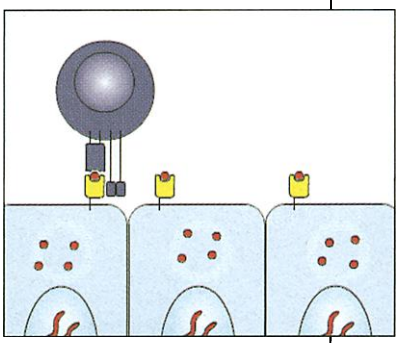
Want to know about the hottest papers in your field? Chemists can find out at CAS Science Spotlight,* sponsored by the Chemical Abstracts Service of the American Chemical Society. The new site ranks the 10 most cited journals, papers, and patents for 1999 and 2000, based on the more than 8000 journals covered by CAS. Surprisingly, the number one article last year was an ancient (well, from 1970) *Nature* paper on the assembly of virus head capsules. Supplying the latest on reading habits, another section lists the 10 articles and patents most often requested from CAS during the previous quarter. All papers and patent documents can be downloaded for free.

Another spot for gleaning such tidbits is the Institute for Scientific Information (ISI), with its well-known citation databases. The institute issues free, weekly dispatches on everything from hot physics papers to the most prolific universities in ecology.† ISI also recently launched "ISI Highly Cited,"‡ a sort of Who's Who listing CVs and publications for the most-cited researchers since 1981.

* www.cas.org/spotlight/index.html
† www.isinet.com/isi/hot/research/index.html
‡ isihighlycited.com/home.cgi

EDUCATION

Immunology Animated



A sick cell is harboring a dangerous virus. Then one of the body's patrolling T cells swoops down, killing the infected cell and thwarting the invader. This action-packed sequence comes from a collection of snazzy Flash animations designed to supplement *Immunobiology*, a college-level text from Garland Publishing. Created by Blink Studio in the United Kingdom, the 27 lucid shorts bring to life topics such as HIV replication, recognition of foreign antigens by the immune system, and the genetic rearrangements within developing lymphocytes. The action stops regularly so that helpful pop-up captions can explain what's happening.

www.blink.uk.com/immunoanimations

IMAGES

Forest Gallery

From ravenous gypsy moths to tree-choking kudzu, America's forests are under siege. That's the impression you'll get from a sprawling collection of forestry images hosted by the University of Georgia, Athens.* Aimed at both researchers and managers, the 4200-image archive is packed with photos depicting pests, diseases, and forestry practices—from the intricate patterns made by bark beetles called engravers, to a controlled burn in Washington state (right). You can also find plenty of other forest denizens, such as deer and invasive shrubs like Chinese privet. A linked sister site† offers fact sheets and other info on forest pests.

* www.forestryimages.org
† www.bugwood.org

MANUAL

X-ray Bible

Synchrotrons are physicists' answer to NASCAR: electrons zoom around and around inside a massive ring of magnets, discharging x-rays that can be used to probe matter. Drop by any synchrotron and you'll probably find a well-thumbed copy of the *X-ray Data Booklet*, a compendium of graphs and tables of values needed for experiments that was first published in 1987. A new Web version of the latest edition (January 2001) lets you find electron binding energies, x-ray emission energies, and more with a few clicks. There's also a primer on synchrotron function and history.

xdb.lbl.gov

Send great Web site suggestions to netwatch@aaas.org

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