



DATABASE

Viral Load

Looking to catch a virus—or at least come down with its genome sequence? Try the new Viral Genomes home page from the National Center for Biotechnology Information, which offers nearly 1200 “reference sequences,” complete and annotated genomes for more than 900 plant, animal, bacterial, and human viruses. They run the gamut from familiar killers such as HIV and the yellow fever virus to obscure pathogens such as the virus that causes Aleutian mink disease.

www.ncbi.nlm.nih.gov/PMGifs/Genomes/viruses.html

FUN

Hollywood Howlers

Two entertaining sites put movies through peer review, exposing the liberties filmmakers often take with math and physics. Math in the Movies^{*} rates more than a dozen films and a couple of plays with math content, from *The Seven Samurai* to this year’s Oscar-winning *A Beautiful Mind*, a biography of game theorist John Forbes Nash. Cheeky commentaries rank each film’s mathematical accuracy.

At Insultingly Stupid Movie Physics[†], engineer-turned-writer Tom Rogers and his two sons scrutinize recent sci-fi or effects-filled movies for good physics—rarely finding it. *Titanic*’s mawkish story line might have made you gag, but the epic earns the second-highest rating for realistic scenes of the liner’s sinking. At the other end of the spectrum, laughable blunders infest 1998’s *Armageddon*, in which Bruce Willis and a plucky team of oil drillers attempt to save Earth from a Texas-sized asteroid. The site also provides a primer on frequent gaffes, from thundering explosions in space (no air to transmit the sound waves) to giant insects (too heavy for their limbs to support).

^{*} world.std.com/~reinhold/mathmovies.html

[†] www.intuitior.com/moviephysics

EXHIBITS

The Turing Files



Alan Turing was a math wizard who laid the groundwork for the computer and helped break the German Enigma code during World War II. At the Turing Digital Archive,^{*} you’ll find a trove of mostly unpublished papers and personal photographs squirreled away by King’s College, Cambridge, where Turing was an undergraduate and fellow. Along with math and computers, Turing’s many other interests are on display, ranging from morphogenesis—how a developing organism takes shape—to long-distance running (left, Turing on his way to a track meet).

One of Turing’s most famous contributions was a procedure to determine if a computer was intelligent. To pass the Turing Test, a machine would have to provide convincingly human answers to a series of questions. This site[†] from the University of California, San Diego, includes Turing’s original 1950 paper and recent critiques and endorsements. No computer has met the standard, but you can chat with some of the programs that have come closest, such as Brian, set up to respond like an 18-year-old college student.

^{*} www.turingarchive.org
[†] cogsci.ucsd.edu/~asaygin/tt/ttest.html

RESOURCES

Out-of-This-World Geology

Smothering dust storms on Mars, pristine impact craters on Venus, possible liquid water on Jupiter’s moon Europa—Earth isn’t the only place that piques the interest of geologists. Dig into the geology of the planets, moons, and asteroids in our neighborhood at the new home page for the U.S. Geological Survey’s (USGS’s) Astrogeology Research Program.

Although the site’s focus is USGS’s own research, the offerings include more general information, from brief overviews of NASA missions to maps and reports for specific planets and moons. Stop by the Venus section, for instance, to scan a database that provides the name, size, location, and type for the planet’s nearly 1000 known craters. You can peruse a gazetteer of accepted names for surface features or create your own map of a particular venusian landscape. Links lead to NASA or USGS images and to other informative sites. You



can also pore over results of missions such as Voyager and Mars Pathfinder, which snapped this austere panorama of the Red Planet in 1997 (left).

astrogeology.usgs.gov

Send site suggestions to netwatch@aaas.org. Archive: www.sciencemag.org/netwatch

RESOURCES: Out-of-This-World Geology

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