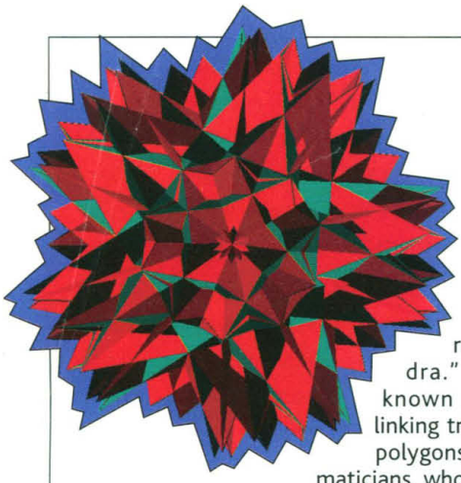
NETWATCH
edited by LAURA HELMUTH



CREDIT: (TOP) GEORGE HART

COOL IMAGES

Out of Shapes

This flowery sphere is no random scrap of clip art but a blend of two precisely constructed "great retrosnub icosidodecahedra." For centuries, objects known as polyhedra—made by linking triangles, squares, and other polygons—have delighted mathematicians, who often make them by gluing together folded pieces of paper. But at Virtual Polyhedra,* created by George Hart, a Long Island sculptor and mathematician, you can skip the hours of work and the risk of dented corners and instead use your mouse to rotate or zoom in on more than 1000 polyhedra rendered in virtual reality. Hart explains the intricate naming scheme for these shapes, which "has a certain logic," he writes, and offers mathematical details for those so inclined. Also check out the link to photos of Hart's sculptures. Many of these real-world polyhedra, fashioned out of everything from polished wood to coffee stirrers to compact discs, are now exhibits in museums.

* www.georgehart.com/virtual-polyhedra/vp.html

HOT PICKS

Search me. PubMed, the National Library of Medicine's site for searching MEDLINE and other databases, is bigger and better. New features include biweekly stories linked to tutorials on bioinformatics, a clipboard function that saves up to 500 selected articles from different searches, new search options, and access to more databases. www.ncbi.nlm.nih.gov/entrez/query.fcgi

Prime time. Wrap your mind around one of math's longest running engagements, the search for Mersenne primes. Thirty-eight of these numbers, which take the form $2^n - 1$, have been described; the largest so far has an exponent of 6972593. Check out 500 years of history, theorems, and proofs, as well as related math problems waiting to be solved. www.utm.edu/research/primes/mersenne.shtml

The sound of science. National Public Radio's whimsical program *Sounds Like Science* aired its final episode on 26 September, but the show will live on. Visit the archives to pick up fun factoids about animals, space, or technology (they make perfect cocktail party banter); test your science trivia skills; or listen to 2 years' worth of witty shows. www.npr.org/programs/science

NET NEWS

Those Virtual Lyin' Eyes

A new game challenges Netizens to mask their identities and strip others' online masks away. In the Turing Game,* a takeoff on the 1970s game show *To Tell the Truth*, a virtual audience grills panelists to uncover who's lying. Sociologists are monitoring the show, hoping to extract some useful data, and at least one computer scientist is trying to get a Ph.D. thesis out of it.

The game is named in honor of the late mathematician Alan Turing, one of the first people to recognize that the definition of "intelligence" changes due to the underlying assumption that "intelligence is whatever humans can do that computers can't." If a computer fools a human questioner into thinking it is human, it should be called intelligent, Turing posited. Although no one is claiming that a female impersonator who fools a virtual audience is, by definition, a female, online personas are raising questions about identity just as computers have raised questions about intelligence.

Contestants in the game, launched last month, have explored themes ranging from race and religion to politics and sex. The only time people are supposed to be honest is at the end of a game, when participants reveal whether they had assumed a false identity, says the game's creator, Joshua Berman, a computer science grad student at the Georgia Institute of Technology in Atlanta.

Berman is collaborating with social scientists and rhetoricians to analyze the game logs and characterize how people construct an online identity. Some of the most telling exchanges, he says, come from "moments of surprise and moments of learning." For instance, when an honest female panelist's audience is convinced she's a man and then learns the opposite, "it gets you asking, 'Are you just closed-minded? Were you looking for something specific? Why is this [other panelist] more of a woman than I am?' "

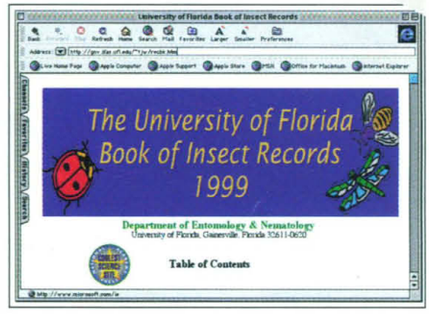
* www.cc.gatech.edu/elc/turing

SITE VISIT

Biggest, Fastest, Most Polyandrous

Need to settle a bet about which insect migrates the farthest or which critter is armed with the most toxic venom? *The University of Florida Book of Insect Records 1999* honors 39 champions. The desert locust, *Schistocerca gregaria*, wins a gold medal for largest swarm (10 billion in one 1954 swarm). The unassuming honey bee, *Apis mellifera*, takes the title for most spectacular mating ("a 'comet' of drones pursues the female with the winner forfeiting a portion of his phallus at the end of coitus and dying soon thereafter"). The tsetse fly, *Glossina palpalis*, will never win an endorsement contract for its world-champ status as "least specific sucker of vertebrate blood"—it's not known to turn down a meal served through any kind of skin.

gnv.ifas.ufl.edu/~tjw/recbk.htm



The deadpan chapters, presented as review papers, were researched and written by grad students in entomologist Thomas Walker's seminars at the University of Florida, Gainesville. He started the online book, he says, to teach students how to evaluate the literature and write in a scientific style. After choosing a record, students interview experts in the field, post questions to entomology bulletin boards, and review published accounts to find insect contenders. Once the nominations are in, the students pick and defend a winner, explaining why the runners-up have to settle for silver and bronze. "It's a matter of evidence," says Walker.

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