



Problem Solver **GAME OVER.** Puzzle fans, avert your eyes:

Theoretical physicist Veit Elser of Cornell University has developed a computer program that efficiently solves the popular game Sudoku.

Sudoku requires puzzlers to fill a nine-by-nine grid of squares with the digits 1 through 9, with no digit appearing more than once in each column and row or more than once in any of nine smaller three-by-three subgrids. Elser, 48, used an algorithm he helped develop to decipher x-ray diffraction data because, like the data analysis, Sudoku requires solving a mathematical problem while satisfying two different constraints. "I had an 'Aha! moment' that finally I had a vehicle to explain what this algorithm does," Elser says. That vehicle is Sudoku, a game Elser himself once found particularly vexing.

The average Sudoku player probably won't use the algorithm, says Frazer Jarvis, a mathematician at the University of Sheffield, U.K., and a member of the team that last year calculated there are 6,670,903,752,021,072,936,960 possible Sudoku

grids. But, Jarvis says, "there are applications for the mathematical side of the problem where we would like to be able to solve puzzles extremely quickly."

MOVERS

HELP WANTED. The Global Fund to Fight AIDS, Tuberculosis and Malaria is looking for a new leader. Richard Feachem, a global health expert, said this month that he will not seek a second term as executive director.



Feachem helped the Geneva-based fund grow from just an idea to a \$9 billion enterprise with activities in 130 countries. But his tenure has not been without

controversy. An internal investigation into procurement and personnel policies did not find any evidence of misconduct, but it apparently increased tension between Feachem and the fund's 25-member Board of Directors. Feachem announced his departure after the board said it would consider other applications for the post, but he agreed to stay until a successor is named. His term ends in July.

Feachem excelled at communicating the importance of the fund's mission, says Bernard Rivers of AidsSpan in New York City, a self-styled watchdog of the fund. But Rivers

thinks what's needed now is "a brilliant bureaucrat." Feachem plans to return to dual appointments at the University of California campuses in Berkeley and San Francisco.

WINDY REUNION. The University of Chicago (UC) has welcomed back a longtime faculty member as its next president. Robert J. Zimmer, a former chair of the mathematics department who also oversaw the university's management of Argonne National Laboratory, will take office on 1 July. He replaces Don Michael Randal, who is leaving to head the Andrew W. Mellon Foundation.

Zimmer, 58, was on the UC faculty for 25 years before leaving in 2002 to become provost of Brown University. The university's management contract for Argonne expires 30 September, and officials say Zimmer's expertise should come in handy. "The risk of losing the contract is greater than zero, but we hope not much more than zero," says James Crown, chair of the UC Board of Trustees.

The first mathematician to serve as UC president, Zimmer holds a Ph.D. from Harvard University.



On Campus >>

FIRST FOREIGNER. Neurophysiologist Fraser Wilson has become the first non-Chinese principal investigator to receive a research grant from the National Natural Science Foundation of China.

Wilson, 52, joined the Kunming Institute of Zoology (KIZ) last year from the University of Arizona, Tucson, where he was an assistant professor. He says he was impressed by the institute's nonhuman primate facilities, which are essential for his work on how the brain processes and stores visual information. The 3-year grant is for \$187,000.

Wilson will be working with longtime collaborator Ma Yuanye. "KIZ has certain [research] facilities that would be difficult to obtain in the States and Europe," Wilson says, including an outdoor enclosure in which monkeys can roam freely. "We are making good progress in both conventional neurophysiology, as well as in more novel experiments in freely moving monkeys."

AWARDS

FORWARD THINKERS. Two cancer researchers in the U.S. will split this year's \$1 million Dan David Prize for scientific achievements that benefit society. John Mendelsohn, president of the University of Texas M. D. Anderson Cancer Center, was honored for his studies of antibody-mediated cancer therapy. The work led to the development of Erbitux, a drug that prevents the growth of several types of cancers. Joseph Schlessinger, a professor and chair of the department of pharmacology at Yale University School of Medicine, was recognized for research on how information is passed between the cell surface and the cell, work that led to the discovery of anticancer drugs. The Dan David Prize is named after a Romanian native who made his fortune in the photography business.

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