

J. KING-HOLMES/SPL

Investigator-led research will be hardest hit.

reducing all its funding by 3–5%, the EPSRC has decided to continue to fund the same number of PhD students and to prioritize support for the six themes.

It is not clear how much of the £130 million will be put into research grants in the themed areas and how much is covering inflation and the move to paying full costs.

“If what is happening is that the responsive mode is taking a bigger hit than [government-themed research], the scientific community

will not be happy with that,” says Peter Cotgreave, director of public affairs at the Royal Society. “People find it very uncomfortable when the decision about what to fund is made before they apply.”

Not everyone thinks the shift is necessarily bad. While saying there needs to be more clarity over the decision, Richard Pike, chief executive of the Royal Society of Chemistry, says that “more focus is a good thing.”

And Sue Ion, vice-president of the Royal Academy of Engineering and a member of the EPSRC council, points out the proportion of funding given through the responsive-mode channel has traditionally been high at the EPSRC. “More attention needs to be given to the directed, theme-based topics,” Ion says. “They [researchers] need to look for opportunities rather than go ‘woe, woe and thrice woe.’”

In 2006/2007, the EPSRC funded 36% of all UK engineering and physical-sciences researchers, including 4,347 postgraduate and postdoctoral research assistants.

Unlike the Science and Technology Council cuts, there will be no high-profile projects cancelled, but fewer grants may mean fewer jobs in the long run. “It will mean 3% to 5% fewer grants, and the average grant employs a postdoc,” says Cotgreave. ■

Daniel Cressey

more recently, some theorists have begun to believe that there indeed may be as many as 10^{500} universes out there. They argue that we just happen to live in our cosmos because it can support life as we know it (see *Nature* 439, 10–12; 2006).

To date, nobody’s bothered to look at how many different kinds of vacua there may be, or whether they fit into any sort of systematic categories, according to Dienes. That will be the goal of the new String Vacuum Project. Like biologists, physicists on the project will try to classify the 10^{500} solutions into different taxonomic ranks, such as kingdoms and phyla.

Among the project’s main goals is to make string theory more predictive, says Gordon Kane of the University of Michigan in Ann Arbor. A major criticism of the theory is that it fails to provide experimental tests that would support or

falsify it. If the vacuum project succeeds, then physicists would be able to find the class of vacua that fit with our own Universe. They can use those solutions to make predictions about what might show up in experiments such as the Large Hadron Collider — a massive proton-smasher being built at CERN, the European particle-physics lab outside Geneva in Switzerland. Kane says that, if the project works, he believes that evidence supporting string theory could emerge “within a few weeks” of the accelerator’s start-up.

But others are less optimistic about the vacuum project’s chances of success. There’s no guarantee that the 10^{500} possibilities predicted by the theory will be easily categorized, and it’s likely they won’t be, says Seiberg. “It’s a very complicated system,” he says. Searching for the few solutions that match our own Universe will be worse

than looking for a needle in a haystack, he adds. Still, he believes the project may yield interesting findings.

Others are more sceptical. Sifting through a near-infinite number of vacua provides no deeper understanding of the theory, according to mathematician Peter Woit of Columbia University in New York City, who is frequently critical of string theory. The fact that physicists are interested in a statistical approach is a sign of desperation, he argues. “It would be better to say, ‘okay, [string theory] doesn’t work.’”

Dienes accepts these criticisms, and concedes that the plan is “absolutely controversial”. Nevertheless, he believes it is the best way forward. “The plethora of vacua is an urgent issue,” he says. “I want to understand our space of possibilities.” ■

Geoff Brumfiel

ON THE RECORD

“I’ve got a student working on an application where you enter a city and it will tell you what grades and types of marijuana are available.”

Clemson University economist Todd Kendall discusses the rising trend of websites that act as consumer guides to illicit activities.

SCORECARD



WiFi

According to Google, the unused ‘white space’ between the frequencies used by US television stations could be co-opted to give wireless broadband to everyone in the country.



Internet users

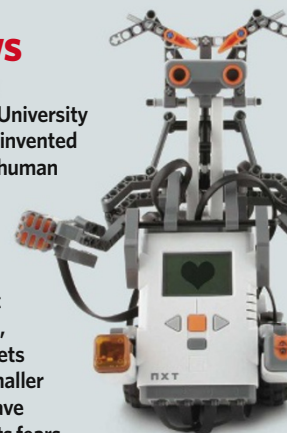
An editorial in the *American Journal of Psychiatry* has called for Internet addiction to be added to the official inventory of mental illnesses.

T. TEN VELDEN/UNIV. AMSTERDAM

ROBOT NEWS

Brave little toaster

Roboteers from the University of Amsterdam have invented a robot that mimics human phobias — and the steps needed to overcome them. The ‘Phobot’ retreats when it first meets a larger robot, but then gradually gets comfortable with smaller ones until it feels brave enough to conquer its fears.



NUMBER CRUNCH

40% is the proportion of scientists and technologists in the European Union (EU) aged between 45 and 64.

27% is the proportion of people in this age bracket in the EU population as a whole. The scientific workforce is ageing faster than other sectors.

47% of senior scientists are female, which indicates that science has greater gender equality than many other professions.

Sources: *Wired*, *BBC*, *Am. J. Psychiatry*, *Associated Press*, *Eurostat*