

ENGINEERING
**Machines That
Change Shape**

MEDICINE
**An Off Switch
for Cancer**

NEUROSCIENCE
**How to Reach
"Vegetative" Patients**

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IF SUPERSYMMETRY

CRISIS

DOESN'T PAN OUT,

IN

SCIENTISTS NEED A NEW WAY

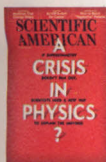
PHYSICS

TO EXPLAIN THE UNIVERSE

?



MAY 2014



The Higgs boson was just the beginning. Scientists at CERN's Large Hadron Collider also desperately want to find evidence of supersymmetry, a theory of matter that posits the existence of a brand-new world of fundamental particles. To the surprise of many, no signs have yet been found. When the LHC starts up early next year, the stakes will be high: find supersymmetry, or face a crisis in physics.

SCIENTIFIC AMERICAN

May 2014 Volume 310, Number 5



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For decades physicists have been working on a beautiful theory that would lead them to a deeper understanding of the quantum world. But soon they will face a moment of truth, when their theory is either proved or found to be lacking.

By Joseph Lykken and Maria Spiropulu

MEDICINE

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By releasing the brakes that tumor cells place on the immune system, researchers are developing a new generation of more powerful treatments against malignancy.

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Luck has played a big part in many of the world's great fossil discoveries. New models predict where the bones are and put serendipity in the backseat.

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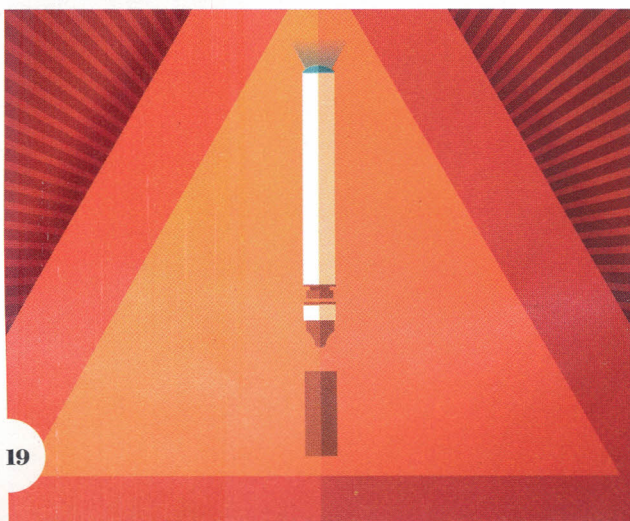
ON THE WEB

The Future of the Internet

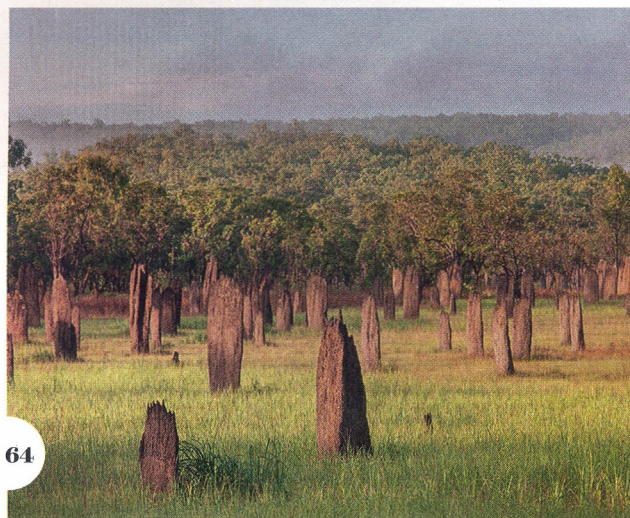
This year marks the 25th anniversary of the invention of the World Wide Web. Where will the Internet go from here, especially considering the challenges to net neutrality? Go to www.ScientificAmerican.com/may2014/internet



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