

# Best of Last Week: Unlocking an old physics secret, artificial bee colony optimization, and food packaging findings

October 14 2019, by Bob Yirka

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It was a good week for physics as a group at IBM [solved a 140-year-old mystery in physics](#), revealing some previously unknown physical characteristics of semiconductors. Also, a group with members from

NIST, the University of Maryland, NHMFL and the University of Oxford announced that they had observed [a rare phenomenon called Lazarus superconductivity in a promising, rediscovered material](#)—uranium ditelluride.

It was also a good week for technology research, as a pair of computer engineers at Iowa State University, Alexander Stoytchev and Vladimir Sukhoy, [solved a 50-year-old puzzle in signal processing](#)—the inverse fast Fourier transform. And a team at MIT [put Leonardo da Vinci's bridge design to the test](#), and found that it held up. Also, a combined team from Nanjing University and the University of Toronto created [all-perovskite tandem solar cells with 24.8 percent efficiency](#). And a team with members from Mahatma Gandhi Mission's College of Engineering & Technology and Jaypee Institute of Information Technology developed [a speech recognition system using artificial neural networks and artificial bee colony optimization](#)—they claim it is more accurate than any other existing system.

In other news, Elliot Hawkes, a [mechanical engineer](#) at Stanford University, found [a simple running hack that is fun and increases efficiency](#)—strap on a resistance band between your feet before heading out for a jog. Also, a team of researchers at Silent Spring Institute found that [people who eat more meals at home have lower levels of harmful PFAS in their bodies](#)—per- and polyfluoroalkyl substances are a class of chemicals commonly used in food packaging. And Swiss Nobel laureate Michel Mayor made headlines when he declared that [humans will not "migrate" to exoplanets](#).

And finally, if you are like millions of others hoping to help keep your heart ticking no matter your age, you might want to take a look at a study conducted by a team led by Gaëlle Deley with the University of Burgundy Franche-Comté—they found that [regular exercise is good for your heart, no matter how old you are](#).

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