## Best of Last Week—Time travelers invited to Hawking memorial, hiding codes in text, benefits of low-energy diet

May 14 2018, by Bob Yirka

Someone using FontCode would supply a secret message and a carrier text document. FontCode converts the secret message to a bit string (ASCII or Unicode) and then into a sequence of integers. Each integer is assigned to a five-letter block in the regular text where the numbered locations of each letter sum to the integer. Credit: Changxi Zheng/Columbia Engineering

It was a good week for physics as a team of researchers from Germany and the U.S. suggested light could make semiconductor computers a million times faster, or even go quantum by making use of infrared laser pulses. And a team at Pennsylvania State University gave a presentation at this year's Meeting of the Acoustical Society of America on cloaking devices, declaring that they are not just *Star Trek* anymore. They have been working with a metamaterial that bends sounds waves around objects. Also, Stephen Hawking's children made news when they offered tickets that indicated that time travelers are welcome at Hawking's memorial service on June 15th. Applicants were asked to give their birth dates, which could include any day up to December 31, 2038.

It was also a good week for technology as an international team of researchers announced that they had <u>made strong</u>, <u>super-tough carbon</u> <u>sheets at low temperature</u> by sewing platelets together. Also, a team at Columbia Engineering announced that they had found <u>a new way to hide information in plain text</u>—called FontCode, it hides information in regular text by imperceptibly changing, or perturbing, the shapes of fonts.

In other news, a team at Duke University found evidence suggesting that large predators that were once hunted to near-extinction are showing up in unexpected places. The animals include killer whales in rivers, alligators on beaches and mountain lions far from any mountains. And a pair of researchers, Daniel Kruger and Jessica Kruger, found evidence suggesting that women perceive men who extrovertly display their wealth as unsuitable partners for long-term relationships. Also, a team of researchers from across the U.S. found evidence suggesting that Earth's orbital changes have influenced climate and life forms for at least 215 million years. And an international team of astronomers looked into the question of what will happen when the sun dies.

And finally, if you want to lose weight but find most diets leave you

feeling hungry, you might want to check out the results of a study led by a team at the University of Leeds—they found that <u>a low-energy diet</u> <u>leaves people feeling full and eating fewer calories</u>.

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Citation: Best of Last Week—Time travelers invited to Hawking memorial, hiding codes in text, benefits of low-energy diet (2018, May 14) retrieved 29 April 2024 from https://sciencex.com/news/2018-05-weektime-hawking-memorial-codes-text.html

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