

Best of Last Week – Environmental impact of microwave ovens, decoding thoughts and flu transmission via breathing

January 22 2018, by Bob Yirka

Overview of deep image reconstruction is shown. The pixels' values of the input image are optimized so that the DNN features of the image are similar to those decoded from fMRI activity. A deep generator network (DGN) is optionally combined with the DNN to produce natural-looking images, in which optimization is performed at the input space of the DGN. Credit: *bioRxiv* (2017). DOI: 10.1101/240317

It was good week for space research as an international team published [new research that challenges existing models of black holes](#)—they observed the magnetic field of a black hole within our own galaxy from multiple wavelengths for the first time. Also, [meteorite hunters found the first fragments of the Michigan meteor](#) that broke apart in the sky near Detroit last week.

In environmental news, an international team led by a group at the University of Queensland and WCS reported on a study they conducted that showed [the world's most vilified and dangerous animals may be humankind's best ally](#)—animals like vultures and bats provide critical services, they note, that would be sorely missed if they were to cease living near places of human habitation. Also, a team at the University of Manchester found that [microwave ovens could be as bad for the environment as cars](#) due to the amount of [carbon dioxide](#) they emit and electricity they use. And a team led by the University of Toronto announced that they had discovered [a new catalyst for recycling carbon dioxide into a very common type of plastic](#).

In other news, researchers with the Advanced Telecommunications Research Institute International and Kyoto University in Japan showed [a way to decode thoughts](#)—using data from an fMRI machine input into a neural network to produce digital images. And a team at the University of Michigan [announced a semiconductor breakthrough that may be a game-changer for organic solar cells](#)—it coaxes electrons into traveling farther in materials making them more conductible. Also, a thirty-year study by Kaiser Permanente showed [women who breastfeed for six months or more reduced their diabetes risk](#) by nearly a half. And an international team conducted what they described as [a breakthrough study that showed how plants sense the world](#)—through membrane proteins.

And finally, in this year of a larger than normal outbreak of flu in North

American team at the University of Maryland found that [flu may be spread just by breathing—coughing and sneezing are not required](#). Those already infected, they found, could pass an infection on to others just by exhaling air laden with the virus—another reason to stay home when you're sick.

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