

Ode to E Pluribus Unum for Sunday February 11 2024

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NGC 1365: Majestic Island Universe



Image Credit & Copyright: Processing - Jean-Baptiste Aurox, Data - Mike Selby

Barred spiral galaxy NGC 1365 is truly a majestic island universe some 200,000 light-years across.

Located a mere 60 million light-years away toward the faint but heated constellation Fornax, NGC 1365 is a dominant member of the well-studied Fornax Cluster of galaxies.

This sharp color image shows the intense, reddish star forming regions near the ends of the galaxy's central bar and along its spiral arms. Seen in fine detail, obscuring dust lanes cut across the galaxy's bright core.

At the core lies a supermassive black hole. Astronomers think NGC 1365's prominent bar plays a crucial role in the galaxy's evolution, drawing gas and dust into a star-forming maelstrom and ultimately feeding material into the central black hole.

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Photo: David Newhardt/Mecum Auctions

Pete Brock had an uncanny understanding of his own aesthetic. His designs were fresh, balanced, and captivating, and while he had plenty of reason to do so, he never swaggered over his skills. Even in his earliest work, he captured the eye of GM when he developed what would become yet another icon of American sports car history, the 1963 Corvette, all before his 21st birthday.

<https://bit.ly/49l6Sim>

I've known Peter since our freshman days at Stanford and smile every time I think of his absolute sense of what is what. He will study the heck out of a project then in defiance of the conventional thinking come up with what will become the icon of its world...you can take that thought to the bank.



He and I are of an age and I plan to keep on chugging if for no other reason than to see what new and wonderful things emerge from his fertile brain in years to come.

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Year of the Dragon



twinkle.com.ph

Lunar New Year celebrations kicked off last Friday, marking the start of the lunisolar calendar for billions of people worldwide. The holiday begins with the first new moon of the lunar calendar and will conclude in about two weeks on the first full moon. China is

anticipating 9 billion trips across the country during the 40-day travel rush around the holiday, nearly double that of last year.

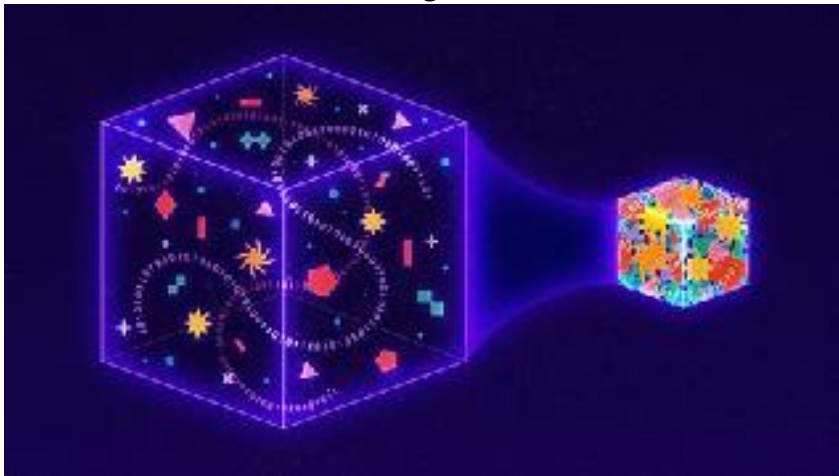
Linked to the repeating 12-year Chinese Zodiac cycle, the new year also marks the transition from the Year of the Rabbit to the Year of the Dragon, a sign that symbolizes strength, good fortune, and prosperity. The Year of the Dragon has traditionally meant a baby boom for China, as those born during this period are believed to possess qualities including intelligence, ambition, and charisma. See the importance of the dragon in Chinese culture [here](#).

Many traditions around the holiday are based on themes of family and good fortune, including giving lai see to children—red envelopes filled with "lucky money"—and a lantern festival to end the celebrations.

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Data Compression Drives the Internet. Here's How It Works.

One student's desire to get out of a final exam led to the ubiquitous algorithm that shrinks data without sacrificing information.



Kristina Armitage/Quanta Magazine

With more than 9 billion gigabytes of information traveling the internet every day, researchers are constantly looking for new ways to compress data into smaller packages. Cutting-edge techniques focus on lossy approaches, which achieve compression by intentionally "losing" information from a transmission. Google, for instance, recently unveiled a lossy strategy where the sending computer drops details from an image and the receiving computer uses artificial intelligence to guess the missing parts. Even Netflix uses a lossy approach, downgrading video quality whenever the company detects that a user is watching on a low-resolution device.

<https://bit.ly/3oMXIKe>

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Canadian Swimmer, 99, Breaks Three World Records



thecanadianmedia.com

Betty Brussel sets records in the 100- to 104- year-old age class in Saanich, while inspiring members of local swim club. "I just count the laps," she says of her feat.

<https://bit.ly/42tVO0c>

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Driving in the Desert: Surreal Images from the Dakar Rally



hamad mohammed

Racers compete in the grueling Dakar Rally in Saudi Arabia, one of the most famous, and dangerous, off-road races in the world.

<https://bit.ly/309QSru>

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New Undersea Robot Digitally Captures Sea's Most Delicate Life

Combining advanced imaging, sequencing, and collecting technologies paves the way for better species descriptions.



A remote underwater vehicle's specialized camera equipped with a laser reaches out to capture the movements of a siphonophore.

Schmidt Ocean Institute

Deep in the ocean are millions of creatures representing thousands of species that have yet to be studied by scientists. But a new effort to film, capture, and pull DNA out of elusive jellyfish, tunicates, worms, and other soft-bodied creatures may change that, say researchers behind a study just out in [Science Advances](https://doi.org/10.1126/science.1258000).

<https://bit.ly/47Q00IO>

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The Unpredictable Abilities Emerging from Large AI Models



the-decoder.com

Large language models like ChatGPT are now big enough that they've started to display startling, unpredictable behaviors.

Researchers are racing not only to identify additional emergent abilities but also to figure out why and how they occur at all — in essence, to try to predict unpredictability. Understanding emergence could reveal answers to deep questions around AI and machine learning in general, like whether complex models are truly doing something new or just getting really good at statistics.

<https://bit.ly/4bhYMsW>

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Dolphins 'Jerks' Are Beating Up Baby Manatees

Bottlenose dolphins have been observed trying to kill Antillean manatee calves, and researchers don't fully understand what's going on.



*Bottlenose dolphins have been observed attacking manatee calves near Belize.
(Image credit: Stuart Westmorland via Getty images)*

The researchers observed dolphins attempting to separate calves from their mothers and harassing, ramming and biting them. In each case, the dolphins initiated the interaction.

<https://bit.ly/3vIw2ZR>

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Critters Are Hiding in Plain Sight

Find the perfectly camouflaged animals in all these photos.



*Known as "walking leaves," these insects use mimicry to look like leaves.
(Image credit: Mark Brandon/Shutterstock)*

<https://bit.ly/47MfKwI>

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Errors Found in Dozens of Papers by Top Scientists

Harvard-affiliated Dana-Farber Cancer Institute seeks retractions on six papers and corrections for 31 others



DFCI President and CEO Laurie Glimcher
originstaff.com

Dozens of papers by the head of the Dana-Farber Cancer Institute and three senior DFCI researchers need to be retracted or corrected, the institute affiliated with Harvard Medical School has concluded after a freelance data sleuth alleged that they are “hopelessly corrupt with errors.”

A 2 January post by biologist Sholto David on the For Better Science blog flagged 57 papers between 1997 and 2017 co-authored by DFCI President and CEO Laurie Glimcher, Chief Operating Officer William Hahn, Senior Vice President Irene Ghobrial, and DFCI center Director Kenneth Anderson. The papers largely cover the basic biology of cancer development and appeared in a range of journals including the top-tier Cell,

Nature Medicine, and Science (publisher of ScienceInsider). The allegations were first reported by The Harvard Crimson, the university's independent student newspaper, and then by STAT, which reported that DFCI began to investigate some of the problems a year ago and was planning to take action.

The errors identified by David, who blogs frequently on research integrity and academic publishing, include identical-looking portions of images—protein blots, bands, and data graphs—that appear more than once in the same paper. “For some of these mistakes it’s hard to understand how it could have happened by accident,” David says. However, he declined to say whether he believes his findings constitute evidence of research misconduct.

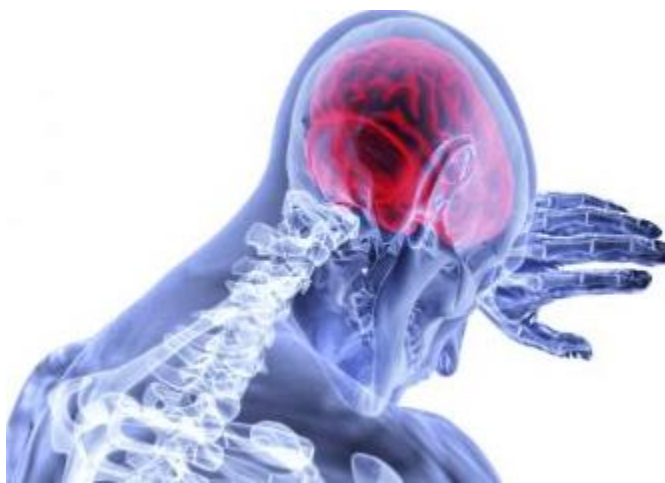
DFCI has requested retractions for six papers and corrections in 31 others for which the DFCI authors “have primary responsibility for the potential data errors,” the institute’s research integrity officer, Barrett Rollins, said in a statement to [ScienceInsider](#). DFCI is still investigating 16 other papers that contain data from the labs of other DFCI and Harvard researchers, according to Rollins. Three of the questioned papers did not contain any “data anomalies,” he added.

Rollins told STAT that the investigation could continue for up to 1 year but declined to comment on whether the errors represent scientific misconduct. “The presence of image discrepancies in a paper is not evidence of an author’s intent to deceive,” he wrote to ScienceInsider. “That conclusion can only be drawn after a careful, fact-based examination which is an integral part of our response. Our experience is that errors are often unintentional and do not rise to the level of misconduct.”

Uh-huh.

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Major Flaw Found in Thousands of Neuroscience Experiments



neurosciencenews

In 2019, working with a group of colleagues, the Structural Genomics Consortium decided to look into the problem, focusing first on characterizing the antibody reagents other scientists had used to localize the protein. What they found was distressing. Using cells lacking C9ORF72 as controls, they discovered that not a single antibody reagent used in any of the published studies actually worked as advertised — they all bound to other proteins in addition to the target. In short, all the studies published using these C9ORF72 antibodies were potentially flawed.

<https://bit.ly/3OzvFr6>

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Poetry Corner

But God Bless

First storm exhausted
lingering clouds
white now
drape themselves along foothills
like eyebrows of an
old man.
It's as though all outdoors
catches its breath
while busy pushing up
thick greens
surely the world's freshest
sheen this living grass treasure
carpeting the earth.
Only price?
Look not once,
but twice.
I take the glanced moment
racer snake fast,
this grass growing life,
and am stilled by awe.
Beach front winds began
this afternoon
new dark clouds darting forth,
on fast forward.
Questions stir.
When have I been unsettled,
pushing towards?
When has a dropped calm used

parts of me
like old eyebrows on the
lands where I live?
Where do I still grow and
how does it astound me?
This kaleidoscope of
evolving earth
in sight —
in whose hands?
I'm betting on the rain drops
as part of the troupe
rain so hard it takes my breath away
pulls my eyes to this
invisible grass growing,
tells me it happens,
is happening right now
without my seeing,
but God Bless, there is a
knowing,

To Our Worth

Sitting in the corner
deep chair
I hear the rain
everywhere
behind
and either side
of me
such peace in the
rhythm
a soft slapping beat
as each drop catches its
destined spot on earth
its own dance movement
first ballet by small girl
hooray
her encore to yesterday's
major storm
yet today no movement holiday
toe shoes still on point
I wonder how finch cluster

how scrub jays lay their heads
under blue wings
do bees buzz their singing
when pinched together in
oak trunk hollows?
Heaven knows.
Rain changes it all
brings us closer within
cars out spinning wheels
learn what doesn't work
best to sit down
hunker like a bee
head in a book like
a bird's wing
ears open because
the rain drops may be a
a young girl's ballet dream
falling together in unison
like a drumming
whose only purpose
is to carry us
if not from sky to earth
then from froth of activity
into deep listening
first cousin
to our worth.

Katherine Holden

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Lancaster Going on Tour



en.wichipedia

To help celebrate the 100th anniversary of the Royal Canadian Air Force, the Canadian Warplane Heritage Museum is taking its priceless Lancaster bomber on tour. It's one of only two Lancs in flying condition and will take part in several airshows and a mass warbird flypast of Parliament in Ottawa on Canada Day, July 1. This video shot last summer gives an idea of what to expect.

<https://youtu.be/QXwd52T04Gs?t=2>

Four Merlins... Yikes! The sound alone is worth the price of admission.

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San Francisco's \$1.7 Million Toilet. It's Still Not Done.

An expensive public bathroom project has come to symbolize the city's bureaucratic inefficiencies.



A mulch patch sits in the spot where a tiny bathroom is supposed to be built in Noe Valley Town Square.

Credit...Clara Mokri for The New York Times

The toilet project broke down the minute taxpayers realized the city was planning an event to celebrate \$1.7 million in state funds that local politicians had secured for the lone 150-square-foot structure. That's enough to purchase a single-family home in San Francisco — with multiple bathrooms.

<https://bit.ly/47XvnRC>

It's hard not to pick on San Francisco

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Close Up Photography Winners Show Amazing Miniature Moments



Orange Isopod

Manfred Auer

Ever since we picked up a camera, we loved capturing macro moments. Zooming into a miniature subject, and seeing it in full detail somehow felt like discovering a new world.

<https://bit.ly/47YFgP2>

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Caitlin Clark Is Impacting Marketing Power of Women in Sports



Iowa Hawkeyes guard Caitlin Clark (22) during the team photo shoot Wednesday, October 4, 2023 at Carver-Hawkeye Arena.

Credit Brian Ray/Hawkeyesports.Com

A 6-foot point guard now in her senior season with the University of Iowa, Ms. Clark came to the Hawkeyes as a highly touted recruit from Dowling Catholic High School in West Des Moines, where she was named a McDonald's All-American and rated the fourth-best player in her class by ESPN.

<https://bit.ly/3SJZOj>

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Handwriting May Boost Brain Connections More Than Typing Does

The finding adds to growing evidence of handwriting's benefits.



Using a pen or pencil to write boosts brain connectivity, which suggests handwriting might help

with learning.

Rafa Fernandez Torres/Moment/Getty Images

When asked to handwrite words, college students showed increased connectivity across the brain, particularly in brain waves associated with memory formation, compared with when they typed those words instead, researchers report January 26 in *Frontiers in Psychology*.

The finding adds to growing evidence of handwriting's benefits and could give fodder to laws that implement handwriting curricula, such as the recently enacted California law requiring the teaching of cursive in grades 1 through 6.

<https://bit.ly/3OtPwYC>

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What Parrots Can Teach Us About Human Intelligence

The birds' brains and behavior could give clues to the evolution of intelligence.



Bruce the kea is missing the top half of his beak. To compensate, the New Zealand parrot wields pebble tools to clean his feathers.

Patrick Wood

For a concept as abstract as intelligence, it's challenging to develop a concrete definition that applies across animals. But researchers often point to features once thought to make humans special — enhanced learning, memory, attention and motor control — as signs of advanced cognition. Many of these capabilities are definitely seen in parrots, as well as in the crow family, and other animals like chimpanzees, dolphins and elephants.

<https://bit.ly/3UmOZeT>

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Robot Shows What It Thinks of Tesla Cybertruck



reddit.comhttps://bit.ly/489DuLm

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Can Math and Physics Save an Arrhythmic Heart?

Abnormal waves of electrical activity can cause a heart's muscle cells to beat out of sync.



cvrti.utah.edu

Today, powerful defibrillators are usually used to help resynchronize hearts in distress. But Flavio Fenton, who studies the electrical dynamics of the heart, tells Steve Strogatz about a new method under development for treating arrhythmias by stimulating the heart with mild, precisely timed shocks — or possibly even with light.

<https://bit.ly/3UIoWiL>

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Finland Hosts Wife Carrying Championships



dailymail.co.uk

When one thinks of Finnish athletes, one thinks of nordic skiing or biathlon, or perhaps hockey. However, the Finns excel at the ancient sport of wife carrying.

Wife carrying is a sport not for the serious nor the weak. It is celebrated wherever there are Finns, particularly Finland and Estonia but also here in N. Minnesota.

The wife doesn't have to be one's own but must be someone's wife and lesbian couples are eligible to compete. The Estonian carry with the wife upside down on the carrier's back seems to be the most successful carrying style..

In case one is tempted to carry a lightweight wife, the minimum weight is 49 kilos and if she weighs less than that, she must carry a rucksack filled with stones to get the weight up to 49 kilos. Also, the prize is the wife's weight in beer so there is an advantage to carrying a hefty wife who is also a good sport.

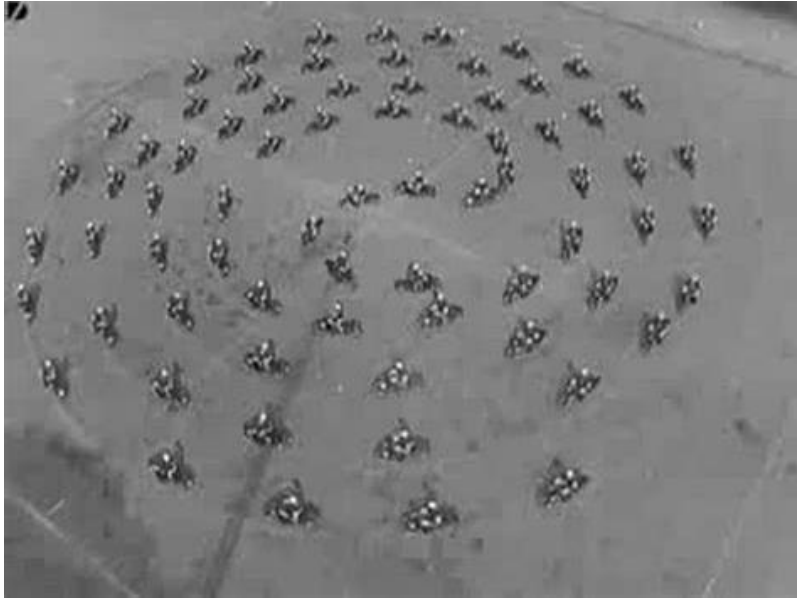
In the accompanying video, the champion team shows why they are the favorites. Their form is exemplary, and the carrier is clearly in excellent athletic shape.

<https://youtu.be/p7IM9f16QZ4?t=3>

108 pounds? Huh.

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Great Italian Motorbike Display of the 1950s



youtube

<https://youtu.be/3BIFTacnyDI>

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How Hermès Bags Are Made



Hermès

For the first time ever, Hermès is opening the doors to their leather goods studio to give Vogue an inside look at how they create their exclusive bags. From the Birkin to

the Kelly and more, watch as Priscila Alexandre Spring, the leather goods creative director at Hermès, gives us a tour of the stunning facility.

<https://youtu.be/Z7LJrU4443Q>

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How Can Some Infinities Be Bigger Than Others?



Scientific American

All infinities go on forever, so how is it possible for some infinities to be larger than others? The mathematician Justin Moore discusses the mysteries of infinity with Steven Strogatz.

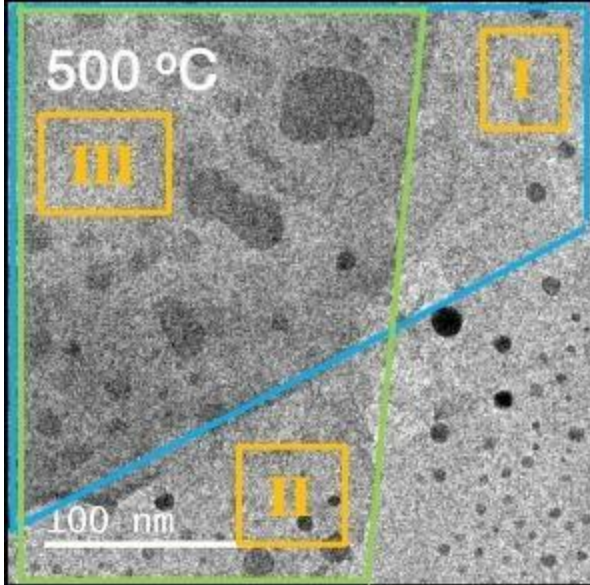
Within mathematics, the idea of infinity is probably about as old as numbers themselves. Once people realized that they could just keep on counting forever — 1, 2, 3 and so on. But even though infinity is a very old idea, it remains profoundly mysterious. People have been scratching their heads about infinity for thousands of years now, at least since Zeno and Aristotle in ancient Greece.

<https://bit.ly/3UlhhnC>

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Researchers Add a 'Twist' to Classical Material Design

They've discovered that crystals can twist when they are sandwiched between two substrates – a critical step toward exploring new material properties for electronics and other applications.



The MoS2 layers and gold nanodiscs together heated up to 500 degrees Celsius. The three marked regions – I, II, and III – indicate the various layers of the sample. Region I shows gold on the bottom MoS2 layer; II shows Au below the top MoS2 layer; and III shows the gold between the top and bottom MoS2 layers. The gold nanodiscs are the darker regions in the region III.

(Yi Cui/Stanford University)

The twisted structure could help researchers develop next-generation materials for solar cells, quantum computers, lasers and other devices.

<https://bit.ly/42nswR4>

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A Brief History of the United States' Accents and Dialects

Migration patterns, cultural ties, geographic regions and class differences all shape speaking patterns



businessinsider

Myriad factors influence variations among American accents and dialects, including waves of settlement in a region, geographic location and class differences.

<https://bit.ly/48G9QOB>

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Japan Spent Decades Making Itself Earthquake Resilient.



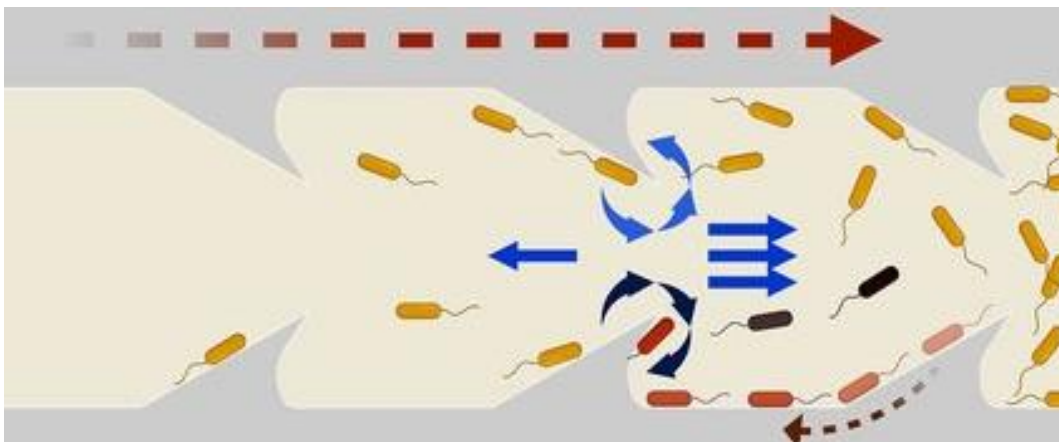
time.news

The country has earned a reputation as one of the most disaster-ready nations in the world due to its seismic codes and culture of preparedness, much of which was built on knowledge from previous disasters.

<https://bit.ly/48TAvHo>

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Aided by AI, New Catheter Design Prevents Bacterial Infections



Gray curved triangles, angled to point right, at the top and bottom. Pill-shaped bacteria

traveling left are caught and sent to the right.

A diagram of the new catheter design. Fin-like triangular protrusions line the interior of the catheter wall, creating turbulence that hinders bacteria's upstream progress along the tube's wall. In this diagram, the normal flow of the catheter is to the right, while bacteria (yellow) attempt to swim upstream to the left.

Credit: Courtesy of X. Wan

An interdisciplinary project at Caltech has designed a new type of catheter tube that impedes the upstream mobility of bacteria, without the need for antibiotics or other chemical antimicrobial methods. With the new design, which was optimized by novel artificial intelligence (AI) technology, the number of bacteria that are able to swim upstream in laboratory experiments was reduced 100-fold.

<https://bit.ly/3tIHRZf>

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Glass Revolution Underway. Spoiler Alert: It Bends and Bounces

Humans have been making glass for 4,000 years. But now, scientists are developing techniques that will impact everything from medicine to the way we see the universe.

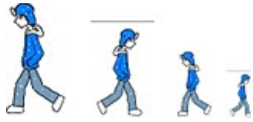


*Technicians in upstate New York pour a batch of molten glass at Corning's "test kitchen." Here, the company tries new recipes to enhance features such as strength, color, and optical clarity.
Christopher Payne*

<https://bit.ly/47N5Lao>

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My Walking Thoughts



For Sunday February 11 2024

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This Week's Scam and Why it Pays to be a Skeptic.

Here's how it came down and eventually played out.

At 0743 all hell broke loose with my laptop. It froze tight and began screaming. When I finally realized the racket was not going to stop, I saw a note on the screen saying that Microsoft's software had discovered an issue and I needed to call a phone number to get an MS technician to work with me to clean the mess up.

I dialed the number but the racket on my cell phone was so great that I asked if someone could call me back. Shortly, my phone rang and a woman named Bonnie explained she was a Microsoft technician who would solve the problem for me. That was the start of a lengthy journey through a number of software routines and allowed me to perform simple tasks that turned the screaming off. She then explained that I had been hit with a Trojan Horse and that it was possible that some sensitive financial data had been compromised.

So far this seemed legitimate.

She then said she would put me in contact someone of the Fraud department of the XYZ bank to see if I was the victim of Identity Theft and that someone would get back to me shortly.

Within five minutes a call came in from a man who said he was looking at my account and that showed there was a draft for an amount just slightly below my balance and that I had vouched for early that morning.

I said I had done no such thing, which led to more confusion when he pointed out the Department of Justice (DOJ) would open an investigation to see whether I had been hit by a scam or perhaps I was trying to pull a fast one. "Oh hell," I thought, "things are getting worse by the minute."

It was here that the Fraud Department Manager proposed a remedy, which was that it might be possible for me to beat the fraudulent claim from being consummated...that I was to go to the branch get cash and deposit it with a secure account overseen by the DOJ while they decided whether I was the crook or someone else was.

I was now getting a hazy picture of a a pretty well-orchestrated scam, but being unused to such situations, I decided to clear the specified amount from the XYZ Bank just in case there really was the possibility of a raid on my account and deposit it in the JKL bank in which I have another account.

This I did while explain the situation to JKL's branch manager, who said, "Oh boy, this is a really elaborate hoax," that no, this was how they got at money, not through some sort of electronic wizardry.

I asked was there any way I could help nab these people and he said, "No. Just be happy you figured out that it was a hoax and leave justice to the police who are up to their ears in things like this." He added that he would send a report to his headquarters detailing what I had told him.

All's well that ends well, but it occurred to me on the way home that there was just enough razzle-dazzle in the scam to capture a few folks and that it might be worth making it the subject of this week's Walking Thoughts.

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