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STEM News

**February** 2024 NEWSLETTER

For Teachers & Students

Upcoming Events

[**Teacher Enrichment Program**](https://www.cee.org/programs/teacher-enrichment-program)

Teachers can join TEP this year in our Virtual Bite of Science and College & Career Panels to learn about new cutting-edge research and STEM related careers.

**TEP**

**Bite of Science**

* February 15; 5:30-6:30 (EST)
* Northern Virginia Teacher Meet Up February 24; 9:00am-2:00pm (EST)

*[Click here to register!](https://www.cee.org/tep-events-2022-2023)*

STEM Spotlight

Dr. Jason Koh

A person wearing glasses and a suit

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[**STEM Lyceums**](https://www.cee.org/programs/stem-lyceums)

Students can join this virtual club to build STEM communities and engage in discussions and explorations of STEM concepts and STEM career pathways.

**STEM Lyceums**

**College Admissions Do’s and Don’ts**

* February 28; 4:30-5:45 (EST)

[*Click here to register!*](https://www.cee.org/programs/stem-lyceums)

Jason L. Koh, MD, MBA, FAAOS, FAOA (RSI ’85) is the Mark R. Neaman Family Chair of Orthopedic Surgery and Director, Orthopedic & Spine Institute, NorthShore University Health System; Clinical Professor, Orthopedic Surgery, The University of Chicago; and Adjunct Professor of Biomedical Engineering, Northwestern University. He is President of the Harvard Club of Chicago. Dr. Koh received his MD from Johns Hopkins, followed by internship at the Massachusetts General Hospital, residency at the Hospital for Special Surgery, and fellowship at the Cleveland Clinic. He earned an MBA from the Northwestern University Kellogg School of Management, with coursework at Harvard Business School. He is an RSI ‘85 alum and major supporter of CEE.

Partner Opportunities

[Rare ancient tree discovery has scientists ‘gobsmacked’](https://www.cnn.com/2024/02/02/world/sanfordiacaulis-ancient-tree-fossils-discovery-scn/index.html)

*Summary:*

Trees are believed to have originated hundreds of millions of years ago. Ever since, evidence of these ancient plant sentinels has been in short supply.

Now, a new discovery of uniquely 3D tree fossils has opened a window into what the world was like when the planet’s early forests were beginning to evolve, expanding our understanding of the architecture of trees throughout Earth’s history.

[**Lockheed Martin STEM Scholarship**](https://www.lockheedmartin.com/en-us/who-we-are/communities/stem-education/lm-scholarship-program.html)

Lockheed Martin’s STEM Scholarship program awards up to 100 renewable $10,000 scholarships to students pursuing a bachelor’s degree in engineering, computer science, math, and physics fields!

Eligible students must be U.S. citizens, and seniors in high school or undergraduate college students (freshmen, sophomores, or juniors)

**Application Deadline: April 1, 2024, at 3:00PM CST**

Cool STEM Careers

STEM Bellringers ***Click the links for the answers***

STEM Activities

[Are fingerprints unique? Not really, AI-based study finds](https://www.cnn.com/2024/01/12/world/fingerprints-ai-based-study-scn/index.html)

“Do you think that every fingerprint is actually unique?”

It’s a question that a professor asked Gabe Guo during a casual chat while he was stuck at home during the Covid-19 lockdowns, waiting to start his freshman year at Columbia University. “Little did I know that conversation would set the stage for the focus of my life for the next three years,” Guo said.

To get to its surprising results, the team employed an artificial intelligence model called a deep contrastive network, which is commonly used for tasks such as facial recognition. The researchers added their own twist to it and then fed it a US government database of 60,000 fingerprints in pairs that sometimes belonged to the same person (but from different fingers) and sometimes belonged to different people.

A group of fingerprints

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**Biology:**

[**What chemicals can make human tissue regenerate in seconds?**](https://www.wtamu.edu/~cbaird/sq/2015/12/14/what-chemicals-can-make-human-tissue-regenerate-in-seconds/)

**Chemistry**

[How does dissolving a salt molecule in water make its atoms ionize?](https://www.wtamu.edu/~cbaird/sq/2013/09/23/how-does-dissolving-a-salt-molecule-in-water-make-its-atoms-ionize/)

**Human Anatomy and Physiology**

[Why are cancer mortality rates rising?](https://www.wtamu.edu/~cbaird/sq/2012/12/20/why-are-cancer-mortality-rates-rising/)

[Why are cancer mortality rates rising?](https://www.wtamu.edu/~cbaird/sq/2012/12/20/why-are-cancer-mortality-rates-rising/)

[How can we unlock the 90% of our brain that we never use](https://www.wtamu.edu/~cbaird/sq/2012/12/19/how-can-we-unlock-the-90-of-our-brain-that-we-never-use/)

[Why are red, yellow, and blue the primary colors in painting but computer screens use red, green, and blue](https://www.wtamu.edu/~cbaird/sq/2015/01/22/why-are-red-yellow-and-blue-the-primary-colors-in-painting-but-computer-screens-use-red-green-and-blue/)?

STEM Scholarships/Internships

**Students**

[*The Gates Scholarship*](https://www.thegatesscholarship.org/scholarship)

[*GE-Reagan Foundation Scholarship Program*](https://www.reaganfoundation.org/education/scholarship-programs/ge-reagan-foundation-scholarship-program/)

[*Ron Brown Scholarship*](https://ronbrown.org/apply/ron-brown-scholarship/)

[*Sierra Nevada Corporation Women in STEM Scholarship*](https://learnmore.scholarsapply.org/snc/)

[*Amazon Future Engineer Scholarship Program*](https://www.amazonfutureengineer.com/scholarships)

[*Foot Locker Scholar Athletes Program*](https://accessscholarships.com/scholarship/foot-locker-scholar-athletes-program/)

[*McDonald’s Hacer National Scholarship*](https://accessscholarships.com/scholarship/mcdonalds-hacer-national-scholarship/)

[*United States Senate Youth Program*](https://accessscholarships.com/scholarship/united-states-senate-youth-program/)

**Teachers**

[Albert Einstein Distinguished Educator Fellowship (AEF) Program](https://science.osti.gov/wdts/einstein/Key-Dates)

[McCarthey Dressman Teacher Development Grants](https://mccartheydressman.org/teacher-development-grants/)

[NEA Foundation Learning and Leadership Grants](https://www.neafoundation.org/educator-grants-and-fellowships/learning-leadership-grants/)

[NEA Foundation Envision Equity Grants](https://www.neafoundation.org/educator-grants-and-fellowships/envision-equity-grants/)

Classroom Activities

[Make colored petals!](https://www.fizzicseducation.com.au/150-science-experiments/botany-experiments/make-coloured-petals/)

[Model a pandemic classroom activity](https://www.fizzicseducation.com.au/150-science-experiments/human-body-science/model-a-pandemic-classroom-activity/)

[Jelly bean natural selection](https://www.fizzicseducation.com.au/150-science-experiments/biology-environmental-science-projects/jelly-bean-natural-selection/)