



# What's new at Fermilab?

Office of Communications

Tracy Marc, media relations manager

September 23, 2021

# Fermilab visit – August 10, 2021

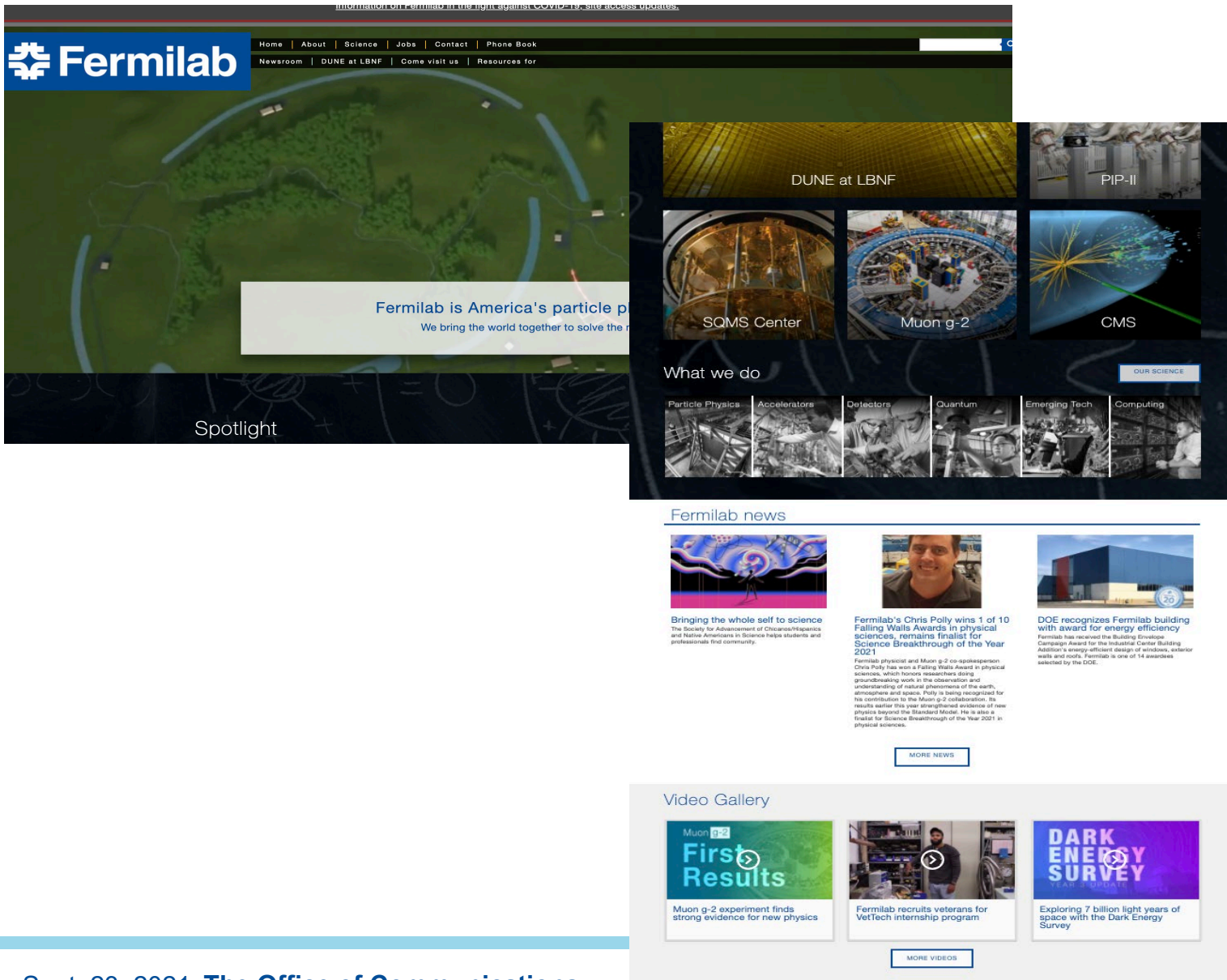
National Climate Advisor Gina McCarthy visits Fermilab to highlight climate change, clean energy in the Midwest



Illinois Reps. Sean Casten and Lauren Underwood

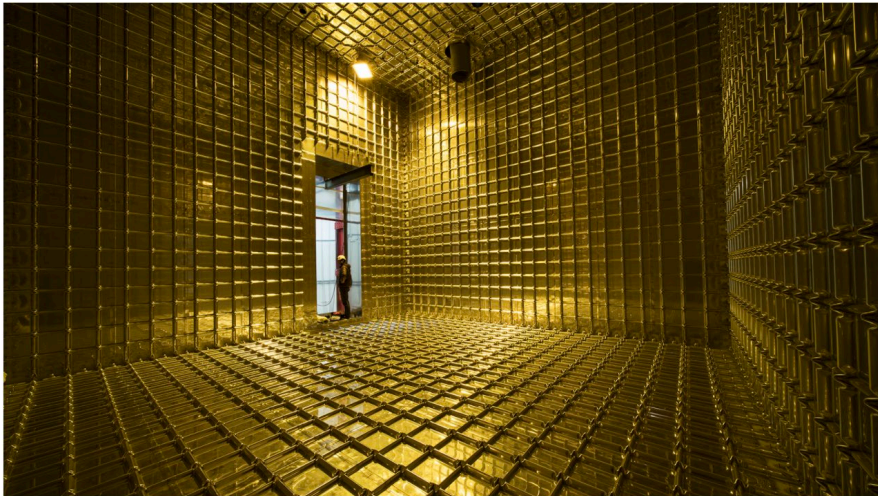
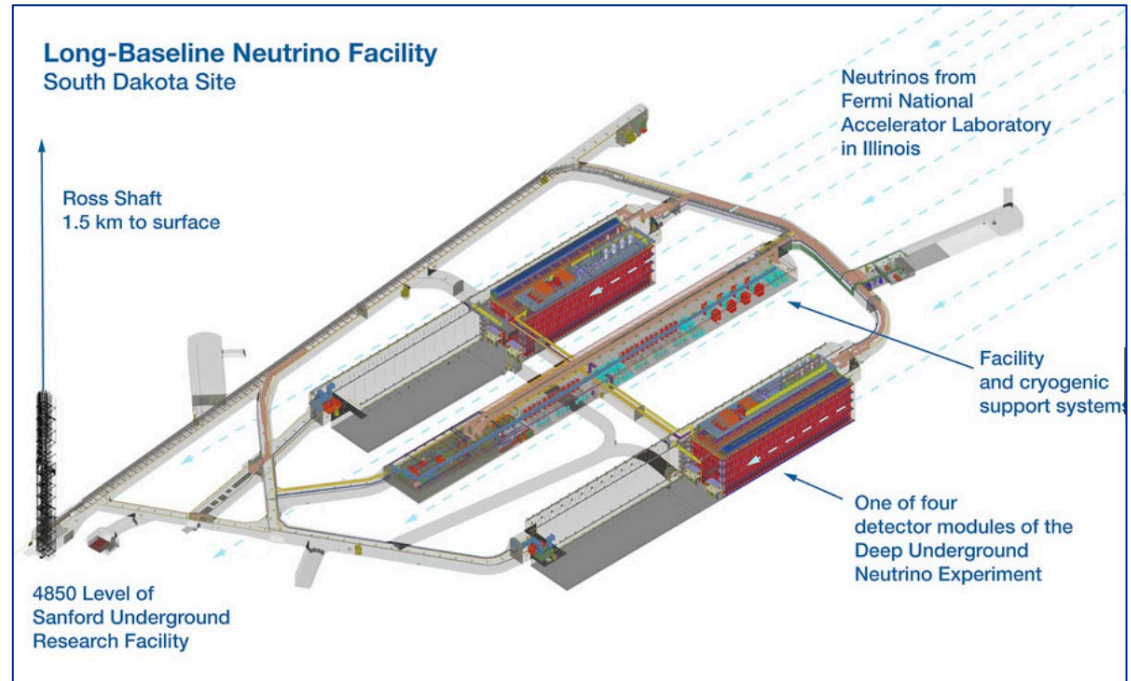


# Fermilab website – new home page arrangement



# DUNE update

Tunnel excavation in progress and cavern excavation will start in November



CERN provided second  
DUNE cryostat

# DOE recognizes Fermilab building with award for energy efficiency



The new Industrial Center Building Addition received recognition as a new building that performs above code thanks to the design of its building envelope, which includes windows, exterior walls and roofs. The building envelope surpassed the award's criteria of a 20% improvement over current building code, providing a 25% improvement.

# DOE invests \$13.7 million for research in data reduction for science

Office of Science

## DOE Invests \$13.7 Million for Research in Data Reduction for Science

SEPTEMBER 2, 2021

Office of Science » DOE Invests \$13.7 Million for Research in Data Reduction for Science

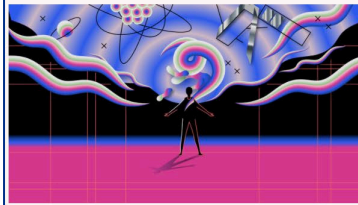
*Research seeks to tame massive data sets to advance scientific discovery*

WASHINGTON, D.C.—Today, the **U.S. Department of Energy (DOE)** announced \$13.7 million in funding for nine research projects that will advance the state of the art in computer science and applied mathematics. The projects – led by five universities and five DOE National Laboratories across eight states – will address the challenges of moving, storing, and processing the massive data sets produced by scientific observatories, experimental facilities, and supercomputers, accelerating the pace of scientific discoveries.

As scientific user facilities upgrade and expand, their capacity for generating unwieldy amounts of scientific data has started to exceed scientists' abilities to stream, archive, and analyze that data. This has created an urgent need to develop new mathematical and computer-science techniques to shrink these data sets by removing trivial or repetitive data while preserving the important scientific information that can lead to discovery.

While the need for data reduction techniques is clear, the scientists using those techniques must trust that they are not losing important scientific information, and this presents a key challenge.





09/14/21

### Bringing the whole self to science

The Society for Advancement of Chicanos/Hispanics and Native Americans in Science helps students and professionals find community.



09/07/21

### Curious physics results could shed light on dark matter

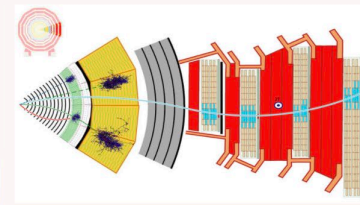
Even experiments that aren't looking for dark matter directly could give us hints about the mysterious substance that permeates our universe.



08/31/21

### Photographing the HL-LHC

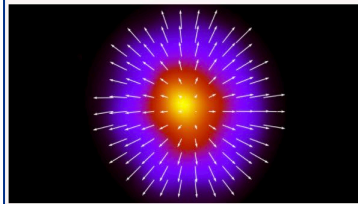
A CERN photographer and videographer writes about his experiences documenting the ongoing upgrade that will turn the Large Hadron Collider into the High-Luminosity LHC.



08/26/21

### Teaching a particle detector new tricks

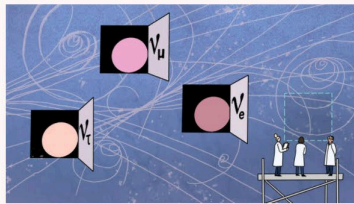
Scientists hoping to find new, long-lived particles at the Large Hadron Collider recently realized they may already have the detector to do it.



08/24/21

### Can light melt atoms into goo?

The ATLAS experiment at CERN sees possible evidence of quark-gluon plasma production during collisions between photons and heavy nuclei inside the Large Hadron Collider.



08/17/21

### The search for the sterile neutrino

Back when it was theorized, scientists weren't sure they would ever detect the neutrino; now they're searching for a version of the particle that could be even more elusive.



08/10/21

### A collective strategy for physics in Africa

For the first time, African physicists and other researchers are creating a grassroots strategy for the future of physics research and education.



08/03/21

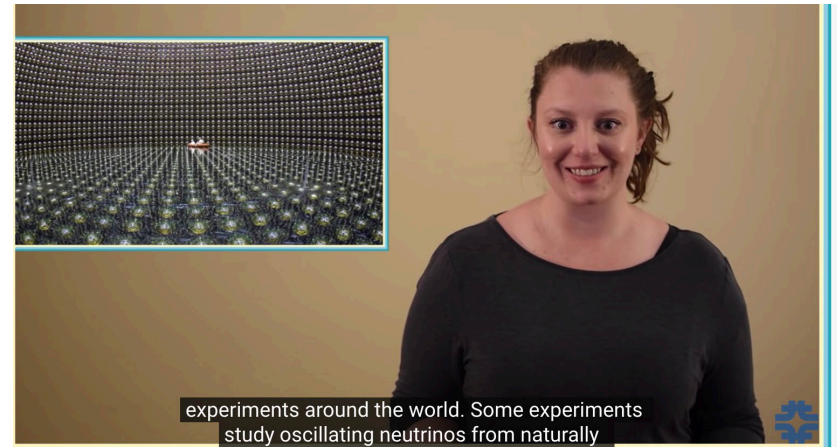
### Drumming up dark photons

A group of scientists is hoping to detect dark matter using a nano-scale drum.

## Recent issues:

- Bringing the whole self to science (Hispanic Heritage month)
- Curious physics results could shed light on dark matter
- Teaching a particle detector new tricks
- The search for the sterile neutrino
- LHCb discovers longest-lived exotic matter yet
- A collective strategy for physics in Africa

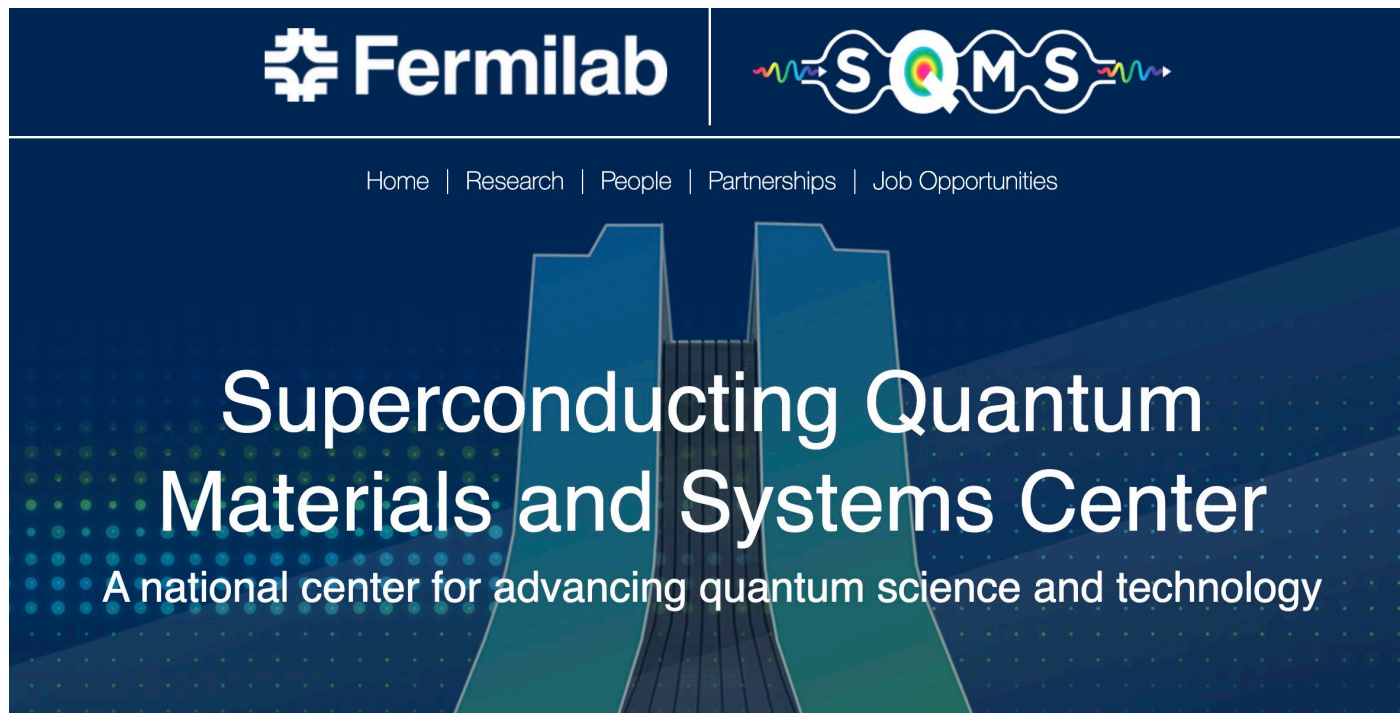
# New Fermilab videos on YouTube





# SQMS news

SQMS Center announces the addition of Rutgers University-New Brunswick to its growing collaboration.

A banner for the Superconducting Quantum Materials and Systems Center. The top left features the Fermilab logo and name. The top right features the SQMS logo, which consists of the letters S, Q, M, and S in a stylized font with colorful wave patterns. Below the logos is a navigation menu with links for Home, Research, People, Partnerships, and Job Opportunities. The main text reads "Superconducting Quantum Materials and Systems Center" in large white font, with the tagline "A national center for advancing quantum science and technology" below it. The background is dark blue with a pattern of small dots and a stylized graphic of two vertical structures.

# DUNE in the news

## Mining crew recognized for fire response

Constance Walter Sanford Underground Research Facility Aug 4, 2021 Updated Sep 9, 2021

Subscribe: 6mos. only \$1

1 of 2



In the foreground, the remnants of an apartment building that caught fire on July 10 in Lead. In the background, the Thyssen Mining Inc. Dry facilities, from which TMI employees first witnessed the smoke.

Courtesy photo

77° Sunny

# Black Hills Pioneer

News Sports Obituaries Opinion Public Notices COVID-19 Info Inside Scoop A & E Contribute Buy Photos Classifieds Digital Edition Online Forms Join our Email Newsletter

FEATURED

## What a blast!

Take a look at the Sanford underground Lab as miners make way for deep science

By Alex Portal, Black Hills Pioneer Sep 2, 2021

1 of 6

Featured Property

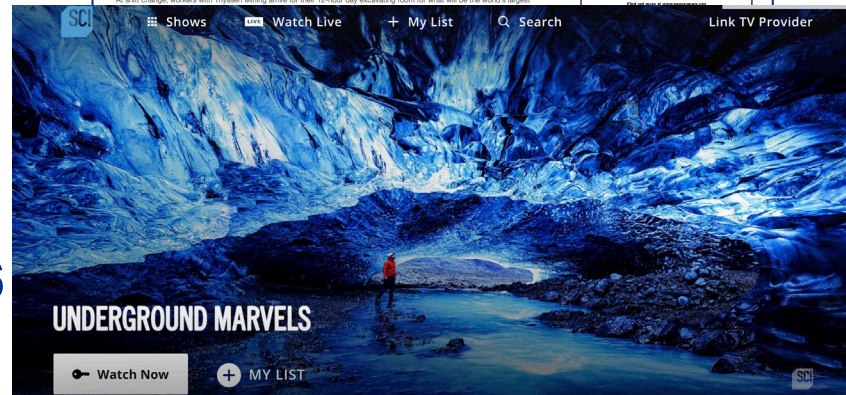
300x250 image ad

READ LOCAL

When you support your local newspaper, you support your community.

Thyssen Mining crew, Sept. 9  
Cavern excavation, Sept. 2

Modern Marvels, Aug. 26

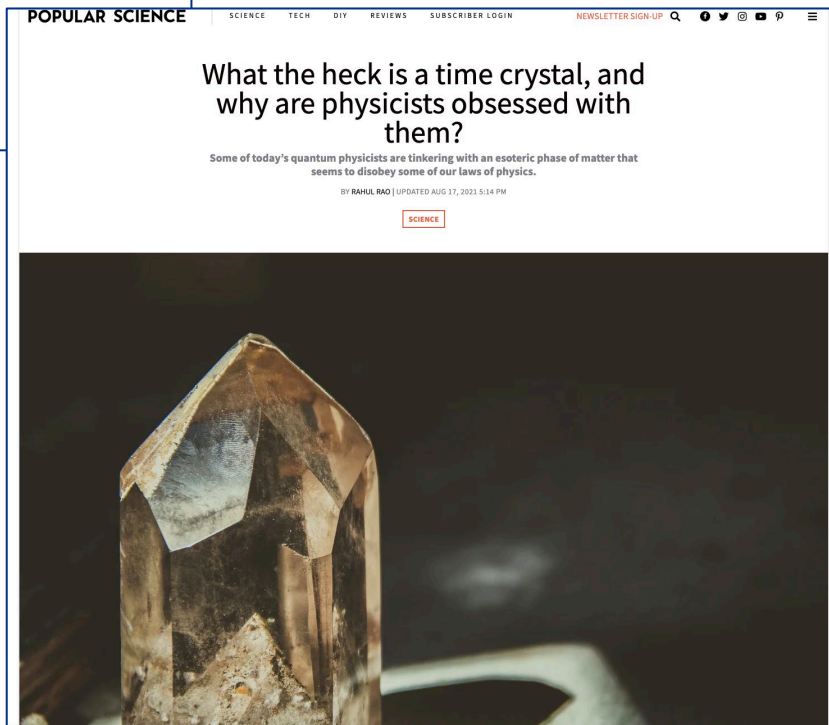
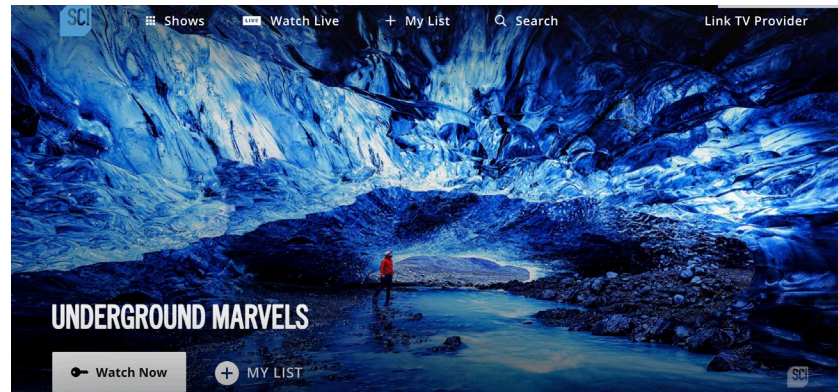


# Fermilab in the media

## The Quantum Technology Industry Is Creating Entirely New Jobs

If you are a quantum algorithm developer or an error correction scientist, the emerging quantum industry is hiring.

The Physics arXiv Blog | By The Physics arXiv Blog | Sep 15, 2021 6:12 AM

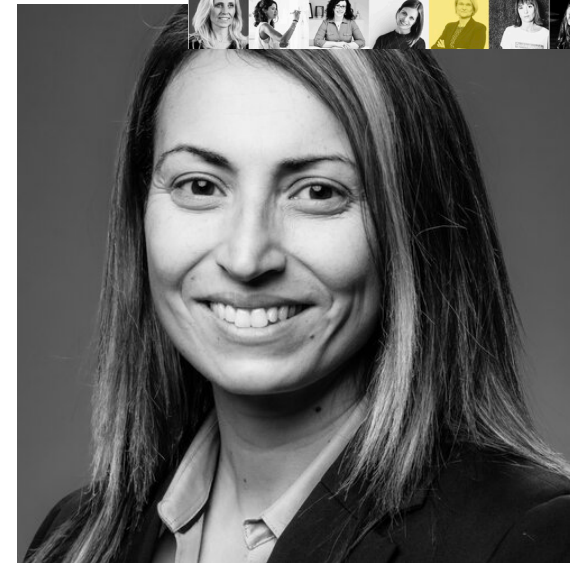




# Fermilab people



Chris Polly wins the Falling Walls Awards in physical sciences and is finalist for Science Breakthrough of the Year 2021.



Anna Grassellino  
One of the 100 successful women selected by Forbes Italia and one of the Inspiring 50 in Italy 2021.

# QUESTIONS

The word "QUESTIONS" is written in large, bold, white capital letters with a slight drop shadow. It is centered and surrounded by a vibrant, multi-colored collage of question marks and geometric shapes (circles, squares, triangles) in various colors including blue, yellow, orange, green, pink, and purple. The background is white.