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Event Horizon

The magazine of STARFLEET Sciences

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"There are really two different ways of looking at science. One says: How does the universe really work and how do we know? And the other says: How could the universe really work and what is it that we don't know?"

Dr. Geoffrey Landis, Professor of Astronautics, M.I.T.

Event Horizon is produced by
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Submissions are welcomed - please send them to **eventhorizon.sfi@gmail.com**

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Welcome to STARFLEET Sciences!

The mission of STARFLEET Sciences is pretty simple: to serve as an informational and communications resource STARFLEET Command staff, Regional Coordinators and Sciences Liaisons, Chapter Science Officers, and our general membership.

We live in exciting times! It's fascinating to see the science-fiction of Star Trek become science reality before our eyes! This is true in so many areas, from personal computers and cell phones to diagnostic medical scanners. Scientists have teleported bits of information from one point in space to another. It isn't *Star Trek*'s transporter yet, but it's the first baby steps toward getting there. Through their Breakthrough Propulsion Physics program, NASA scientists and others are developing the math and theoretical physics necessary for faster-than-light space travel — *Star Trek*'s warp drive — by surfing space-time!

The history of science is every bit as exciting. Modern science can be traced back 300 years to the beginning of the European Renaissance. But its roots technically go back thousands of years before that, for you see, the Renaissance was essentially a rediscovery of the works of the ancient Greeks. We have explored and continue to explore this rich history through a series of articles for the STARFLEET Communique and this web page, which ships and regions may reprint in their own newsletters.

We're always interested in learning new things, especially how we can improve the STARFLEET Sciences Program to meet your needs. If you have a suggestion, please send us a note (**https://sciences.sfi.org/sfsci-staff/**).

Captain Barb Barton

Director of STARFLEET Sciences

SFI Sciences Academy Challenge – Trekking Through the Universe:

It takes a long time for a ship to go from point A to Point B. This STARFLEET Sciences Challenge will take you on a six-week trip through the balance of how a team works together to ensure crews and passengers make it to their final destination safely.

Certificates will be issued for the completion of all six weeks.

Silver certificates will be issued for all courses completed with Honours & Distinction, and gold certificates for completion of all 6 courses with Distinction.

Week 1: Institute of Space Studies: College of Astrocartography ACART 100

Week 2: Institute of Technology: College of Aerodynamics AERO 101

Week 3: Institute of Technology: College of Engineering CENG 101

Week 4: Institute of Space Studies: College of Orbital Mechanics COOM 101

Week 5: Institute of Space Studies: College of Rocketry and Propulsion SOPr 101

Week 6: Institute of *Star Trek* Studies: College of Starship Operations CSO 101

Email proof of grades to **yolonda.whitworth@gmail.com** by July 22, 2024

SOL SPEAKER SERIES

The Sol Speaker Series is a monthly online event free to SFI members bringing interesting and inspiring presentations on a variety of science topics - with the opportunity to ask questions at the end of the talks. To register for the Zoom link, email **capt.barbbarton@gmail.com** and put "Sol" in the subject line.

Next event: July 18th, 7pm EST/11pm GMT
“Models for How Space/Time Travel Could Work”
Dr. Matthew Szydagis, UAlbany SUNY

From tachyons to wormholes, and from black holes to cosmic strings, this talk will cover which physical processes and phenomena can lead to time travel, based on cutting-edge real science, to either the future or to the past. Which methods used in *Star Trek* are realistic, and which are totally crazy? Prof. Szydagis will discuss time travel, made famous as a TEDx talk on YouTube, along with its relation to warp drives and other rapid space travel at the same time, covering special & general relativity, and quantum mechanics.

Dr. Matthew Szydagis is an associate professor at UAlbany SUNY and an experimental astroparticle physicist focused upon dark matter and UFOs. He is a member of the LZ dark matter experiment, on which he has held numerous leadership positions, plus UAPx and the Scientific Coalition for UAP Studies (SCU), and you may have seen him in the film "A Tear in the Sky." *Dr. Szydagis is lead author of UAPx's first scientific publication and is a regular expert featured on the History Channel's* "The Proof is Out There."

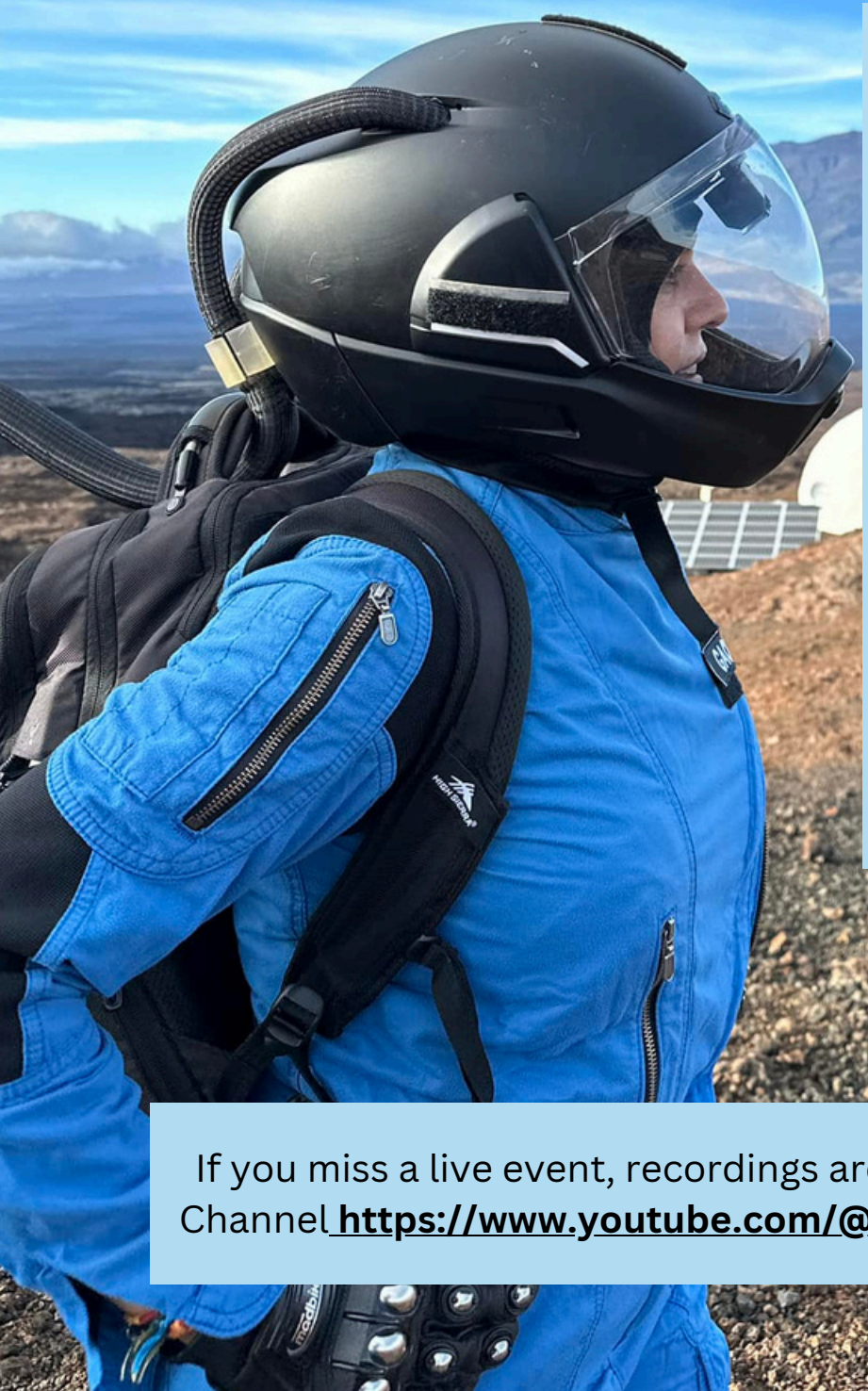
Coming soon: August 15th, 7pm EST/11pm GMT
"Physiology and Space Exploration"
Phyllis Friello, Johnson Space Center

Humans have been living and working in space aboard the International Space Station for almost 25 years. Although this orbiting lab has provided us with a wealth of information on the effects of the space environment on the human body, there are many remaining questions as we venture beyond low Earth orbit. This presentation will provide an overview of the primary risks of expedition class exploration to human physiology and the work underway to meet these challenges.

Phyllis Friello is currently the Project Manager for the Exploration Medical Integrated Product Team at Johnson Space Center. Prior to her current position, she was the manager of Science and Research at Space Center Houston, overseeing the on-site research and ISS science payloads of the Applied Research Collaborative.

September 19th, 7pm EST/11pm GMT
Sharife Gacel, Analog Astronaut
“Artemis: From the Earth to the Moon”

If you’re curious about humanity's next steps on the Moon, this is the presentation for you. Learn about the Artemis program, the spacecraft involved, and how humans are preparing to live and work on the Moon. You’ll get the opportunity to go behind the scenes with rarely seen images and get the inside scoop from an analog astronaut researcher who simulated a Moon mission in isolation.



Sharife Gacel is an Analog Astronaut (someone who plays the part of an astronaut in simulated missions - Ed), *NASA/JPL Solar System Ambassador, and Licensed Mental Health Counselor with a passion for sharing space with others. As an Analog Astronaut researcher, she served as the Medical Officer and her ongoing research is titled* “The Impact of Crew Isolation and Lunar Simulation on Human Behavior.”

If you miss a live event, recordings are posted on SFI’s YouTube Channel **https://www.youtube.com/@starfleetinternational7353**

Introducing Stamets

Meet Stamets, SFSCI's tardigrade mascot. Tardigrades are among the most resilient animals known on Planet Earth, able to survive extreme conditions that would quickly kill most other forms of life. It can withstand exposure to extreme temperatures, extreme pressures (both high and low), air deprivation, radiation, dehydration, and starvation - and some species of tardigrades have even survived exposure to space.

Discovery's Science Officer is named after renowned mycologist Paul Stamets, who has extensively studied the mycelial network on Earth. While the spore drive and the universal mycelial network is pure *Star Trek* fiction written with some great imagination, we think the tardigrade is one tough beast and represents SFSCI with distinction.

Look to the skies...

The Western Veil Nebula, NGC 6960, taken by Capt Barb Barton using a Redcat 71 telescope and ZWO533 mc pro cooled color astrocamera and processed with Pixinsight.

We want to showcase some of the talent within SFSCI, starting with astrophotography. If you have an image or images you would like to share, please send it to **eventhorizon.sfi@gmail.com** with your name and rank, a description of the image, what equipment you used, and what part of the world you are in.

If you are inspired to take up astrophotography, the next issue of *Event Horizon* will include a feature on that subject.

Coming soon...

Image created in Copilot

This part is up to you, the members of SFSCI. What would you like to see in this newsletter?
We will always include details of the latest Academy challenges, Sol Speaker Series talk and anything else that we feel you should know about, but beyond that the pages are blank...
Do you want to see discussions of *Star Trek* science? Real science inspired by *Trek*? Quizzes?
Episode reviews from a scientific point of view? If you have a great idea for a Star Trek science-themed article, please, please PLEASE send it in to us at **eventhorizon.sfi@gmail.com**
This is YOUR magazine - please tell us what you would like to read about!

If you have received this newsletter and you're not a part of STARFLEET Sciences but would like to be, visit **https://sciences.sfi.org/join-us/** to sign up.

To contact SFSCI email the Director at **sfsci-director@sfi.org**
Join the main SFSCI Facebook Group: **https://www.facebook.com/groups/sfsciences** - ask your regional liaison for region-specific groups.
Join the discussion on Discord: **https://discord.gg/3nW8wXhPTF**