



Hangar Soaring

February 2025

THE OFFICIAL PUBLICATION OF THE WOMEN SOARING PILOTS
ASSOCIATION.

<https://womensoaring.org/>

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Arcus M

**The Plane that won the World Championships
(flown by Karl Striedieck and Sarah Arnold)**

MARK YOUR CALENDAR

WSPA Scholarships Deadline : March 15, 2025 (Briegleb May 15)

February 2025

**1-26 Championship at Merlin Gliderport, Amelia, VA
May 7-14, 2025. Practice May 5-6.**

**2025 Women Cross Country Camp: June 29-July 4, Moriarty, NM
www.xcwomen.org**

Contact : CarolAnn Garratt cagarratt@gmail.com

**2nd Women Friendship Soaring July 5 -7, 2025, Uebersberg/ Ger-
many (locale of the 2023 seminar)**

Contact: Uli Franz eule@ulrikefranz.de

2025 WSPA Seminar: August 3-8, Danville, NY

www.womensoaring.org

See future updates

THE WOMEN SOARING PILOTS ASSOCIATION (WSPA) WAS FOUNDED IN 1986 AND IS AFFILIATED WITH THE SOARING SOCIETY OF AMERICA

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president@womensoaring.org

Sylvia Grandstaff
Vice President
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Membership Director
membership@womensoaring.org

Kristin Farry
Scholarship Director
sctrophy@womensoaring.org

Anna Laura Geusen
International Director
international@womensoaring.org

Scholarship Chair
Cathy Keller
scholarships@womensoaring.org

Ishitha Arekapudi
Youth representative

HANGAR SOARING
Frauke Elber
editor@womensoaring.org

Badges

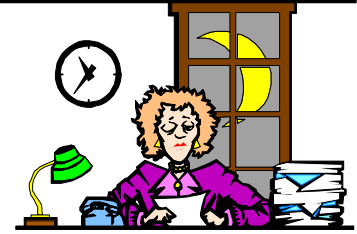
Recorded through Jan.2025

B Badge

Charlotte Woensche, PA
Maggie Broman, FL
Sarah Inzerellio, NY

A Badge

Charlotte Woensche, PA
Maggie Broman, FL
Courtney Bumpers, MN
Avery Ferreria, PA



From the Editor

A new year, a new soaring season are on us. And with them maybe some resolutions of advancement. Last year was great for women in soaring with Sarah breaking the glass ceiling winning the 20m World Championship with Karl as teammate. It might encourage more women to fly in the gender-neutral Championships and prove that, at least in this sport, they are equal to their male counterparts.

Looking into the future I am encouraged by the great young people we have in our sport. For me it was an honor to meet recently two of them: **Maxyn Hallare** and **Ishitha Arekapudi**.

Two years ago, **Maxyn** was a TSS (Tidewater Soaring Society) scholarship student, a scholarship that introduced her to soaring. During her tenure with TSS she received her glider pilot and power license, the latter one also on a scholarship from a different local aviation organization. I did not only meet Maxyn through soaring but also met her (and her sister) as very accomplished musicians. They and a friend of theirs gave a concert at my retirement community and brought the house down. Maxyn was a member of the local Civil Air Patrol and a top student in her high school (I don't know how she had the time to pack it into her busy schedule). Maxyn is now in her first year at the Air Force Academy. In this issue of HS you will find her report and a soaring related scientific article she submitted to SOARING. She hopes to continue her soaring career at the Academy.

Ishitha is a member of Evergreen Soaring in Washington State. She was the recipient of the WSPA Sky Ghost Scholarship in 2022 and the 1-26 Scholarship in 2023. She got her glider license in 2023 at age 16 and her power license in October 2024.

President's Note



As we welcome in the new year 2025, we find ourselves living in record-breaking times. The economy, inflation requiring us to cash in our 401K's to buy a dozen eggs or put gas in the car. The weather, surreal firestorms devouring whole cities in California and hurricanes in North Carolina that will take decades, if not lifetimes from which to heal. Did they say "SNOW" in Florida? Geopolitical madness, as the wars linger in Israel, Ukraine and always somewhere in Africa...A.I., space aliens and a new President of the USA elected to "fix-it-all". Is there any of us reading *Hangar Soaring* this month that has not experienced or know of someone effected by such anxieties?

Allow me to remind you that you are a part of a wonderful, albeit temporary, solution to these ever-changing challenges. A "safe space" to which you can retreat for respite. Your nearest glider port equipped with camaraderie, your glider, or rentals and a tow plane with a tow pilot lurking somewhere in the near-by bushes (that would be me). Sometimes you will find all the peace that you need from a myriad of problems just by driving to the airport and watching others fly as you quietly sip on your diet Coke.

Organizations such as "WSPA", (Women's Soaring Pilot Association) and our "mothership", SSA (Soaring Society of America) are designed for this anti-anxiety, self-medicating solution. Your membership (only \$25 .00) is designed to provide you with this vital remedy from the psychological stressors of the natural storms and human tragedies we all face on both sides of "the Pond". Many of us have formed life-long friends over the past 40 years at seminars and contests WSPA has sponsored around the world. Our international friends are waiting for that phone call or text from you to share your latest trials as well as your latest flight. There is so much that we have in common, and it NEVER gets old...and neither will you as long as you keep making that drive to the airport.

Now picture yourself at the airport...on short final, the intensity growing...you are thinking of NOTHING else except the moment of touchdown. You grease your landing hoping that everyone was watching. As you roll to a completely safe stop, that moment of decompression washes over you. Well done, AGAIN! Savor that moment and remember...it's there, waiting for you at the airport any time you are feeling overwhelmed by forces beyond your control. Let's plan on meeting there soon!!!

Lynda LaBerge

2025 WSPA Seminar call for presentations

We are hoping to fill the 2025 WSPA Annual Seminar program with presentations from women that can inform and support the aviation aspirations of seminar participants.

Do you have or have had a career or experience in aviation: pilot, IA, mechanic, instructor, air traffic controller, FBO operator, astronaut, contestant, aeronautical engineer, adventurer...? Or aviation-adjacent career or experiences such as meteorologist, author/artist, historian...?

Are you proficient in using soaring technology such as flight computers, flarm, personal ELTs, weather forecasting and flight planning apps or

Her ultimate dream is to become an Astronaut. (She is still in High School). She is the founder and president of Sky Riders, an organization dedicated to spreading aviation and space opportunities for young people. She is a member of the North Shore Civil Air Patrol Chapter participating in the Red Tailed Hawk Pilot program. On January 14, 2025, her book "Cleared for Takeoff, bridging Gaps to Access for Youth in Aviation" hit the shelves. (Available at Amazon). Her latest accomplishment is "Digital for Good" an online initiative to help youth accomplishing good things via online tools. WSPA just recently included Ishitha as a youth representative non-voting member to the WSPA Board. She contributed to this issue of HS.

Further back I met **Sylvia Grandstaff** when she was still a high school student, **Kathy Fosha**, while in her first year in College and **Nora Geusen** (and her sister Anna Laura), when she was still too young to start flying. I have watched them progressing in soaring, all three now flying in World Championships. I never met **Jenna Cooper** in person but watched her climbing in the ranks whereas she now is an instructor. I met **Sarah Arnold** (then Sarah Kelly) when she was in her early 20ies and had just taken over Chilhowee Soaring. Her accomplishments over the years have been well documented. They are probably more accomplished women glider pilots out there which I have never met or never learned about. To them I say: **PLEASE SEND ME YOUR ACCOMPLISHMENTS**

Nora comes from a soaring family. Both parents, her brother and sister (who is our new foreign country representative now) are glider pilots. They live and fly in Germany. I met the family in 2002 when I visited their glider club in Germany. Nora started flying in 2009 at age 14. She and her family participated in the 2009 seminar in Slovenia, where she won the limerick contest. She got her license in 2012, the aerobatic glider license in 2015 and instructor rating in 2017. In 2024 she earned a place on the German Aerobatic Team and flew in the German Nationals. The same year she qualified for the World Advanced Glider Aerobatic Championships. To prepare for this and defray the costs she applied for the Maria Farber Scholarship which was awarded to her. She also contributed to this issue of HS.

These are just some examples of great young people who are the ambassadors of our sport. I am sure there are more out there that could serve as role models and inspiration. We, the oldies, have done our part. Just recently I got a very uplifting note:

"Thank you for being a wonderful mentor and an invaluable source of wisdom and kindness. My sister and I really look up to you as role model."

It's now up to the young generation to follow in our footsteps and take up that role.

Frauke

NEW WSPA YOUTH REPRESENTATIVE

By Lynda WSPA, President

It is an honor for me to introduce to the WSPA general membership our new Board Affiliate and Youth Representative, Ishitha Arekapudi. On November 8, 2024 the Women's Soaring Pilot Association Board of Directors unanimously voted to add Ishitha Arekapudi as "Youth Representative", a new position on our Board. You may have had the good fortune to have already met Ishitha at our last Soaring Society of America Convention in Knoxville, Tennessee. She was a guest speaker at our WSPA breakfast addressing the plight of youth launching into the field of aviation and served as a volunteer in our WSPA booth. Driven by the challenges Ishitha, herself, faced in accessing aviation opportunities, she founded **Sky Riders**, a national 501(c)3 non-profit youth aviation mentorship program that provides underserved students with resources, scholarships, and mentorship to help them navigate pathways into aerospace careers. Her dedication to breaking barriers in aviation has been recognized with the Presidential Volunteer Service Gold Award and the Experimental Aircraft Association's President's Award.

This remarkable young woman is truly a pioneer in her determination to make the development of knowledge in the field of aviation less of a struggle for the young, inspired burgeoning pilot. Ishitha has already published her first book, "**Cleared for Takeoff , Bridging Gaps to Access for Youth in Aviation**". It can be found on Amazon in printed and Kindle platforms. In this book she shares information which she discovered and documented while on her journey paving an organized path towards her passion and ultimate career in aerospace sciences. Ishitha describes her beginnings in her book: "I thought it was a given that aviation was an "adult" endeavor. Looking back, I realize how misguided that belief was. I didn't grow up with an obsession for space or aviation; the idea of becoming an astronaut didn't truly take root until sixth grade. It didn't stem from watching rocket launches or hearing stories about astronauts on the moon. Instead, my passion for space emerged unexpectedly during a middle school talk I attended by chance". It is this type of epiphany that Ishitha wishes to help others to experience. To that end, her position of Youth Representative on our Board will address :

(1). **School outreach:** speaking at schools to inspire students and share information about WSPA's mission and opportunities. Collaborate with educators to organize aviation-themed workshops or events.

(2). **Social Media:** Focus on building WSPA's presence on platforms like Instagram, Facebook, TikTok, and LinkedIn. Create engaging posts, videos, and interactive content such as Q & A sessions, success stories and Scholarship opportunities. Using Instagram stories and TikTok or similar platforms to share events and quick aviation tips to appeal with younger audiences. To share professional updates and connections on LinkedIn to reach a broader audience including mentors and sponsors. Further develop a youth column on our current Women's Soaring Pilot Website.

(3). **Newsletter:** Provide regular updates on youth programs, scholarships, scheduled events and inspirational stories of youth experiences to motivate others.

online sites such as OLC and WeGlide?

Would you be willing to give a presentation to WSPA seminar participants about why and how you got there, etc.? The Seminar hosts are trying to get the presentation schedule firmed up before the soaring season starts here in western NY, so please get in touch soon, even if it is just a "maybe." Contact Judith Galbraith

Email: jgalbraith@separationdesign.com. Phone or text (not voicemail): +1 724.825.1386

See you August 4-8 at the seminar in Dansville, NY!

Judith Galbraith

(Youth on page 8)

Reaching the Young

By Ishitha Arekapudi



Ever since the sixth grade, I've dreamed of becoming an astronaut. Unlike many, my journey didn't begin with rocket launches or meeting astronauts; it started with a chance encounter. Raised in Ireland until the age of 12, I had little exposure to space exploration. However, moving to Seattle transformed my perspective. Immersed in a city that thrives on aerospace innovation, I attended a Science Olympiad meeting where a payload specialist at Blue Origin spoke about her career. Initially aspiring to be an astrophysicist, I was inspired by her journey and realized I wanted more than to study space—I wanted to experience it firsthand. I decided at 14 that I would become an astronaut, despite my lack of connections, resources, or a plan to get there.

Determined to start my journey early, I discovered the world of aviation. At 14, I learned I could begin glider training, a revelation that felt like unlocking a door to my dreams. My first flights were exhilarating, marking the start of an incredible journey. However, navigating aviation as a teenager without guidance was challenging. I spent countless hours researching opportunities and deciphering the jargon of aviation, often feeling overwhelmed by how much I didn't know. These experiences became the foundation of my book, **Cleared for Takeoff: Bridging Gaps for Youth in Aviation**.

This book is the resource I wish I had when I started. It unfolds the aviation world, providing a comprehensive guide for young people interested in becoming pilots, exploring aerospace careers, and pursuing their dreams—especially those from underrepresented backgrounds. From step-by-step instructions on flight training to resources for scholarships, mentorships, and volunteering opportunities, **Cleared for Takeoff** aims to streamline the process for aspiring aviators. It's not just about logistics; it's about empowerment, inclusion, and inspiration.

Through sharing my own journey—from earning my glider and airplane pilot licenses to becoming the Deputy Cadet Commander in the Civil Air Patrol—I hope to inspire others to chase their ambitions. Becoming a pilot wasn't just a steppingstone for me; it became a passion. There's nothing like the freedom of being in the cockpit, the sound of the wind against the wings, and the thrill of navigating the skies.

Alongside my personal experiences, this book offers insights from industry professionals and actionable advice to help others succeed. It's organized to be both a start-to-finish guide and a quick-reference tool, encouraging readers to bookmark, highlight, and revisit sections that resonate with them. My hope is that it becomes a trusted companion for young people navigating the complexities of aviation.

Cleared for Takeoff also reflects my work with Sky Riders, a national program I founded to break down barriers in aviation and aerospace. Through Sky Riders, I've seen firsthand how accessible information and support can transform lives. This program, like the book, is rooted in my belief that the path to the stars is open to anyone with determination, regardless of their background. As I reflect on my journey, I'm filled with gratitude for the support I've received—from scholarships that provided financial aid to mentors who believed in me. Each step has brought me closer to my goal of becoming an astronaut, and I'm more motivated than ever to help others find their own paths. As the 2022 recipient of the Sky Ghost Scholarship, I was able to continue my glider training and make my dreams become reality. As a young person in aviation, financial burdens were numerous, but WSPA stepped in and took that weight off my shoulders and allowed me to soar and learn to my full potential. WSPA has played an indispensable role in my journey of becoming a glider pilot, and now astronaut, and for that I will forever be grateful.



Start 'Em Young, Set 'Em Soaring

by Adriana Barragan



I grew up with an interest in aviation but lacked a family or community connected to it. Almost in agony, I finally found my way to soaring after a long, bumpy road.

STEM and high school programs are opening the eyes of many who might have never considered aviation before. However, with this new interest, the risk of misguidance is at an all-time high.

To guide these students well, it's essential to intercept them right when their curiosity sparks, and provide them with a playground or supportive environment filled with aviation professionals who can guide and mentor them.

Of all communities, I can say that the soaring community is one of the few you can still trust—where you can find what real aviation is made of. Looking around, our community includes some of the finest machinists, mechanics, pilots, engineers, instructors, dispatchers, air traffic controllers, competition pilots—you name it! We rock!

Starting'em in soaring goes beyond learning to fly or earning a glider private pilot certificate:

- It's opening the right door for them to explore and discover what they want from aviation and what they want to do.

- It's identifying high-quality, motivated applicants who aspire to be part of aviation.

- It's an efficient way to recognize talent early on and their potential to succeed in aviation.

- It's a catalyst for successful people thanks to teamwork and the multidisciplinary exposure of the sport.

Whether or not this incoming talent ends up in the sport, the industry, or the military, planting these seeds ourselves will help shape the aviation community we enjoy being a part of.

This year, I missed my local soaring contests — but for a good reason. I have been building an ecosystem to connect students with the right people. One of the components of this ecosystem is a marketplace, which is gaining visibility.

The marketplace is a pathway to send students to those we trust. Through it, we give those interested in aviation a shot at making their aviation life what it could—and should—be from the very beginning:

- Rewarding

- Exciting

- Vibrant

- Filled with friends and fulfilling experiences

- Fun, challenging, and more

“Send students to those we trust.”

I am on a mission to guide students to the finest members of the aviation community. If the young want to get started, let it be surrounded by the soaring community. We know it's not about the planes and the excitement alone. It's about the people, the experiences, and the friendships—encouraging each other and passing the spark along.

If you've got that spark, let me spread it through the reach I can achieve with my work. You paint the picture with media, provide students with up-to-date information upfront, and the marketplace will give the instructor-in-charge a direct way to save and follow up with this additional source of inquiries. Listing is free. The simplest way to start is by listing an introductory glider training session or the first lesson in your curriculum. This will open the door to those who have no idea we exist—like I was in

high school 15 years ago, or even as a certified power pilot.

“Open the door to those who have no idea we exist.”

I'd be happy to provide technical assistance or guide you through the self-serve tools hosted at flyorka.com

Soaring instructors, soaring clubs, and commercial soaring operations - with spark - are all welcomed. Part of my vision is to support the advancement of soaring through what I can put in hands of students and instructors.

About the author.

Adriana has been soaring since 2019 and flying since 2010. After nine years in aerospace engineering, she moved on to build applications that enhance the flight training experience for instructors and students as the Co-Founder of ORKA. When not working, Adriana soars, tows, and teaches tailwheel at Ridgeland Airport in SC. Say hello at adriana.barragan@flyorka.com

A Year to Remember: My Journey at the World Advanced Glider Aerobatic Championships

By Nora Geusen

This year has been truly special for me as I had the incredible opportunity to participate in the World Advanced Glider Aerobatic Championships (WAGAC) held in Oschatz, Germany. The journey to this moment has been long and filled with passion. I started flying at the age of 14, just before attending the WSPA Seminar in Slovenia in 2009. It was there that I experienced my first aero tows in a Blanik glider, and I even wrote a limerick about it that won the contest:

***A young girl in a Blanik,
Made the tow pilot get in panic.
Loops and rolls,
She performed while in town,
Hopefully a future expert in aerobatics***

A kind of prophecy.

I earned my pilot's license in 2012, followed by my aerobatic license in 2015, and became an instructor in 2017. That year marked my entry into the world of competitive glider aerobatics, and I continued to participate in various competitions over the following years.

Last year, however, I wasn't focused on competing and had limited aerobatic training when I signed up for the 2023 WSPA Seminar in Uebersberg. I had a fantastic time there, enjoying the camaraderie of fellow women pilots, completely unaware that my greatest gliding adventure was yet to come. Just a week before the opening ceremony of the WAGAC in July 2023, I received an invitation to fill a newly vacant spot on the German team. It was an amazing experience, bonding with the German team and other competitors from around the globe.

I also qualified for the World Advanced Glider Aerobatic Championship in 2024, which prompted me to apply for the WSPA Scholarship (Maria Faber Scholarship) to help me prepare. I feel incredibly fortunate to have received this scholarship. My training commenced in May alongside other competitors for the World Championships, guided by an international judge.

In glider aerobatic competitions, pilots must perform a series of programs. The first is the Known program, which I practiced very often. The goal of glider aerobatics is to execute the figures as precisely as possible within a designated area known as the "Box," measuring 1 km by 1 km. During my training, I also tackled Unknown programs, where I aimed to perform as many challenging figures as I could. As further prepare, I competed in the German Glider Aerobatic Championship, where I placed 8th—an encouraging result!

The WAGAC in Oschatz kicked off with a spectacular opening ceremony. Pilots and team members were transported from the airfield to the town of Oschatz via cars, trucks, and rickshaws, where we celebrated with the local community. Among the total of 55 participants in both the Unlimited and Advanced categories, only six were women.

The following day, the competition began. The tasks for pilots extend beyond just flying. For every flight, except the first program, each nation proposes a figure that must be compiled into a program. This requires careful planning to ensure that the exit speed of one figure matches the entry speed of the next, and that the figures are arranged in a way that optimizes positioning within the box.

Each day starts with a briefing — sometimes as early as 6 a.m. due to weather conditions. After the briefing, gliders are prepared for flight, and each pilot meticulously plans their routine. Mental training is crucial in glider aerobatics; pilots often "simulate" their programs on the ground, resembling a dance as they visualize their performance.

In a heartwarming display of camaraderie, pilots from around the globe gathered for unforgettable evenings. Many nations showcased their unique culture by hosting special evenings filled with traditional food and drinks, allowing everyone to experience the rich diversity of our world.

For me, the joy of connecting with fellow pilots far surpassed the thrill of competition. It was a truly exciting time, and I proudly secured 32nd place in the Advanced category. This year has been a remarkable chapter of my flying journey.

As I reflect on this incredible experience, I want to extend a heartfelt invitation to all female pilots: embrace the world of aerobatics and consider participating in competitions. Your passion and talent are needed in the skies!



Nora (back seat) with sister Anna Laura

How I used math to analyze elite glider pilots' flight behavior

By Maxyn Hallare



Maxyn with 2-33 BYRD

I started working towards my Private Pilot's License - Glider when I was 15, after being graciously awarded a scholarship with the Tidewater Soaring Society, encouraged by my mentors at my Civil Air Patrol squadron to pursue my interest in aviation. Immediately enamored by the sleek beauty of the gliders at the gliderport, I embarked each weekend on a 30 minute drive to the airfield (chauffeured by my parents, since I hadn't had my driver's license yet), and diligent-

ly worked under my instructors.

Over time, I grew familiar with being in the air and learned to handle the 2-33 BYRD (dubbed lovingly as a "bus" compared to the "sports cars" of the club's higher performance gliders). At one point during my training, I remember one of the club's members offering to take me up in the 2-33 on a cold and crisp morning. Although I obviously knew about thermalling and had experimented with it lightly during my short 14-24 minute flights, this was the first time I fully engaged in the practice, outside of practicing the maneuvers and traffic patterns and emergency procedures for the practical test.

I watched as the experienced pilot brought us to a thermal - felt the cold of the day seeping through the canopy and the beeping of the variometer as we steadily gained altitude. The thermals were pretty strong that day, bringing us up to above 6500 feet from our release altitude of 3000. The poetry of gliding revealed itself to me through this experience - staying aloft not through the brute force of engine and propeller, but by sifting through the essence of the air and dancing its warm, rising ribbons.

I continued my training and earned my license at 16 - before my driver's license, a fun fact I liked to bring up to new acquaintances (having acquired the ineffable pilot ego). Since then, I've pursued my powered license at a nearby airport, graduated high school, finished Basic Training, and embarked on my first semester as a cadet at the United States Air Force Academy (USAFA).

The first-year schedule at USAFA is demanding, so I haven't been able to fly, but I found a new way to delve into my interest in gliding, and thermals in particular. Learning about space curves in Calculus III inspired this project - the distinctive spiraling shape of the thermal immediately came to mind when our class discussed helices.

As I delved into the mathematical explorations of 3D through vector fields and triple integrals, I had the idea to combine this knowledge with knowledge about soaring. Two questions guided my exploration of this project: *How can thermals be identified and captured? What will mathematical models of thermal behavior reveal about maneuvering these pockets of air?*

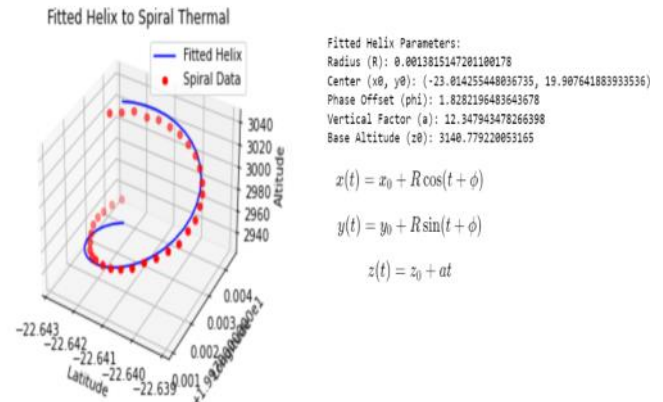
I explored how top glider pilots interact with thermals by analyzing flight data from a recent competition near Bitterwasser Airport in Namibia. The task covered a triangular route of about 1,300 km. Using tools like Python and MATLAB, I delved into the details of thermalling, isolating periods of altitude gain and circular flight patterns to study how pilots maneuvered in these crucial segments of their flights.

By processing IGC files, I extracted time, altitude, and trajectory data. I created a Python program that allowed me to apply constraints on

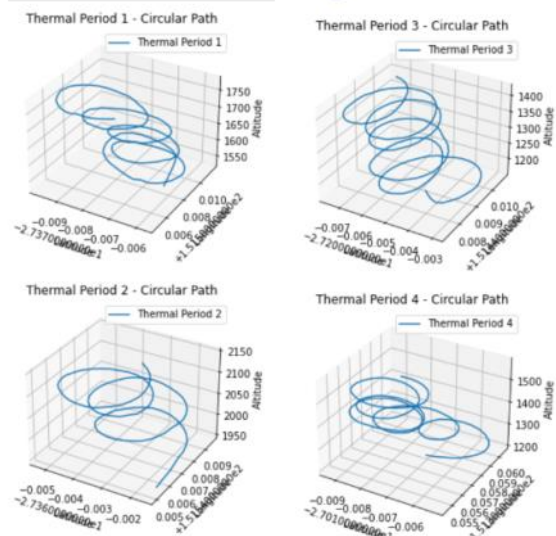
the data to isolate thermal periods based on an altitude threshold and a distinctive circular pattern. I experimented with different parameters and methods of defining these "thermal periods". By tweaking with my Python model, I was able to find the specific thresholds used to define thermalling periods on online soaring record sites.

The Python program also allowed me to visualize them as 3D helix curves, capturing the distinct spiral shapes of glider movement in rising air. This was probably one of the most satisfying results, combining my knowledge of space curves and seeing the raw numbers transform into the flight they had captured, as well as the mathematical equation fit into a real-world example.

Example Fitted Helix to Spiral for Pilot B



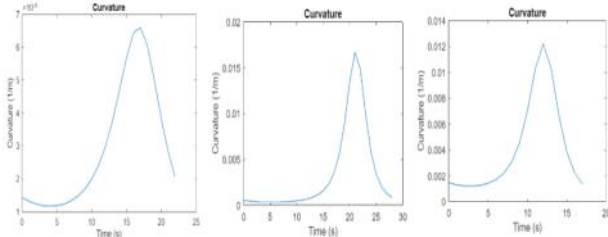
3D Thermal Graphs



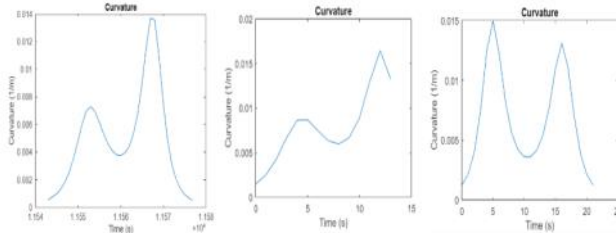
For further analysis, I examined key metrics such as velocity, acceleration, curvature, and torsion in a MATLAB program, focusing on the most and least effective thermals for each pilot—those with the highest and lowest average altitude gains per second. The mathematical values of curvature and torsion were particularly intriguing because of their applicability to the curving helix shape of a thermal. Curvature expresses how much the curve bends at a particular point, with zero curvature indicating a straight line and high curvature indicating sharp turns. Torsion measures how much the curve "twists" out of the osculating plane of curvature; zero torsion means the curve lies completely in the plane.

Although velocity, acceleration, and torsion all yielded interesting

results, analyzing curvature revealed a striking pattern among the most effective thermals—those that yielded the highest altitude gains per second. These thermals consistently exhibited relatively low curvature throughout the maneuver, indicating smooth, efficient turns. Interestingly, curvature would spike briefly near the end of the thermal, likely as pilots transitioned out of the thermal and into a glide. This contrasted with less effective thermals, which tended to involve higher average curvature, reflecting sharper, less efficient turns that likely wasted energy.



Curvature for Most Effective Thermals



Curvature for Least Effective Thermals

My project has thus far proved to be a quite rewarding and educational experience in visualizing and conceptualizing thermals. The results revealed interesting variations in technique among pilots, highlighting how different thermalling styles impact performance. I hope to continue adding onto this project as I gain more skills with Python and MATLAB. Perhaps with enough flight recorder data for a given competition day, different programs could be used to map out locations of strong, repeatedly used thermals. In gathering resources for this project, I came across several exciting articles using AI and data learning in mapping thermals to allow UAVs to take advantage of them. While environmental factors like wind or thermal strength weren't captured in the data, this project showed the potential of math and data analysis to deepen our understanding of soaring - an endeavor I'll continue to pursue on my journey as a student and pilot!



Note from Sylvia Grandstaff (WSPA vice president)

I am in the unique position to have qualified for both the World Gliding Competition (WGC) and Women's World Gliding Competition (WWGC)- I will be flying Club Class in both. Simultaneously, it is a unique situation that both WGC and WWGC are being held in Czechia this year! The races are in two separate locations and, fortunately or unfortunately, spaced out enough that I cannot make the journey in one trip. I will have to do logistics in duplicate: make two out-and-return flights, have two separate sets of crew (plus a Team Captain for WWGC). Fortunately, as of right now, I will be renting the same glider to fly for both: an LS-4 owned by a Czech woman pilot.



The locations and dates of both contests are as follows:

- WGC (Tabór):

Unofficial practice: 31 May - 4 June
 Official practice: 4 - 6 June
 Contest: 8 - 21 June
 Website:

<https://www.wgc2025.cz/>

- WWGC (Zbraslavice):

Unofficial practice: 19 - 22 July
 Official practice: 23 - 25 July

Contest: 27 July - 8 Aug

Website: <https://www.wwg2025.cz/>

I will be offering some glider-themed jewelry for sale as a fundraiser for WGC/WWGC. My website isn't public yet, but I will likely want to advertise with you once it is in place. I've attached a photo of an example piece I finished recently for myself.

Ed. note:

Sylvia needs financial support to fly in these **two** World Championships. Please donate to the WWGC Fund.

Make your tax deductible donation out to WSPA and send to

Margarett Roy, Treasurer

PO Box 1197

Central Islip, NY 11722-0950

Put in subject line WWGC



Maxyn and Hally, the musicians



Maxyn and mother at the AFA



Karl Striedieck with eagle "LIMA" adorned with Karl's Gold Medal

Youth from page 3)

(4). **Mentorship Program:** Assist in making youth mentorship program more accessible and appealing to youth. Develop a clear organized pathway for Young people to connect with mentors, instructors and aviation professionals through an online platform.

(5). **Flight Schools and Glider Clubs:** Speak with flight clubs and glider schools to promote WSPA programs and scholarships. Partner with these organizations to host youth events, workshops or youth contacts at seminars.

(6). **Aviation Opportunities App:** Develop an online app featuring aviation Opportunities, with WSPA as a key component through the **Digital4Good Initiative**, a program which Ishitha is in the process of developing with Google.

(7). **Partnership Development:** Explore collaborations with other aviation organizations to expand WSPA's reach. Establish relationships with local and national youth organizations to encourage more participants.

(8). **Book Donations:** Ishitha has graciously donated her books to WSPA to assist in funding and/or developing a structured approach to the above mentioned youth programs.

(9). **Workshops and events:** Organize hands-on workshops, such as Introductory sessions on aviation or STEM topics, to spark interest among youth. Host informational webinars featuring guest speakers from WSPA. For more information on our new Youth Programs visit our website at : **womensoaring.org** or contact me directly at lyndaleelaberge@gmail.com. I will be more than happy to direct you to Ishitha's latest developments and programs. Let us help you to make your dreams or those of the youth in your lives come true.

2024 1-26 Championships in Hamilton, TX

By Kristin Farry

Five WSPA members competed in the 2024 1-26 Championships in Hamilton, TX: Cathy Williams, Judith Galbraith, Kristin Farry, and team Ashleigh Andrews and Angelina Barber-Petroff.

Ashleigh and Angelina (Lina) are juniors in the Hamilton Soaring Club. This was the first contest for both of these college students. They flew Hamilton's 1-26C. Ashley Andrews completed her very first task (almost 35 miles). She also had a couple successful, safe land outs—proof that the Bronze Badge training is effective. Ashleigh capped her 1-26 Champs participation with her airplane PPL the following weekend. Lina had just passed her glider PPL check ride with Tony Condon at the WSPA Seminar in Sunflower, KS, days before the contest began. She completed her first two contest tasks (82.4 and 60.2 miles). Busy week for these two new and very talented soaring pilots!

High winds kept us on the ground for the first two days, hanging onto our gliders that were trying to fly without pilots or tow planes. With temperatures well over 100F everyday, we had to be careful to stay hydrated. The winds finally died down a bit and we had six flyable days in a row. The lift wasn't always easy to fly, but fly it we did. Winning distances were about 100 miles on four of those days, proof that a "low performance" glider does not mean you are stuck flying around the home airport. Cathy Williams, Judith Galbraith, and Kristin Farry completed six out of six tasks. For Judith and Kristin, this 100% task completion was a major flying mile-

stone. This accomplishment was all the more impressive considering that experienced pilots landed out every day. On the day of Judith's first day-win, almost half of the starters landed out.

Judith Galbraith won two contest days (Day 3 and Day 6), making this contest her best yet. Judith took her first glider flight at age 66 and crewed for Cathy and Kristin in 2019. Then she bought a well-used 1-26A for \$4500 and has been incrementally restoring it and learning cross-country soaring since then. On her way here via the Women's XC camp at Moriarty, her trailer had a wing-cradle failure and the leading edge of one wing was crushed. Alamogordo Soaring Club members fixed it in less than two weeks, so she got to Hamilton on time with a flyable glider. But then a speeding truck here wiped out her pickup (as well as their own). So she had a tough time this trip, but was still able to get her head in the game and fly very well. Proof that you can start this hobby late on a shoe-string budget and accomplish a lot.

In the final tally, Cathy Williams was fourth overall and took home the Virginia Schweizer Trophy for top woman pilot. Judith Galbraith was just a few points behind Cathy in fifth place overall. Kristin Farry finished in eighth place. Team Ashleigh and Lina were the second-place team and thirteenth overall.

The 2025 1-26 Championships will be May 7-14th at Merlin Aerodrome near Richmond, VA. This is a great first contest, with lots of mentoring available. The 1-26 Association pays for your first entry fee no matter what your age. The Association pays both entry fee and tows for juniors. The 2024 winner—Michael Hayter from Caesar's Creek Soaring Club in Ohio—was flying in his first contest at age sixteen, turning in consistent distances and speeds every day to edge out old-timers. The WSPA Contest Scholarship can be used to participate also. Many 1-26 owners are willing to loan their gliders to out-of-town participants. Contact Kristin Farry (Kristin.Farry@verizon.net or 540-738-6015) for more information on how to participate.

The 1-26 association also offers flight training scholarships to juniors, accepting applications year around



On the grid, four of the five women competing (L to R): Kristin Farry, Cathy Williams, Ashleigh Andrews, and Judith Galbraith

Forty Years of the Women's Soaring Pilots Association (WSPA) (transcript of the WSPA breakfast talk at the 2024 SSA Convention in Knoxville, TN)

By Frauke Elber

The following is a brief history of WSPA and its achievements during the 40 years of its existence.



In 1972, to encourage more interaction among the US women glider pilots, Bertha Ryan, a glider pilot herself, and later the recipient of the Majewska Medal, the highest international honor for a woman glider pilot, distributed amongst clubs in the US a survey to find out how many women glider pilots were active. Fifty-seven women responded. Encouraged by the response, Bertha started a small newsletter that later evolved into the now quarterly newsletter *Hangar Soaring*, which became a sounding board for new ideas and communication amongst the women here in this country and overseas.

Bertha's initiative led in 1979 to the first weeklong women soaring seminar in Tehachapi, CA organized by the women then in the SSA office. This resulted in the decision to hold the women's seminar annually, and each time in a different part of the US, to enable as many women as possible to attend. Out of these seminars grew the idea of forming a Women's Soaring Pilots Association, which was formalized in 1986 and whose intended mission is to encourage and support women glider pilots.

Over the years, private donations and grants made it possible to establish scholarships to support young women pilots (and recently not so young ones) and to help defray the costs of the seminars and training and participation in a World Championship. From the first scholarship of \$200 in 1990, the Briegleb Scholarship, WSPA is now able to award 8 yearly scholarships plus support for two soaring camps. As of this year they are:

Briegleb Scholarship	\$750.00
Sky Ghost Scholarship	\$1500.00
Mid Kolstad Scholarship	\$1500.00
Glider Girl Scholarship	\$1500.00
The Flying Montague Scholarship	\$1500.00
Monique's Scholarship	\$1500.00
Karl Striedieck Competition Scholarship	\$750.00

In addition, WSPA supports:

Moriarty Women Cross Country Camp	\$500.00
Sugarbush, VT Youth Camp	\$400.00

Support WSPA female members flying in World Championships

Thanks to generous donations, it was possible to financially support two women pilots flying in World Championships: Kathy Fosha in the 2007 Junior Worlds in Italy; and Sarah Arnold flying in 2013 in Argentina, the first time that an American woman participated in gender-neutral World Championships. Also, in 2013 WSPA supported Sarah in the Women's World Championships in Issoudin, France whence she returned with a Bronze Medal. 4 Years later Sarah earned a Silver Medal at the Women's World Championships in the Czech Republic, and to crown it all in 2020 in Australia Sarah (flying with Sylvia Grandstaff and Kathy Fosha as teammates) came home with the Gold medal. Kathy and Sylvia also flew in the 2023 Women's World Championships in Spain.

Through the years the organization had grown to nearly 300 members (both women and men) in 7 countries. By 2023, after the Pandemic, it had shrunk to about 150. This membership decline is partly due to Covid but also because several overseas countries formed their own women organizations. Some overseas members have come across the Atlantic for the seminars, especially when they were held in the Western States. Right now, the membership is on the upswing again and we have passed 200.

Of the 46 seminars we have had so far, I will mention only the out of the country ones

In the summer of 2009, for the first time in WSPA's history, the seminar was held in Europe at Lesce/Bled, Slovenia. Of the 48 participants, 21 came from the US, 11 from Germany, 2 from Switzerland, and 2 stopped by on the way to the Women's World Championships in Hungary (Margot Aquaderni from Italy and Gill van den Broeck from Belgium, both WSPA members). This seminar was extremely well organized and created a lot of enthusiasm. Support and sponsorship from private and official sources in this tiny country was amazing, especially to the participants from the US, who are not used to corporate and public sponsorship.

The connection to the Slovenian women glider pilots goes back to 2004, when I was informed that, through an anonymous donor, \$750 was available in case the organization was able to bring a woman glider pilot from one of the former East Block countries to the 2004 Women's Soaring Seminar

Germany and one from Switzerland, joined us at the Harris Hill seminar. In the succeeding years, two American members visited Lesce/Bled airport in Slovenia and were impressed by the facility and the beauty of its location. After 4 years of planning, the first out-of-the-US seminar became a reality.

The 2014 seminar was for the first time held north of the border, in Ontario, Canada. Several years ago, WSPA (far ahead of its time) had included all of Canada in its regions. Therefore, it was just a natural that the seminar was held in Canada.

The 2016 seminar returned to Europe, to Varese, Northern Italy, near Lago Maggiore on the southern edge of the Alps. 39 participants from 9 countries took part in the seminar.

For the first time in its history the 2020 Seminar was canceled, due to the Corona Virus Pandemic.

In 2023, after two more years delay due to the Pandemic, the seminar returned to Europe, this time to Germany. Of the 27 participants 15 came from the US.

Although the average number of seminar participants is about 22, one seminar held in the US is notable for the number of attendees: the 1993 seminar at Black Forest, CO had over 70 registered participants (with the support people there were more than 100 in attendance). During the first part of this seminar, the operations were spread over three different fields in order to accommodate all. For the second half of the seminar, the flight operations were moved to Silver West, southwest of Colorado Springs, to give participants a chance to experience wave flying and winch launching. Several clubs joined in hosting this seminar.

To continue the seminars, the organization depends upon local clubs or commercial operations across the country being willing to host our week-long event.

Over the years, WSPA has become the most active of the SSA divisions. In 2009 and 2017 WSPA was the recipient of the **SSA Exceptional Service Award**, the first time for an organization not an individual person.

At the 2010 Soaring Convention in Little Rock, Arkansas, WSPA women reached a high level of visibility, Dianne Black-Nixon was awarded the **Warren E. Eaton Memorial Trophy**, the highest award the SSA bestows. WSPA became the first organization ever honored with the **Exceptional Service Award** for promoting soaring through its international work. Kathy Fosha had 6 National records awarded, and Cindy Brickner and Valeria Paget each received one. Val's record also was recognized as a World Record in the World Class category. What made this flight so remarkable was that it was not flown at any exotic soaring site but occurred in the coastal area of South Texas in a PW5. Also, Kathy Taylor was recognized for scanning countless back-issues of SOARING magazine now posted on the SSA web page.

In 2022, I was honored with the **Paul Schweizer Lifetime Service Award** for my more than 60 years of work on behalf of soaring. I was also included in the National Soaring

National Soaring Museum's "**Women in American Soaring Wall of Fame**" along with WSPA members Bertha Ryan, Sarah Arnold, Doris Grove, Gini Schweizer, Helen Dick, Elizabeth Woodward, who are also members of the Soaring Hall of Fame.

But it is not only the highly visible accolades and achievements of these women. All the little achievements (like first solo or first cross-country flight) are recognized and celebrated by our WSPA members. This really makes us a very supportive soaring community.

Honors to WSPA members:

Four WSPA members received **the Pelagia Majewska Medal**, the highest international gliding honor for women awarded by the International Gliding Commission (IGC):

Bertha Ryan	1996
Doris Grove	2008
Gill Van Den Broeck (Belgium)	2011
Margot Aquaderni (Italy)	2016

(Doris was the first woman to break the 1000 km mark)

Doris Grove, Cornelia Yoder, Jo Shaw and Val Paget flew World Records

Up to this date Sabrina Jackintell's Women World Altitude record in 1979 of 41,562 ft has never been broken

The following female WSPA members are members of the **US Soaring Hall of Fame**:

Betsy Woodward	1967
Helen Dick	1968
Virginia Schweizer	1971
Bertha Ryan	1972
Doris Grove	1988
Sarah Arnold	2021

Paul Schweizer Lifetime Service Award

This Award was established in 1994. Since then, only 17 SSA members received this award, 3 of them WSPA members

Bertha Ryan	2006
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Mid Kolstad	2006
Frauke Elber	2022

WSPA- internal recognition:

The Anne Morrow Lindbergh Trophy

Awarded each year to a member who accomplished the longest handicapped cross-country glider flight. The first recipient was Mary Hunt, now Mary Rust, in 1987.

Virginia Schweizer Trophy

(Administered by the 1-26 Organization)

Awarded to the top scoring woman in the 1-26 Championship

Bertha Ryan Service Award

This in 2023 newly established award recognizes WSPA members for their long-time active involvement in the organization.

First recipient was Mary Rust

The 2024 recipient is Phyllis Wells

Betsy Woodward Award

Recognizes the woman who flies the most flights that earn at least 50 points in OLC-Plus or WeGlide-Free distance, to reward steady growth in soaring and frequent attempts at achieving soaring distance

WSPA has encouraged women to take a more decisive role in the soaring community and in the field of aviation in general. The organization is justly proud of its accomplishments.

And just fresh off the press

WSPA members Sarah Arnold and Karl Striedieck won the 20 m, multi-place World Championship in Uvalde, TX in August, 2024

In the NEWS

Kristin Farry nominated the two Schweizer generations Ernest, Paul A., William, Leslie, Paul H. and W. Stuart Schweizer for Enshrinement into the National Aviation Hall of Fame.

Adam A. Smith has been named the new Director of the National Soaring Museum in Elmira, N.Y. He was previously Director of Operations and Facility Manager at the Martha Vineyard Museum, Vineyard Haven, MA.

WSPA Convention talk

The following link leads to the 2024 SSA Convention presentation given by three WSPA members

https://www.ssa.org/webinars/?_kx=YcM_kxny55kWpNv8hYftwL1KTPhLNypjeZj3hY4GTVM.WFNpes

Book

"Hunger for the Sky" by Sparky Barnes Sargent

This book features 9 women pilots which the author interviewed in person. Most prominently featured is Sarah Arnold (as the time of the writing in 2007 still Sarah Kelly) with 30 of the 215 pages.

Penny R. Hamilton, author of **"101 Trailblazing Women of Air and Space"** sent the following note:

Please subscribe to Grit and Lace: Trailblazing Women of the World on substack

A free Sunday morning short story about inspiring historic or contemporary women around the world, especially in aviation and space.

Click on this link to sign up to Grit and Lace

https://open.substack.com/pub/gritandlace/p/celebrating-raymonde-de-laroche-worlds?r=ozavq&utm_campaign=post&utm_medium=web&showWelcomeOnShare=true

www. PennyHamilton.com

Mia Gonzalez — was awarded an SSA Junior CFI-G Scholarship

Women Soar
with scholarships from the
Women's Soaring Pilots Association

Whatever your goals in soaring are,
we have a scholarship for you.

Visit our website: womensoaring.org

APPLICATION DEADLINE: MARCH 15th

womensoaring.org 

Time to start your application for a WSPA scholarship. Completed applications are due midnight, **March 15, 2025**. But I strongly suggest that applicants get in their applications early so that there is time for me to look and see if requirements are satisfied and for the applicant to amend if something is amiss.

Please spread the word to any woman in your club or that you know who might be eligible to apply for a WSPA Scholarship. that the Deadline for the **Briegleb Scholarship**, that helps a woman student pilot taking glider lessons to attend the Seminar, is extended to **May 15, 2025**. This gives potential applicants more time to think about attending the seminar.

All other scholarships have a strict **March 15, 2025**

Cathy Keller
WSPA Scholarship Committee Chair

www.womensoaring.org/scholarships

Please Donate to the US Women's World Gliding Championship Team

The 13th FAI Women's World Gliding Championship (WWGC) will be held in the Czech Republic from July 26 through August 9. WSPA will again support our US team.

In the past, we have supported the participation of our women in the 2013 7th WWGC in France, the 2020 10th WWGC in Australia and in the 2023 12th WWGC in Spain. In 2020, our team included 3 competitors in Standard and Club Class, Sarah Arnold, Sylvia Grandstaff and Kathy Fosha with Sarah winning the Gold in Standard class.

Those of us who followed the race on-line were granted some nail-biting moments watching the progress of the tracks over the Australian landscape.

We are very proud of these WSPA members who represent and inspire all of us. Competing in a world competition is a very costly undertaking, and US pilots pay a significant percentage of their own costs.

This year, we are once again highlighting the participation of our women at the WWGC 2025.

We want to offer them adequate support to be able to dedicate their energy to a successful outcome and we are asking you to help us achieve that goal.

This year Sylvia Grandstaff will represent the US at the Women's World Championships (WWGC) and the FAI World Championships (WGC) both in club class.

Sylvia is a seasoned competitor of many US Regionals and Nationals. She won the 2024 US Club Class Nationals and is ranked 38th in the US pilot contest rankings.

Please send your donations to WSPA using:

Zelle (treasurer@womensoaring.org),

PayPal (Women's Soaring Pilots Association)

or mail a check to: WSPA Treasurer, Margaret Roy, PO Box 1197, Central Islip, NY, 11722.