THE FLORIDA SURVEYOR

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IN THIS ISSUE: Women in Surveying Around the State From the Archives

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PRESIDENT'S message

As 2020 draws to a close, we are preparing for a Presidential transition which will be entirely without controversy or discord. Starting in January, Hal Peters will be taking the FSMS reins. Hal is more than able and I look forward to seeing him move the Society forward. Fortunately for Hal, he will have the same benefits I have had with our great team of administrative staff, Board members, committee leaders and members, and other experienced Society members along with our lobbying, legal, accounting, and investment professionals to support his efforts in the new year.

The structure of FSMS is designed for continuity, precisely because many goals take years to accomplish and those efforts are not encompassed under any one Presidency. The endeavor that H.O. Peters and his cohorts undertook in 1955 is in many ways the same one we have today. The scenarios and problems of the day change, but the mission is still "To promote, enhance and preserve the surveying and mapping profession through public awareness, education efforts, advocacy for the profession and legislative actions." Having the grandson of the Society's founder pick up the gavel in the coming year has a poetic symmetry which appeals to a sense of connection to our past among our collective of history afficionados.

This month's issue of the Florida Surveyor focuses not just on history, but on the necessary path to a sustainable future for the profession. A healthy profession is a demographically diverse one which mirrors the composition of the world around us. Currently, women make up about 4% of the licensees in Florida. This must change, starting with our outreach efforts at the very youngest ages. The work that Elaine and Elly Ball are doing with Get Kids Into Survey is outstanding, and that endeavor is worthy of the support of all geospatial professionals.

A better balance in the profession is an achievable thing. Something which was immediately eye-catching to me when I attended the 3rd International Congress of Surveying, Cadastral, and Geospatial Sciences early last year in Puerto Rico was that the average age of attendees was roughly mid-40s, and almost half were women. In looking at where those attendees came from, a common cluster of elements is noticeable. In those places of origin, most of the public is aware of the profession of surveying, the profession is held in high public regard, and there are geospatial licensees who hold public office.

Historically, the United States did have these elements, as evidenced by a particular mountain in South Dakota. If we are going to make a difference in the future of surveying, being ambassadors for the profession is not enough. We must be tireless zealots, focused on supporting and training new and prospective licensees, educating existing technicians and recruiting new ones, spreading the word about what we do among the community at large, and supporting each other through organizations such as FSMS. The future is ours to write, if we have the will to pick up the pen and begin.

Thank you for the honor and privilege of allowing me to serve as the President of the Florida Surveying and Mapping Society this year. Though my term of service in this role is concluding, the work continues!



President Don Elder (850) 354-9665 donelderpsm@gmail.com

WOMEN IN SURVEYING

ROAD

SED

Pictured: Leah Metcalf

Did you know women only make up about 4% of the number of Licensed Surveyors in the state of FL?*

We sent out a questionnaire to gain some insight into their perspective within the profession. We celebrate these bright and spirited women who represent this field so well.

How long have you been in this profession?

I graduated college in 1996 but did not start my surveying career until 2008. - Amelia Rodriguez-Alers, Professional Surveyor and Mapper Supervisor II for the Florida Department of Transportation District 4.

41 years - Brenda Catone, Project Manager.

I started in 1988 after graduating from College. - Cristina Albury, Project Manager at Biscayne Enginering, Inc.

Degree: BS in Surveying and Mapping from UF 1986 graduated. Worked summers at Johnson Engineering in Ft Myers during my degree program. Started full time in December of 1986 - Deborah Hill, retired January 2019.

6 years - Paige Rogolino, Professional Surveyor and Mapper. I graduated in December of 1998 and started to work right away. And, if you counted college years, since 1995, when I began the Surveying program. - Ia Hall, Senior Surveying Manager and Office Manager.

~5 years - Leah Metcalf, currently SIT, Survey Technician.

Since 1972 - MaryHanna Clodfelter, Vice President of Mock Roos & Associates and semi-retired.

I started the UF Surveying & Mapping program in the fall of 1988, graduated in December 1990, and have been surveying for 30 years now. - Pam Hyatt, President of Hyatt Survey Services, Inc.

I started this company in 2002 - Elizabeth F. Gaines (Liz), President of E.F. Gaines Surveying Services, Inc.

10+ years - Sarah Stillman, Mobile LiDAR Project Manager.

Just licensed in 2020 but have been active my surveying career since 2004. - Angela Bailey, Sr. LiDAR Analyst

*Stats from Florida Department of Agriculture and Consumer Services, October 2020

Why did you choose this profession or major?

Just by curiosity, when I was 13 years old I saw surveyors in a road expansion project; I had stopped them to ask what they were doing. They were gracious enough to let me look through the theodolite and I fell in love with the profession ever since. - Rodriguez-Alers

I joined the Air Force right out of high school without a guaranteed job. Surveying is what I was assigned to do. When I left the Military, I went to work for a survey company, and eventually got my degree and surveying license. -Catone

My great grandfather was a surveyor and I have many cousins in the profession. In addition, I have his old instrument. When I was in College taking architectural classes, I came across a surveying class and took it and I loved it so much that I changed my major. - Albury

Took a Photogrammetry class at UF while in the Agricultural Engineering Department taught by Dr Hintz. Dr. Ray Hintz was a professor in the Surveying and Mapping Department and recruited me into the department. -Hill

I was searching for a major as I entered my Junior year at the University of Florida back in 1978 and found the Surveying program. I was intrigued because of the combination of math and being outside. - Gaines

I originally went to school for graphic design, but it was a surveyor who gave me an internship. That was when I was introduced to the survey profession and fell in love with it. I then changed paths and completed my studies in surveying and mapping. -Bailey My father was a surveyor. -Clodfelter

I didn't choose it; it called me. I was enrolled in Computer Engineering and didn't know anything about Surveying. I had a roommate who would major in it, and I was interested in finding what it was. After exploring other options, Surveying was my calling. -Hall

In college, I started my degree in civil engineering, then stumbled across geomatics while working. Geomatics was a field I never had heard of before but found that it was a much better fit for what I wanted to do career wise. I love that I can go out in the field and collect data, then come back in the office and create the final product. -Metcalf

When looking for a college major, I came across the Geomatics Engineering degree at Florida Atlantic University. Growing up, I had a love of maps so the second I saw the degree I knew that was what I wanted to do. - Rogolino

I've always had a love for maps and seeing/doing new things. - Stillman

It really came into my life like a piece of a missing puzzle. I was enrolled in Civil Engineering at the University of Florida but wasn't passionate about the classes I was taking. That is, until I took the beginning surveying class required for all civil engineering students. I loved the class and after talking with one of the teaching assistants, Mark Haines, realized I could actually major in Surveying & Mapping (or Geomatics as it's called today). I thought long and hard about making the degree change, and at the end of that semester, went home for Christmas and told my parents I was switching from engineering to surveying. They gave me their 100% support and I haven't looked back since! - Hyatt



What are your goals?

At this point in my life my goal is to figure out and implement an exit strategy for myself from this business I started. - Gaines

Currently, I am working towards passing the PS exam, to get my license, and move into a project management role. - Metcalf

Enjoy the variety of work that the Profession brings daily. Do it with joy and with an open mind to learn about the new technologies that will change the face of it. Quietly contribute to the growth of starting Professionals. Retire. - Hall

Above: MaryHanna Clodfelter, 2005

To continue running a successful surveying & mapping business, to remain active in the Florida Surveying & Mapping Society, to maintain the great relations I have with other surveyors throughout the state, and to promote the Geomatics degree program any chance I can. My children used to laugh at me because I would always ask their friends what they wanted to do as a profession or study in college. No matter if they were headed to college or not, I would always talk to them about what a great career option surveying is and invite them to come by the office for a tour. Even if they didn't go into surveying, it sparked a conversation and educated them just a little about what surveying encompasses.

- Hyatt

goals continued

To continue to be fruitful in all aspects of life: faith, family, and work. I've found that some will outweigh others at times, but success and happiness tend to fall in place more easily when you take care of them in that order. - Stillman

I love working as a public servant and having that sense of giving back to the country. I have achieved that goal and now just looking to retire in the next

10 years or so. -Rodriguez-Alers

I have worked with some great surveyors that have come up through the field to management as well has degreed surveyors. All have been instrumental in my success. I have held positions with my FSMS – Tampa Bay chapter. I was also appointed to the Florida Board of Professional Surveyors and Mappers for 8 years. My Board opportunity

allowed me to experience the laws and rules behind the profession. I served as chair of the rules committee as well as several other committees. I presently assist with review of Right of Way Maps for FDOT and County projects. Throughout my professional years I have been a Manager for large FDOT projects and various contracts. Also, as Assistant Vice President status for two different companies. I feel I have met all my goals throughout my years in Surveying. - Hill

Above: Sarah Stillman

To reach out to the youth, educate, and show them a path into surveying and mapping. I would like to personally visit schools (or virtually now) and teach elementary/middle school students about cartography and a peek into the surveying profession, just to create awareness. - Bailey

I retired from FDOT and started working again in the private sector because I missed work. At this point, I want to enjoy going to work and doing what I like. I want to keep learning and staying active in the profession. - Albury At what level in the education system do you think it would be best to be introduced to Surveying?

For me, it would have been nice to know more about geomatics while in high school. That is the time you really start seeking options for your future and career. Even informing kids at a younger age would be helpful to draw them towards this field. - Metcalf

Middle school. - Clodfelter

Probably high school. - Gaines

I think surveying should be introduced in grade school via history and mathematics. Allowing the student to know that Surveying and Mapping is a possible professional goal. - Hill

Right before college applications are due for high schoolers. - Hall

I think high school would be a good time to introduce surveying. Elementary and Middle School would be good but I don't think kids really start thinking about what they want to do for real until high school. - Rogolino

I believe the profession should be promoted very early on and throughout middle and high school. -Rodriguez-Alers It would be awesome to integrate surveying processes and terminology (on a basic level) into math classes as early as elementary and middle school and every high school geometry and trigonometry class should utilize the theories of surveying in their everyday problem solving. Definitely by the start of college classes, students should be introduced to surveying. So many students starting college need direction and guidance for a career path but are steered toward the broader majors and never even know Geomatics exists. - Hyatt

I grew up on a farm and was exposed to the profession as a child. I always liked the outdoors, astronomy and art. - Albury

I think surveying applications should be used in word problems as early as Middle/High School geometry. Too many kids/people don't realize how relevant math is to real life. - Catone

I think basic navigational and surveying skills should be incorporated in the earliest ages in the education system. Common trade skills aren't taught enough anymore at early stages in life as they use to. Surveying incorporates all aspects of classroom learning with math, science, English, history and geography. It also utilizes a hands-on learning approach for those that learn and think differently. -Stillman

I feel everyone should be introduced to Surveying as early as elementary school, in fact, I hope to help with that endeavor. - Bailey



Above: Liz Gaines at Ding Darling Preserve, 2013



Right and below: Liz Gaines



What is the most enjoyable aspect of your job?

Definitely working side by side with my husband! There's nobody I'd rather spend my day with. We work very well together and have built a company that provides a fun, enjoyable, secure work environment for all our employees. We are a team, all the way from the field to the office, and nobody is less important than any other employee. We have some very interesting jobs we work on and it's nice to know the difference we are making in society. -Hyatt

Every project is different and brings new challenges. Being that I am relatively new to this field, it's great that I work with a bunch of people that are willing to pass down their wisdom and teach me. I love that there is always something new to learn and share with others. - Metcalf

I like it when a job is finished, and you can look back and know you did the best you could do. -Clodfelter

Finishing a product, a being proud of it, solving problems, researching old documents. - Albury

I enjoyed being a Manager of so many talented individuals and putting together teams of people who worked together and had the work ethics to be successful. I have seen those that have worked for/with me before successful and that makes me immensely proud to have been part of their journey to being successful. - Hill

I enjoy working with my teammates and clients and coming up with ideas to make processes better. -Hall I love solving Boundary puzzles, look at the history of a property to determine the interest the Department has in the right of way. - Rodriguez-Alers

The most enjoyable aspect of my job is the variety. No two projects are the same. - Catone

Talking with our engineering clients about their projects and the surveying services we can provide for them. - Gaines

I enjoy a finished survey. All the time and effort that goes into a survey and the final product going out the client is the best feeling of accomplishment. -Rogolino

I love working with coworkers and the relationships I've created along the way. I've been blessed to be able to travel and meet many different people and places throughout my career. - Stillman

Puzzles, in many ways it is like constructing a puzzle where all the pieces must fit together while all playing by the rules/laws. -Bailey

What could be done to encourage women to enter this Profession?

Surveying is not well known neither by men nor women. The opportunity to promote the career through social media or any other means can help. For example: have a girls' scout patch, career day at school and encourage girls early on to learn about the profession. Women love challenges and this career can certainly bring it. - Rodriguez-Alers

Education/familiarity. I didn't know what surveying was until I was an adult. - Catone

That would take changing our culture. Most women prefer roles that are socially approved as women roles and that makes sense. I believe surveying is viewed as a male profession, even though it's not. -Albury

I think if other women see that women are successful in this profession and that it is an incredibly challenging and enjoyable profession with decent pay if you apply yourself. There are many areas of surveying within the overall Surveying and Mapping umbrella. Find the area that meets your passion and go for it. - Hill

Present it as a profession for women—more women in visuals. Show them how varied the work can be, that it is not only fieldwork or dirty work. I mean, show that. Some of us don't mind that, but others may want the technological, educational, or operational aspects. - Hall

I think with the move to more advance instrumentation there is more interest. - Clodfelter

Mentoring programs, Trig-Star type programs - Gaines

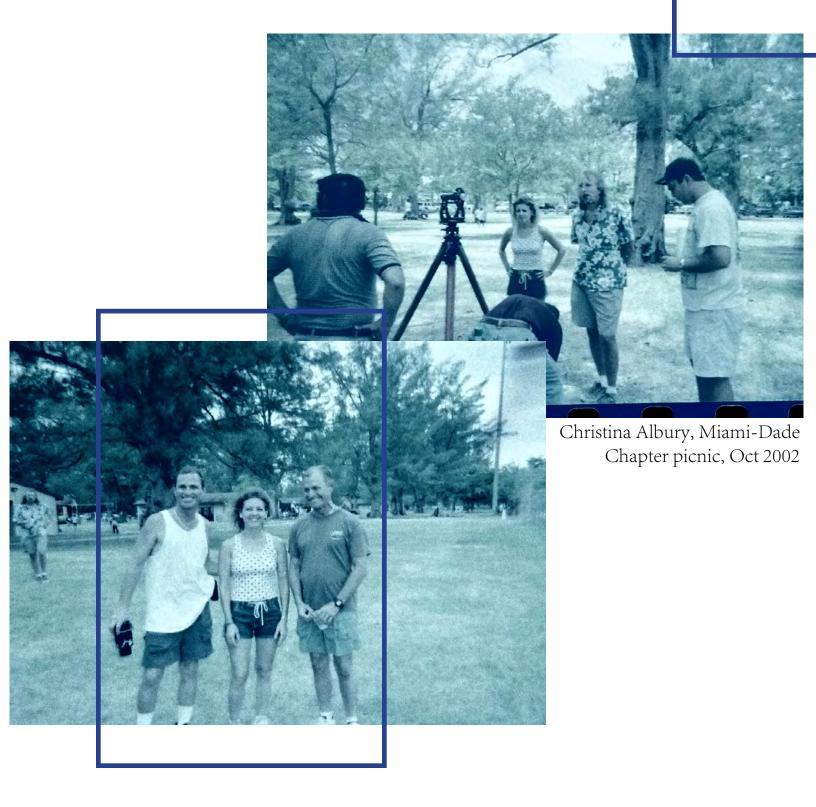
I would encourage them that at first it will be intimidating entering a male dominant field but work hard and prove to them that you know what you are doing and then things will come easier. -Rogolino

I think the broad spectrum of the profession isn't showcased enough. Everyone thinks of surveying as standing on the side of a road looking through a piece of equipment, which isn't the case. I started out with a Geography degree and became intrigued by LiDAR and aerial photography. I've collected the streets of New York City and Boston, flown the mountains of Trinidad and St Lucia, and spent many hours in front of a computer. The options are limitless, and I have been able to grow a family in the journey of it all. - Stillman

Communication is key. They have to know it is a viable, respectable option. The women already in this field have to be open and encouraging about introducing our wonderful profession to anyone searching for their own career path. Make a point to contact your local high schools, girl scout troops, church youth groups, etc. and educate them on the vastness of surveying. When you reach out to just one person, they in turn could tell others and it can snowball from there. - Hyatt

Seeing more women in surveying or even in the construction field makes it less intimidating. One issue that stops a lot of women is the stigma that it's a man's field and they won't be treated fairly. In fact, it's quite the opposite, we get treated equally with the same respect and expectations. - Metcalf

Awareness! - Bailey



What are some of the challenges you face or have faced in this Profession?

Often being the only woman at meetings and earning the respect of the men in this predominantly male profession was at times a challenge. I often have a different way of management from those before me. You have to keep showing up, proving you can do the work and earn the respect of your fellow surveyors. - Hill

Always being on the "bleeding edge" can be the most challenging and yet rewarding thing about my career field. Specializing in mobile LiDAR where there's not a ton of support or research to fall back on, we're faced with solving problems on our own to create the best product possible. We've had to create our own workflows and internal standards that tend to outshine the rest. - Stillman

Being in this profession in the 70's – 90's there was a definite attitude toward female surveyors that you constantly had to overcome. I am only five feet tall, so this was also an issue. - Clodfelter

I think I would have benefited greatly from having finished my surveying degree (I left school halfway through my junior year). It would have given me a better foundation for the geodesy portion of surveying. Otherwise, I really struggled more as a business owner than as a surveyor. They are really two very separate things. - Gaines

The biggest challenge for me was passing the NCEES licensing exams. No amount of college or experience can prepare someone for the exams without studying. - Rogolino

Credibility. In a still male-dominated profession, it will always be challenging to change the perception, of some, that women aren't as smart or equipped with the wits and agility to tackle tasks in the field or the office. - Hall

Naturally, I am more of a shy and quiet person. By spending time working out in the field and the office, it has led me to be more outspoken and confident when managing a crew and giving directions. - Metcalf

Machete! For some reason, most men think women cannot hold a machete and chop away through the brush. Proving them wrong was a challenge at the beginning of my career. Once you show what you can do with the machete, the rest is a matter of being on top of your game. - Rodriguez-Alers

For the most part, being a woman in surveying hasn't been an issue, but I certainly had to prove myself when I first started out. My two internships while I was in college were on a field crew at the same company. The first summer, the head of crew fought real hard not to put me on a crew. He wanted me inside drafting instead. And none of the crew chiefs wanted me on their crew. They figured I wouldn't work hard and that would just create more work for the others on the crew. I must have proven them wrong that first summer, because the next year everyone wanted me on their crew! They knew I would do whatever it took to get the job done and wasn't afraid of working outside. - Hyatt

Office politics has been a challenge. Competition is very strong in this profession. - Albury

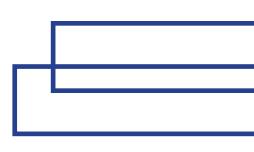
Men not thinking of me as an equal, even when I have had more experience than they. This is NOT the case across the board. There are MANY great men surveyors who have supported me every step of the way! This is just for those who have not reached that level of enlightenment. - Bailey



Above: Paige Rogolino at a clay shoot, February 2020



Above: Coral Sperling & Paige Rogolino, May 2020



Would you recommend a career in surveying for a female entering college?

Yes. Absolutely. I would recommend doing what I did and explore the options. Go to the department and ask the counselor of a professor to give her the real details. They usually have a fair amount of stories and material they can provide. - Hall

Yes! I think it can be a very rewarding career. - Gaines

Of course! I would recommend trying out a few other courses outside of surveying to broaden one's knowledge and incorporate those into a future surveying job/career. - Stillman

Yes, but I would also tell her that the math and science courses along the way will be hard and will knock the wind out of your sails. But just push through and take advantage of the tutoring labs offered by the college. If you can get through those courses, then when you get to the surveying course it will be a breeze. - Rogolino Absolutely! Surveying is a very diverse profession. Women can pursue the field work experience or they might like the drafting part of it. At the licensed level, women will be interested in the entrepreneurship and have their own business. -Rodriguez-Alers

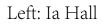
Certainly. It is a great job with opportunities for people who want to own their own business or work for a larger corporation. - Catone

Absolutely, if that is what she wants and if she is ready to accept a career that is viewed as a male career. - Albury

There was a time when I would have said no because of the pay and the challenges of being in a male dominated profession but now I believe that men are more open minded about women and their abilities to do as well, if not better a job than those males in the profession. Opportunities are more available and finally financial return has increased as you progress through the varies levels of surveying. The university classes are much the

> same as the engineering degree for the first few years until you move into your area of expertise and classes that support the surveying and mapping degree. - Hill

Absolutely! - Bailey





Definitely! I would say go for it if it's something you have interest in. If you like problem solving, working with technology, and learning new things, you may be a good fit. There are so many great opportunities in surveying for women. Even if you don't see yourself working outside, the office track has a lot to offer too. - Metcalf

I hope more would pursue this field, but I think many do not see it as a longtime profession and that is seems archaic. - Clodfelter

Absolutely! A career in surveying is a fantastic choice for men and women! If you like math and technology and are considering a career in a STREM related field, definitely give surveying a chance. Most people are very surprised at how broad the

surveying profession really is. When I talk with high school guidance counselors and college and career counselors, they are always excited at this amazing career choice (for both college-bound and trade-oriented students) that they had no idea even existed. -Hyatt



Top Right: Sarah Stillman Above: Liz Gaines

What do you recommend for women and men who want to support and encourage more females to pursue STEM careers?

I think simple but effective things could be done. To not act surprised when any girl wants to pursue a career in science, technology, engineering, and mathematics, especially math. Expose them to the jobs that are out there that we usually don't mention. Maybe, when the girls are little, pretend-play other things that aren't dancer, nurse, teacher, and such. There is a vast world of information on the internet: videos, graphics, fun facts, etc. that could be shown to them. Another idea is to make sure that when you are driving around, you point out the people working in construction and discuss how the projects get to be where they are. I love to also look for benchmarks everywhere I go, and I now have my family members looking for them too. - Hall

Educating and bringing more light to surveying. Surveying is definitely an underappreciated field that is the foundation for so many other disciplines that we come across on a daily bias. If you know someone interested in surveying, offer to mentor them, or introduce them to someone who can help them be more informed. - Metcalf

We need to show that surveying isn't only a crew on the side of the road. We need to show them that we get to do and go to lots of different places and do all kinds of interesting projects. And more importantly there is a whole team on people supporting them in the office so there are jobs for everyone. - Rogolino

Try to showcase all aspects of the careers. - Stillman

Presentations at career fairs - Gaines

The best thing for a female pursuing a STEM career can do is talk with someone in that field and if possible, shadow them around for a day. We also offer internships to those considering a career in surveying. I'd rather them know what they are getting into before they start their surveying classes hen get into it and find out they don't like it. If one of our employees decides to go to college to get their surveying degree, we pay 100% of their tuition in order to entice them into furthering their surveying education. - Hyatt

I believe we are at that point where women pursuit anything they want and like. We need to continue to encourage and promote their abilities in science and math. Also, internships are very helpful for high school and college students - Rodriguez-Alers

They would have to teach and encourage their daughters, nieces, friends, etc. They could mentor and help women surveyors. - Albury

Become active and speak directly to those who will/ want to hear you. - Bailey

Be a mentor, be supportive, be empowering and respect their management skills even if different than the norm. I have seen so many women thrive in this profession if they are given a chance to be valued as part of the team. - Hill

Do you have any other comments/ suggestions that you want to make?

I am a big supporter of the CST exam. It had a great impact on me having a goal to strive for before I was able to take my licensure exams. I want to encourage field crews and technicians to take the test if they have the opportunity. - Rogolino

Don't be afraid to try something new because you've never done it before. Play to your strengths and strengthen your weaknesses. I've always been the only female in my departments and never felt inferior from the gender standpoint. A good attitude and strong work ethic should always outshine, and the bad eggs tend weed themselves out. - Stillman

I greatly encourage others to volunteer for either a Director position with FSMS or on the Board of Professional Surveyors and Mappers. I was the Director for District 6 and sat on the Board for six years. I enjoyed and learned from this experience. I was also able to meet others from around the state by attending the annual FSMS Conferences throughout my years in Florida. - Clodfelter

Surveying is a very interesting and enjoyable profession that is not very well known. I am glad to have chosen surveying as my career. - Albury

Do not give up and stay open to learning from everyone around you. Both your fellow employees and your various clients. - Hill Regardless of which career women selects the stigma that we do not belong will be there, it is up to us to "sit at the table" and find our place. Land Surveying can be challenging but not because I am a woman but because it is important to be detail-oriented, comprehend what you read and stay up to date with the new technology. Women are good at all these. - Rodriguez-Alers



Above: Sarah Stillman

Never give up and never think there is something you cannot achieve because you are a woman! That is ludicrous. We all have the capability of learning and achieving anything we want! - Bailey

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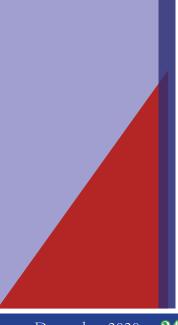
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The Florida board of Professional Surveyors and Mappers has announced it is expanding options for applicants to take the Florida Jurisdictional Exam. Board staff has been unable to administer the exam since the Covid- 19 Pandemic started due to safety concerns and restrictions on meeting in person.

the State

Therefore, board staff sought and secured another option. Applicants can now take the exam with Prometric, Inc., a third party testing company that has facilities across the state and nation. The fee to use this service is \$69.00 in addition to the application fees paid to the department.

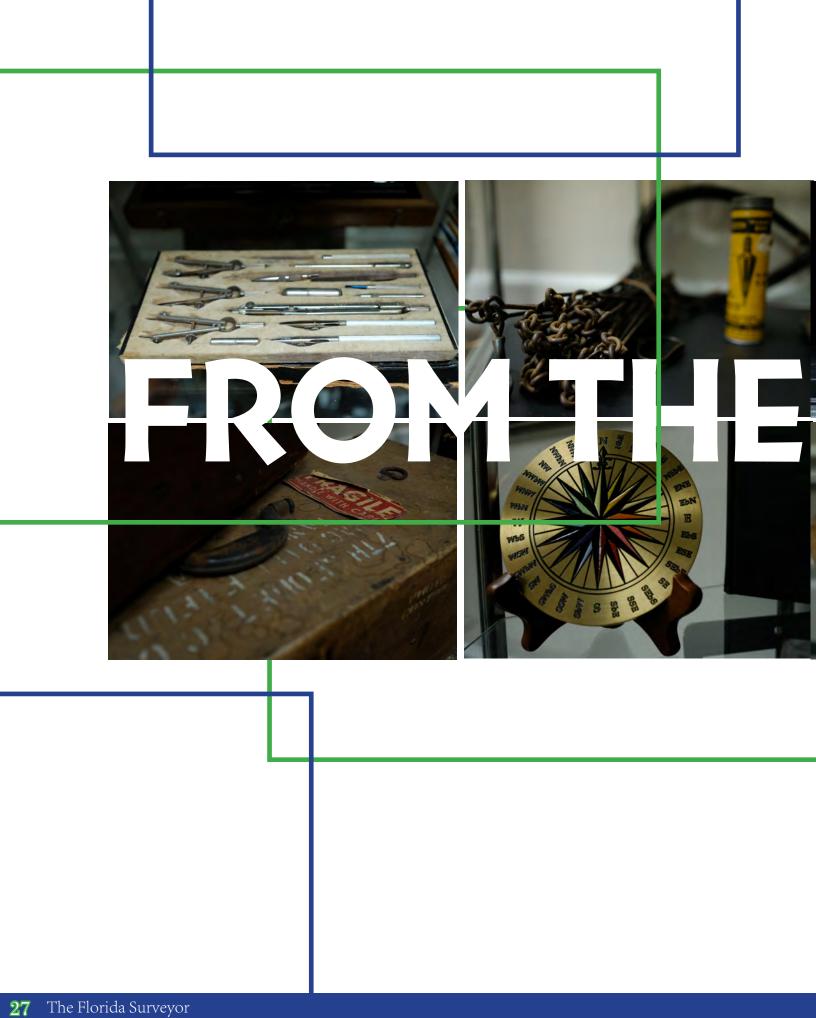
However, Prometric, Inc.'s numerous locations will enable examinees to avoid what can be significant travel costs including airfare and hotels for those living out of state. Prometric has safety procedures in place at its locations including social distancing and requirements for face masks. Applicants can also opt to wait until board staff resume in person meetings and take the exam at no additional cost.

The timeframe for lifting restrictions is undecided at this time.

For more information on taking the Florida Jurisdiction Exam, please visit the PSAM website at https://www.fdacs.gov/Business-Services/Surveyors-and-Mappers or contact board staff at regenia.lee@FDACS.gov or liz.compton@FDACS.gov

Happy Hanukkah from FSMS!







She's cutting in on a man's field

Pamela Clemiecki is the only woman in the land surveying program at the University of Florida.

LISA DE GREGORY

The sawgrass stretched high over Pamela Clem-niecki's 5-foot-3-inch frame. The foliage was overpalmetto leaves, and mostly with trees grown blocked her path. Lifting her machete, she struck the unruly growth and tried to forge ahead.

Every couple of yards she put down her machete, faced forward and stretched her hands out horizontally. Then, closing her eyes, she swung her out-stretched arms directly in front of her until they met in a clap. Opening her eyes, she saw her joined hands pointing to a reference tree in the back-ground. Clemniccki bent down, found her machete and returned to chopping the bush, this time heading for the tree.

What Clemniecki was doing is known as cutting line. She was clearing a path so her crew could survey the land, and there must be no trees or foliage obstructing the view.

Clemniecki is the daughter of Ray and Patricia Clemniecki of Bradenton. She is the only woman currently enrolled in the land surveying program at the University of Florida. In April she was nominated secretary of UF's surveying and mapping student organization.

One of the questions she hears most is, "Aren't you worried about snakes when you are out in the field?" She shakes her head and says, "Every once in awhile one goes slithering by." But snakes don't bother her, since she loves the outdoors.

The first surveying class Clemniecki took com-monly is known as Plumb Bob. She has forgotten its real name. The class was easy for her, she said, because the teaching assistants were surveying students. Eager to get a woman into the program, they

were lenient in their grading, Clemniecki said. The class taught would-be surveyors how to set up the instruments and use them, cut line and run a level. The final in the class asked students to set up the instruments and find the angle between two predetermined objects in 15 minutes.

Part of the test in setting up the equipment required sinking the tripod's legs into the ground, which meant standing on each leg and pressing it down as far as possible. The teaching assistant administering the test was a big, hearty guy. He stomped down hard on the tripod's legs to sink them in farther.

"He would take

points off for not

me, he didn't even

Pam had a simi-

at

summer when she



She reads the numbers.

energy trying to sink her tripod's legs into the firm ground. Then her party chief would walk behind her and casually sink them in farther.

'It was such a waste of my time," Clemniecki said, laughing. "I would sit there and jump up and down on the legs, trying to get them to go into the ground.'

As secretary of the University of Florida's Surveying and Mapping Student Chapter, Clemniecki devotes much of her time to taking minutes of their meetings and answering correspondence.



Photos by LISA DE GREGORY Pamela Clemniecki cuts a line through brush.

have asked why she chose this profession. "They are set in their ways and don't think girls should be in surveying," Clemniecki said. "It's their opinion."

But other times men are curious to find out how Clemniecki got interested in surveying. When she is standing behind the UF surveying booth, they will come up to her and talk about what motivated her to become a land surveyor.

"A lot of them hope more girls will get into surveying," she said.

Clemniecki plans to graduate from UF in December and look for a job in Bradenton. "I want to work in an engineering firm, doing office work, not field work," she said.

The worst part of her summer internship hap pened one afternoon when she was out in the field. It was 2 o'clock when her crew broke for a late lunch. With the sun shining down brightly, they decided to sit under an oak tree and eat in the shade.

sinking it in far enough," Clem-niecki said. "For Clemniecki and her party chief got out of the truck and started walking toward the back of the truck to get their lunches. Suddenly bees swarmed at them, stinging the party chief 10 times and Clemniecki four times. They ran from the truck, stomp on the legs. He just looked at them." while the instrument man, who had not seen the bees, watched in confusion. Not knowing why they were running, he took off after them. lar problem last

When they were a distance away, they turned around to see bees everywhere. "They were like a solid covering over the truck," Clemniecki said. After much debate, the instrument man, who had

was interning at Lombardo & Skipper Inc., an engi-neering/surveying thus far avoided getting stung, returned to rescue the truck. He managed to get inside and started driving the truck toward Clemniecki and the party firm in Bradenton. She would exert great amounts of chief.

What he didn't realize was the bees were following the truck. Clemniecki and the party chief, seeing the swarm, took off running again. At first the instrument man was at a loss. "He was wondering what we were running from," Clemniecki said. "Fihally, he understood and drove the truck in another direction.

Clemniecki was stung on her back, shoulder, arm and under her eye. Trying to alleviate the pain, an older man on her crew suggested placing some of his chewing tobacco on the bee stings to lessen the pain. Willing to try anything, Clemniecki put it on her bee stings.

"It stunk so bad," Clemniecki said. "And I'm put-When Clemniecki and the other surveyors go to ting it on my face while we're sitting in the truck. conventions, she gets mixed reactions. Older men That was the worst part of surveying."

The Florida Surveyor 29



MERRY CHRISTMAS AND HAPPY NEW YEAR FROM FSMS!!

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Tom's Tip of the Month

Hope sees the invisible, feels the intangible, and achieves the impossible.

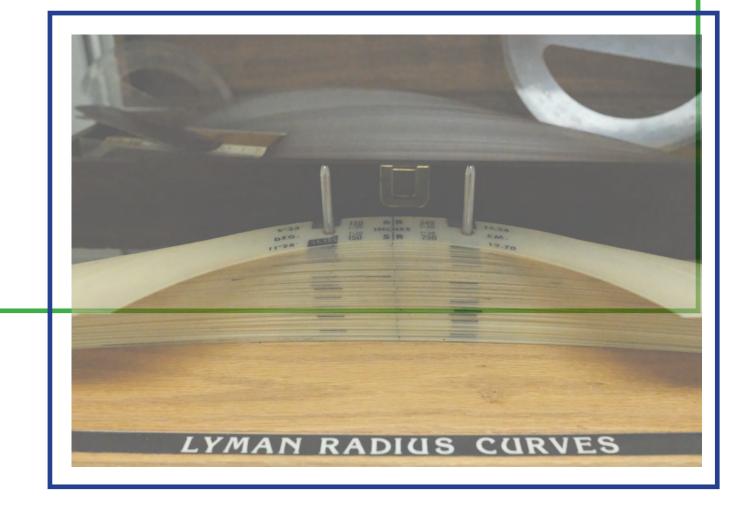
Helen Keller

The Florida Surveyor is the official publication of the Florida Surveying and Mapping Society, Inc. (FSMS). It is published monthly for the purpose of communicating with the professional surveying community and related professions who are members of FSMS. Our award winning publication informs members eleven months of the year of national, state, and district events and accomplishments as well as articles relevant to the surveying profession. The latest educational offerings are also included.

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	FTE Engineers & Planners	800-639-4851

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Gary Allen Land Surveying	850-877-0541
Geodata Consultants, Inc.	407-732-6965
Geoline Surveying	386-418-0500
Geomatics Corporation	904-824-3086
Geo Networking, Inc.	407-549-5075
GeoPoint Surveying, Inc.	813-248-8888
George F. Young, Inc.	727-822-4317
GeoSurv, LLC.	877-407-3734
Germaine Surveying, Inc.	863-385-6856
GPI Geospatial, Inc.	407-851-7880
Gustin, Cothern & Tucker, Inc.	850-678-5141
Н	
Hamilton Engineering & Surveying, Inc.	813-250-3535
H.L. Bennett & Associates, Inc.	863-675-8882
Hanson Professional Services, Inc.	217-788-2450
Hanson, Walter & Associates, Inc.	407-847-9433
Hole Montes, Inc.	239-254-2000
Hyatt Survey Services, Inc.	941-748-4693
Ι	
I.F. Rooks & Associates, LLC.	813-752-2113
J	
John Ibarra & Associates, Inc.	305-262-0400
John Mella & Associates, Inc.	813-232-9441
Johnston's Surveying, Inc.	407-847-2179
Jones, Wood, & Gentry, Inc.	407-898-7780

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KCI Technologies, Inc.	954-776-1616
Keith and Associates, Inc.	954-788-3400
Kendrick Land Surveying	863-533-4874
King Engineering	813-880-8881
Associates, Inc.	
L	
L&S Diversified, LLC.	407-681-3836
Landmark Engineering &	813-621-7841
Surveying Corporation	013-021-7041
Land Precision	727-796-2737
Corporation	
Langan Engineering	973-560-4900
Leading Edge Land	407-351-6730
Services, Inc.	
Leiter Perez & Associates,	305-652-5133
Inc.	
Lengemann	352-669-2111
Leo Mills & Associates, Inc.	941-722-2460
LidarUSA	256-274-1616
Long Surveying, Inc.	407-330-9717
Ludovici & Orange	305-448-1600
Consulting Engineers	
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