



## Board of Directors

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# ASTEE

December 2018

ASTEE Newsletter

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## Message from the President

Hello ASTEE Members!

Happy Holidays to my fellow ASTEE members! This is my final President's message before I pass the torch to Robyn Weimer, and I must say this year has been very busy and productive. Your Board of Directors has laid the groundwork for some exciting things coming up in 2019. Allow me to enumerate:

- Celebrations! Because 2019 is ASTEE's 10th anniversary year! The ASTEE Board is working hard to make this banner year one to remember. Stay tuned while we iron out the details, but rest assured there are going to be prizes...
- ASTEE will soon have an updated website with more features for members, including easier payment options, an open forum for discussions, and a more streamlined membership directory.
- The ASTEE Challenge Coin is nearly at the production stage, and will soon be available for purchase! Get a few of your own to collect, trade, and gift.
- The SAFS-ASTEE joint meeting is gearing up to be a good one! Convening in April 2019 in beautiful Asheville, North Carolina, we're rallying the troops to bring a strong Trace presence. Jeff Dake and the Education Committee have already lined up some amazing workshops, including wood identification, statistics in trace evidence, ropes and cordage (featuring a factory tour!), and a couple more that are being considered. Make sure to mark your calendars for April 29 – May 3, 2019 and prepare your presentations. I know you all have some great stories to tell, and I want to hear them!

It's been an honor to serve as your President for 2018. This is such a great organization to be a part of, and its members are truly the heart and soul of trace evidence analysis. It's amazing to think about how much ASTEE has grown and evolved since its inception, and I can't wait to see what ASTEE will look like in 10 more years!

Cheers,

Kelly Brinsko Beckert  
kbeckert@microtrace.com  
2018 ASTEE President

## Helping Out a Fellow Trace Examiner - Update

We wanted to provide an update for our friend and fellow forensic scientist Ted Bermann, Florida Department of Law Enforcement, who is recovering from traumatic complications following colon surgery in March. Ted's current condition is called short bowel syndrome (SBS), which requires him to obtain his nutrition intravenously. Physically he is doing as well as can be expected and getting adjusted to his new life at home. It has been a long, hard year, but his wounds are healing up slowly but well.

While short bowel syndrome has its limitations, Ted is trying to make the most of what he IS able to do. Ted is able to walk his daughters to school, drive to his oldest daughter's swim meets, and take his youngest to gymnastics. Ted misses his forensic family that has shown him tons of love and support since March of this year. While he has been granted an extension of sick leave for the time being, there is still much uncertainty surrounding his ability to return to work. Back in May, the trace section members delivered Ted a 50<sup>th</sup> birthday card signed by the crime lab. Also, in October, the Orlando region recognized his 28 year anniversary with the FDLE by surprising him with a bunch of text messages throughout the day, congratulating him. He genuinely appreciated it. We all look forward to what 2019 has in store for Ted, and hope that he finds peace and comfort in this next chapter. Ted and his family are grateful for the well wishes, donations and thoughtful messages he has received.



James Marano is happy to pass on any messages sent to Ted at [jamesmarano@fdle.state.fl.us](mailto:jamesmarano@fdle.state.fl.us).





# Microscopy Courses

## McCrone Research Institute

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- Asbestos Identification
- Small Particle Identification
- Forensic Microscopy
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- Indoor Air Quality
- Crystal Characterization

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60616-3230 • 312-842-7100  
[www.mccroneinstitute.org](http://www.mccroneinstitute.org)  
[registrar@mcricri.org](mailto:registrar@mcricri.org)

# Inter/Micro 2019

Chicago, June 10–14, 2019

*An international microscopy conference — since 1948*

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McCrone Research Institute*



- Speaker Presentations
- Microscopy Workshop
  - SMSI Awards Dinner
  - An Evening with Brian
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## **ASTEE at a Glance – Committee Updates**

### ***Elections Committee Update***

The elections committee would like to welcome Kelsey Winters! If you are interested in joining the elections committee please email Katherine (Katie) Igowsky at [Katherine.Igowsky@state.mn.us](mailto:Katherine.Igowsky@state.mn.us). There will be one spot opening up with Jeff Dake stepping down. Thank you Jeff for your many years of service to ASTEE.

#### 2018 Election

Thank you for all that participated in the 2018 election. Congratulations to our new board members and continuing board member! We appreciate your willingness to serve on the board and are excited for the new ideas you will bring to ASTEE! I also want to thank the outgoing board members for your service. Your service to ASTEE and the Trace community is greatly appreciated.

#### Incoming ASTEE Board Members

President Elect- Sandy Koch

Treasurer- Chad Schennum

Director- Michael Trimpe

All of the people recommended for Emeritus status were approved by the membership. Congratulations and thank you for your contributions to ASTEE and the Trace community! This is a special honor.

The changes to the by-laws and admin rules were also approved. Thank you to the ASTEE Board of Directors for working so hard to get these updated!

One additional note, if you are an associate member and are eligible to upgrade to a full member I encourage you to do so. As a full member you will be eligible to vote and serve on the ASTEE board.

### ***Bylaws and Admin Rules Committee Update***

The By-laws committee (with input from the BOD) put forth an extensive revision to the By-laws and Administrative Rules for vote by the membership. The foundational documents had not been thoroughly reviewed since the creation of ASTEE. Not surprisingly, we came across a few discrepancies between what the documents said and how the organization was actually functioning. Hopefully, the two are now more in line with each other, and at the time of this publication, the membership has approved the changes.

For future reference, if someone in the membership has a suggestion for future edit of either document, please submit them in writing to the President. The official procedure to amend the By-laws can be found in Article 4. Amendments to the Administrative Rules can be made at the discretion of the Board as in Subsection 3.1.1 of the By-laws.

### ***Communication Committee Update***

The Board of Directors recently voted to approve the overhaul of the ASTEE website! The Board is very excited to begin the process of building a new and improved home for ASTEE on the web, and there will be lots of new online functionality for members coming soon. The Communications Committee will be coordinating the design/build process, and will administer the new website once the project is completed.

Because of the new website, Committee Chair Daniel Mabel is now in need of some additional help to manage ASTEE's gmail account, sponsor relations, and other ASTEE affairs. If you are interested, please consider joining the Communications Committee! You can submit your name and contact information to [asteetrace@gmail.com](mailto:asteetrace@gmail.com), and Daniel will contact you with more details. Thank you in advance to any who are willing to volunteer their time in service of ASTEE.

## **ASTEE at a Glance – Committee Updates continued...**

### ***Education Committee Update***

The Education committee is working to solicit workshops for the upcoming joint meeting. If anyone is interested in teaching a workshop, please reach out and contact Jeffrey Dake for assistance at [jeffrey.h.dake.civ@mail.mil](mailto:jeffrey.h.dake.civ@mail.mil).

### ***Awards Committee Update***

ASTEE is pleased to offer two \$500 travel awards to the SAFS-ASTEE joint meeting in Asheville, NC from April 29-May 3, 2019. In order to be eligible for the award, the applicant must be a member in good standing with ASTEE, traveling greater than 50 miles, and giving an oral or poster presentation. Interested members should email an essay of a maximum of 1000 words detailing why they should be given this award, membership number, and details regarding the oral or poster presentation they will be giving at the meeting. The deadline to be considered for this award is March 30, 2019 and should be emailed to the Awards Committee at [michelle.drake@dfs.virginia.gov](mailto:michelle.drake@dfs.virginia.gov)

Lastly, a huge THANK YOU to those who submitted designs for the ASTEE challenge coin!

### ***Mentorship Committee Update***

After much thoughtful discussion, the ASTEE Board of Directors has elected to dissolve the Mentorship Committee. This is not a decision that was taken lightly, and is certainly not for lack of effort by the Committee's chair and its members. Despite the hard work by the committee, there were too many questions regarding the legal ramifications of mentorship, and they were ultimately hamstrung by Board inaction. Our hope is that the Mentorship Committee is revived in the future, because it could be a great support system for our members that would directly benefit ASTEE in carrying out its mission. Unfortunately, we just don't have the resources to devote right now. Many thanks to Kim Mooney and her committee members Azriel Gorski, Chantelle Taylor, Chris Chen, David Flohr, Kyle Mueller, Lara Mosenthin, and Rebecca Bucht for all of their time and hard work on this project.

### ***Publications Committee Update***

#### ***JASTEE Update***

Check out the 2018 issue of the Journal of the American Society of Trace Evidence Examiners (JASTEE) at [http://www.asteeTrace.org/WebPages.cfm?action=viewCat&BIZ\\_UNL\\_id=74487](http://www.asteeTrace.org/WebPages.cfm?action=viewCat&BIZ_UNL_id=74487). As a reminder, JASTEE is an open access online journal which publishes research articles and case studies. Each manuscript undergoes a double-blind peer review process with a distinguished editorial review panel. As opposed to traditional published journals, we generally have a much shorter period of time between submission and publication. Our journal issues are published online and therefore are free to view, download, and print. This method of publication also translates to the lack of traditional submission fees or fees for color images. More importantly, publishing in JASTEE provides the opportunity for a larger audience of trace evidence examiners to learn from your work.

If you have any questions, please contact JASTEE Editor, Jeremy Morris at [Jeremiah.Morris@jocogov.org](mailto:Jeremiah.Morris@jocogov.org).

#### ***Newsletter Update***

Please ensure your contact information is up to date on your 2019 ASTEE Dues Form (page 11). The publications committee will contact you via email to participate in "May We Introduce You To..." As always, we welcome feedback and want to hear from you! If there is anything you would like to see included in the ASTEE Newsletter or you have something to contribute, please email Kiersten LaPorte at [Kiersten.LaPorte@dps.texas.gov](mailto:Kiersten.LaPorte@dps.texas.gov).



## May We Introduce You To...

**Name:** Chad Schennum

**Occupation:** Forensic Scientist Senior, Virginia Department of Forensic Science, Central Laboratory

**What Trace Evidence sub-discipline(s) are the focus of your work?**  
Explosives, fire debris and general chemical

**What is your favorite quote?** For me, it has to be a movie quote. "Back off, man. I'm a scientist." - Peter Venkman (Ghostbusters)

**What do you like to do in your down time?** Watch movies, play video games, hunt for toys (see question below), and go to theme parks with my wife and daughter.

**Tell us something that would surprise others about you:** I have an extremely large toy collection, which my wife has graciously allowed me to display in one of our spare bedrooms. We're now adding on to our house because my collection has gotten so large!



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## News You Can Use

### American Board of Criminalistics Recertification:

If you are a certificant of the ABC, you can earn recertification points for your membership in ASTEE. If you pay your ASTEE dues through PayPal, you can provide the ABC with a current dues payment receipt from PayPal as documentation of your membership. If you pay your dues by check, please email ASTEE Treasurer Chad Schennum at [chad.schennum@dfs.virginia.gov](mailto:chad.schennum@dfs.virginia.gov) to obtain proof of active membership.

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## 2019 Important Dates

- |                  |   |
|------------------|---|
| February 18-23   | AAFS 71st Annual Scientific Meeting - more information regarding ASTEE reception soon |
| March 30         | Deadline for travel awards to SAFS-ASTEE joint meeting                                |
| March 31         | ASTEE Dues due  |
| April 29 - May 3 | SAFS-ASTEE joint meeting  |
| June 10 - 14     | Inter/Micro - more information regarding ASTEE reception to come                      |
| July 9 - 12      | OSAC Meeting for Chemistry Scientific Area Committee                                  |

# Forensic Science

## with CRAIC Technologies™

### The Perfect Vision for Trace Evidence



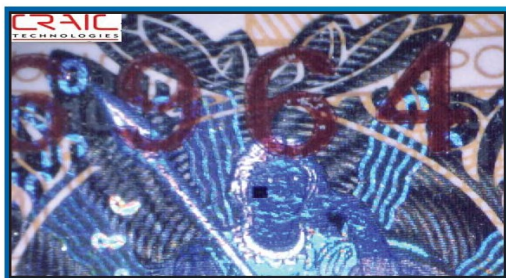
Fluorescence imaging of a nylon fiber with CRAIC's unique calibrated variable aperture.



Chromafair paint sample using 10x magnification in reflectance, microscale shown is 50 microns.



Glass fragment with multiple probes for fast and accurate quantification measurements.



Foreign currency showing subtle variations of inks are detectable by CRAIC microspectrophotometers.

#### Fiber Evidence

CRAIC instruments measure and compare the UV, color, NIR and fluorescence spectra and images of the smallest known and questioned fiber samples rapidly and accurately.

#### Paint Evidence

CRAIC microspectrometers are commonly used to analyze the UV, color, NIR, fluorescence and Raman spectra and images of paint, paint chips and paint smears.

#### Glass Evidence

riQ™: the smart way to measure the refractive index of glass. Also measure color and fluorescence in addition to the refractive index of multiple glass fragments simultaneously.

#### Explosives

CRAIC Apollo™ Raman microspectroscopy and UV microscopy can be used to locate and identify explosives easily and accurately.

#### Drugs

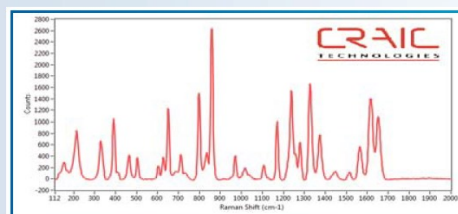
CRAIC Apollo™ Raman, UV and fluorescence microspectroscopy can be used for accurate identification of drugs of abuse.

#### DNA and Biological Evidence

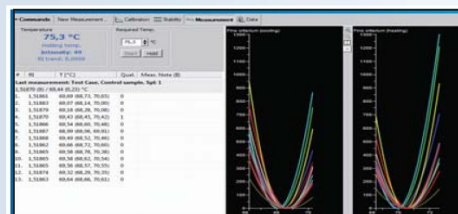
CRAIC UV microscopes can be used to identify usage of WMD materials from tissue samples. UV microscopy can also locate trace amounts of DNA and biological evidence.

#### Questioned Documents

CRAIC imaging and spectroscopy ranges from the deep UV to the near IR and gives you capabilities never offered previously.



Raman Microspectrum™ of Acetaminophen using the CRAIC Apollo-532™.



riQ™ by CRAIC shows an illustrative interactive graphs of heating and cooling phase for each probe with zoom capability enables fast visual evaluation results.

CRAIC TECHNOLOGIES



## OSAC, What's New?

The Chemistry Scientific Area Committee, which includes the Trace Evidence Subcommittees, met again in Houston, TX, on November 5<sup>th</sup> – 8<sup>th</sup>. One overarching focus for this meeting was to work on subcommittee road maps, which are used to show the progress of documents thus far and the plan for future documents. Now, for some subcommittee-specific updates:

### Materials (Trace)

This subcommittee was able to add another document to the OSAC Registry, ASTM E3085 IR of tape! ASTM E2330 ICP-MS of glass has a couple more hurdles to pass before it too makes its way to the Registry, primarily ASTM's resolution of the generic Knowledge, Skills, and Ability statement. Seven documents with adjudicated comments will be included on December's ASTM ballot, and work is well underway on roughly seven other documents in the subcommittee (including the significance assessment document). In addition to revising and editing documents, this subcommittee is working on listing research needs and working on a Field Evidence Collection Guide.

Glass, Paint, Tape, Hair, and Fibers are officially incorporated under the "Materials (Trace)" subcommittee umbrella. With the exception of Hair, each of these sub-disciplines must consider the possibility for physical fits. As a result, a task group has now been created within this subcommittee for Physical Fit and they will begin to plan and work on documents and research needs.

### Fire Debris and Explosives

A new document is now navigating the ASTM process: a Guide for Ignitable Liquid Analysis, while a Guide for Intact Explosives is nearing the ASTM process. The subcommittee continues to work on several documents, including but not limited to, a QA/QC Guide for Ignitable Liquid and Explosives Analysis, a new Validation of Fire Debris Methods, and Report Writing Standards for both Ignitable Liquids and Explosives.

### Gunshot Residue

This subcommittee's efforts on ASTM E1588 (GSR Analysis by SEM/EDS) have resulted in progress toward inclusion on the Registry; voting within the OSAC, for return to the SDO, is imminent. Comment adjudication continues with both the Report Writing and Training Guide documents. Following the jumping of a couple OSAC approval hurdles, the Testimony Guide will soon be sent to ASTM for a vote. In Houston, a new task group was formed for Inorganic GSR Identification and tasked with developing a Standard Test Method for EDS Spectral Interpretation and Particle Morphology Assessment (associated with particle classification). Also in the beginning stages is a standard practice written by the Organic GSR task group.

### Geological Materials

The GEO subcommittee has addressed comments related to the Guide for the Collection of Soils and Other Geological Evidence for Criminal Forensic Applications, and this document should be submitted to ASTM in the near future. Initial drafts of the Standard Guide for Determination and Comparison of Color by Visual Observation in Forensic Soil Examination and the Standard Guide for the Forensic Analysis of Geologic Materials by Powder X-Ray Diffraction have been completed. The goal is to submit these documents to ASTM next year. Progress continues on guides related to forensic soil analysis by PLM and SEM-EDS, as well as on an overall guideline for forensic analysis of soil evidence. The GEO subcommittee encourages interested readers to consider applying for membership.



# Coloring a crime

A real trace evidence case

Jairo Peláez-Rincón

jpelaez@medicinallegal.gov.co jarpacartoon@gmail.com

Thanks to Martín Molina

Laboratorio de Evidencia Trazas  
Instituto Nacional de Medicina Legal  
y Ciencias Forenses

Bogotá, Colombia



MIDNIGHT ON A LONELY ROAD NOT FAR AWAY FROM PEREIRA.  
A DEAD BODY IS DROPPED BY THE SIDE OF THE ROAD.  
AN INVESTIGATOR WONDERS HOW TO SOLVE THE CRIME.



LOCARD'S EXCHANGE PRINCIPLE...  
REMEMBER THAT BASIC PRINCIPLE!



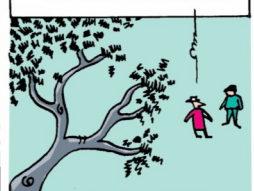
OH MY GOD...  
I'M ENLIGHTENED!  
LOCARD'S EXCHANGE PRINCIPLE!!!



SIR...  
A SUSPECT CAR WAS  
STOPPED ON THE ROAD  
TO QUIMBAYA!



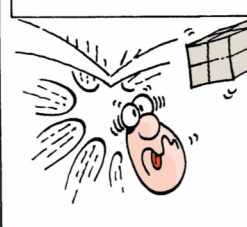
TAKE SOIL SAMPLES FROM  
THE SCENE, FROM  
THE SUSPECT'S SHOES  
AND CAR'S FLOOR MATS...



AND SEND THEM  
TO THE TRACE EVIDENCE  
LAB IN BOGOTÁ!



NEXT DAY ALL SAMPLES ARRIVED  
AT THE TRACE EVIDENCE LAB.



MARTÍN... SAMPLES FOR YOU!

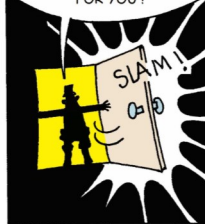


WHILE THE FORENSIC GEOLOGIST PLUNGES HIMSELF  
INTO THE WORLD OF MICROSCOPES THE SUSPECTS  
ARE CELEBRATING CONFIDENTLY.



THEY'LL NEVER  
CATCH US...  
OURS IS THE  
PERFECT CRIME!

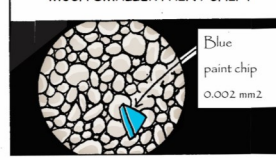
SURPRISE BOYS...!  
I'VE GOT NEWS  
FOR YOU!



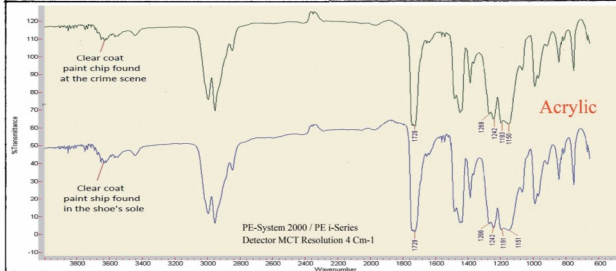
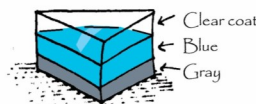
THE FORENSIC LAB  
FOUND THAT THE  
SOIL SAMPLES FROM  
THE CRIME SCENE  
MATCHED THE SOIL  
SAMPLES FROM  
YOUR SHOES.  
BUT THAT'S  
NOT ALL!



... IN THE SAMPLE FROM THE CRIME  
SCENE THEY FOUND A TINY BLUE  
PAINT CHIP AND, AFTER SEARCHING  
THE SOIL FROM THE SHOES,  
THEY FOUND A SIMILAR BUT  
MUCH SMALLER PAINT CHIP!



THE PAINT CHIPS WERE COMPARED  
BY STEREOMICROSCOPY AND FTIR  
MICROSPECTROSCOPY AND THEY  
SHARED THE SAME LAYER  
DISTRIBUTION AND CHEMICAL  
COMPOSITION



WHEN YOU GOT RID OF THE BODY YOU DID IT  
AT A LOCATION WHERE THERE HAD BEEN A CAR  
ACCIDENT.



ONE OF YOU GUYS PICKED UP A TINY PAINT CHIP  
WITH THE SOLE OF A SHOE AND THE POLICE  
PICKED UP ANOTHER ONE WHEN THEY COLLECTED  
THE CONTROL SAMPLE FROM THE CRIME SCENE.



THE COMBINED RESULTS FROM  
THE SOIL ANALYSIS AND  
THE PAINT CHIPS COMPARISON...



POINT AT YOU AS THE  
AUTHORS OF THIS CRIME.



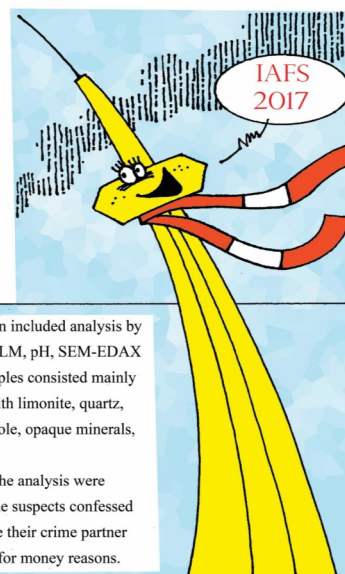
WHAT DO YOU  
HAVE TO SAY?



YOU MORON...! YOU CHOSE THE PLACE AND YOU  
SAID IT WAS OK NOW WE'LL HAVE TO SPEND  
THE REST OF OUR LIVES IN JAIL...  
AND ALL BECAUSE OF OUR STUPID CRIME!



The soils comparison included analysis by  
stereomicroscopy, PLM, pH, SEM-EDAX  
and color. Both samples consisted mainly  
of a sand fraction with limonite, quartz,  
plagioclase, amphibole, opaque minerals,  
oxides, and clays.  
After the results of the analysis were  
presented in court the suspects confessed  
the victim used to be their crime partner  
and they killed him for money reasons.









## Board of Directors

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*Executive Secretary*

# ASTEE Dues Form

Dear ASTEE member,

Please remit the sum of \$25.00 to ASTEE in payment of your membership dues for the 2019 calendar year by March 31, 2019. Please add a \$5.00 late fee for payment received after March 31, 2019. U.S. members remit checks and non-U.S. members remit International Money Orders payable to ASTEE.

Please send your payment to :

**Chad Schennum—ASTEE Treasurer**  
**Virginia Department of Forensic Science**  
**700 North 5th Street**  
**Richmond, Virginia 23219**

If you prefer to use our online option, you can pay through the **asteetrace@gmail.com** account on PayPal or via the PayPal button in the Membership section of our website **www.asteetrace.org**.

**If any of your contact information has changed**, please complete the following and submit this form to Chad Schennum, either by mail with your payment, by email to the address at the bottom of the page, or by fax to 804-786-6305 once your payment is submitted.

Name \_\_\_\_\_

Membership # \_\_\_\_\_

Employer \_\_\_\_\_

Address \_\_\_\_\_

Phone # \_\_\_\_\_

Email \_\_\_\_\_

If you have any inquires concerning your membership dues, please contact Chad Schennum at [chad.schennum@dfs.virginia.gov](mailto:chad.schennum@dfs.virginia.gov) or 804-588-4105.





[WWW.ASTEETRACE.ORG](http://WWW.ASTEETRACE.ORG)