Message from the President

I remember sitting in the audience at the Northeastern Association of Forensic Scientists annual meeting in 2009 and listening to Vinny Desiderio give a presentation about a new organization being formed that was meant specifically for trace evidence examiners. His enthusiasm was obvious as he spoke about the need for us to band together and provide a platform for our discipline, encourage the exchange of ideas, and promote research and training. I was very excited to fill out my application as a charter member, and I’m honored to serve as president in 2018. I believe that this society has exceeded expectations, both in the size of its membership and its footprint on the trace community.

I want to thank outgoing president Amy Michaud for her hard work and dedication last year, as well as the entire Board of Directors: Treasurer Chad Schennum, Secretary Emily Weber, Directors Michelle Drake, Robyn Weimer, and Daniel Mabel, and Executive Secretary Katie Igowsky. I’d also like to extend a hearty welcome to Micheal Villarreal. He will assume the Director seat vacated by Robyn, who in turn is now jumping into the President-elect position. There are also a number of committee chairs who perform a lot of behind-the-scenes work and deserve some recognition. Allyson Karr constitutes the entire Events Committee, and does an excellent job organizing ASTEE networking events.
Message from the President continued...

during various conferences (and hasn’t had a flop yet!). Lisa Schwenk heads the Membership Committee, and is currently working on an updated membership application form. Celeste Grover, along with the entire Bylaws Committee, has tirelessly and patiently combed through the ASTEE Bylaws and Administrative Rules to give the Board recommendations for changes. This is a slow process that we are hoping to complete in the coming months. Michelle Drake chairs the Awards Committee, and would like to remind everyone to start thinking about nominations for the Locard Award: please consider honoring an esteemed mentor or colleague who has made an impact in our field. Daniel Mabel is the Communications Committee, and it is thanks to him that ASTEE’s emails are timely and efficient. Jeff Dake lords over the Education Committee, which has lots of great ideas for future workshops, including one specifically geared towards statistics. Katie Igowsky leads the Elections Committee, Kim Mooney the Mentorship Committee, and Dana Greely the Research Committee. Kiersten LaPorte is the newly-crowned Publications Committee chair, while Jeremy Morris has agreed to be the new editor of the Journal of the American Society of Trace Evidence Examiners. These are both big tasks, and I know that they are in very capable hands. Thank you to all the committee members who dedicate their time and talents to make ASTEE the thriving organization it is today.

The first big trace-relevant meeting of the year, the Impression, Pattern, and Trace Evidence Symposium (IPTES), was conducted 22-25 January 2018 in Arlington, Virginia, with some excellent talks and workshops. ASTEE hosted an evening reception, during which Diana Wright was presented with the 2017 Edmond Locard Award. Her award was well-deserved – big congratulations to Diana!

The American Academy of Forensic Sciences annual meeting is being held 19-24 February 2018 on the other side of the country in Seattle, Washington. This meeting always draws a large crowd of attendees in every forensic science discipline, and I see some excellent trace-centric topics on the program. Hopefully ASTEE members who can’t attend IPTES will be able to represent our trace community in Seattle.

Because the first decade of my forensic science career was spent teaching microscopy at McCrone Research Institute, education and training is very important to me. There are training opportunities outside of conference workshops that are available. One is “Fire Debris Analysis for the Forensic Chemist,” 23-26 July 2018. Course information and an application can be found on the ASTEE website. It is offered by the ATF, and as such,
Message from the President continued...

tuition is free!

While formal training is essential, I want to remind everyone that knowledge is also gleaned while practicing one’s trade. And the field of trace evidence analysis certainly takes practice: Practice to accurately estimate a particle’s refractive index based on its contrast and Becke line movement in a particular mounting medium. Practice to know when a sample is too thick to give a good infrared spectrum (before even collecting said spectrum) and will therefore need to be pressed thinner. Practice to be able to cut a nice cross-section of a fiber by hand faster than with a microtome. And to that end, with New Year’s resolutions as a recent topic, I encourage all of you to truly practice your trade. It could be as simple as broadening your microscopical horizons by mounting a piece of your lunch on a slide and taking a look. (Have you ever looked a cross-section of a black bean? The testa (outer layer) has beautiful parallel palisade cells arranged neatly. And the starch grains are present as clusters within little rounded pockets. Cross the polars and behold the beauty! Cut a thin piece from an avocado pit and look at that through the microscope. You’re in for a treat!) Or you could start your own personal materials collection, including various items you see in your field from time to time. This includes not only the usual fibers, paint, and glass, but consider other possibilities as they present themselves: Did you break a tooth? Excellent! Keep it, look at the decaying part under the microscope and compare that to a pristine, healthy area. Were you in a car accident where the airbags deployed? Great! Collect samples from your clothing to examine for propellant and airbag dust particles. And if you read about an interesting new fiber in a magazine, contact the manufacturer to ask for a sample. Often this leads to nothing, but you may get lucky and receive a traceable, authentic, straight-from-the-factory-floor exemplar, which is more valuable than its weight in gold in our world. My point is that as trace evidence analysts, we could be asked to identify literally anything. This task becomes much easier and more enjoyable if we have practiced our trade. And we may even get a nice picture out of it.

Kelly Brinsko Beckert
2018 ASTEE President

We Need Your Help!

One of the features on the ASTEE website (under the Resources Tab) is Trace 101, which provides fundamental information on the various subdisciplines of Trace Evidence analysis in a central location. Trace 101 aims to offer examiners a launching pad into new areas of analysis, to assist attorneys in preparing for court, and to dispel some of the misperceptions of analytical capabilities.

It has been a long-time effort to find and obtain contributions from experts in each of the various Trace Evidence subdisciplines. There is one final category that is lacking a contributor at the moment – Lachrymators/Pepper Spray Analysis. Are you an expert? Would you like to make a contribution to ASTEE and help us complete this page? If not you, do you know someone who is? If so, please email ASTEE at asteetrace@gmail.com to volunteer, to suggest an author, or to ask any questions. Thank you, in advance!
Message from the Outgoing President

My year as your President has come to a close and I am so grateful and honored to have had the opportunity to serve this wonderful organization. It has been a year of investigating a number of improvements for our group. We have started the process of editing many portions of our Bylaws/Administrative Rules for the first time since our society’s formation in 2009 and are also taking a look at our website to see how we can make additions that will prove more useful to our membership. We have also added some awards that I hope you all take advantage of when you want to supplement your travel to a meeting or conduct a research project. This has been an exciting time of growth for ASTEE and I know it will only continue in this next year.

With regards to the focus that has been put on forensics with the PCAST report and others, I am for the first time (in a very long time) feeling somewhat optimistic. I may be a bit of a dreamer, but I feel like the tides are changing ever so slightly in a positive direction. I know that forensic scientists all over the globe have been doing great work for decades, but I really believe that the bad perceptions some non-forensic types have had in light of these reports is diminishing. Although I have seen the role of the Trace Evidence Examiner change over the years – it seems that some labs are realizing the importance of this valuable discipline again and even investing in it by bringing back some examinations that were lost in the past. I think the only right thing to do if we really want quality work to come out of forensic science labs is to utilize every available resource. Trace evidence examinations provide information that no other discipline can and it should be an integral part of any investigation if we want to do what is best for each case. If I am right about this trend, I hope that it continues with renewed focus on strengthening the trace disciplines with support and funding from those in management positions.

Finally, I want to sincerely thank each and every one of the Board Members and Committee members who worked so hard this year and who helped me immensely during my time on the Board. I also want to thank all of the ASTEE members for your dedicated service to trace evidence and forensic science. You ARE making a positive difference with your contributions – you are heroes in my mind!

Amy Michaud
ASTEE President 2017
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2017 Election Results

The 2017 election was a great success. 77% of eligible voters cast a ballot. This is a significant increase from last year where 58% of eligible voters cast a ballot.

A huge thank you to those board members that will be stepping down. Your service to ASTEE not only strengthened this organization but also furthered Trace Evidence as a whole. Congratulations to the new board members and to those who will be continuing their service!

*Per the ASTEE by-laws the president’s vote serves as the tie breaker.

We faced challenges with the 2017 elections, specifically with members who experienced the blocking of the voting information email. Steps were taken to ensure all eligible members had the opportunity to vote. In the future, to prevent the same issues, eligible voters will be receiving two emails regarding the election – one from the voting platform and another from ASTEE. Despite receiving two emails, each member will only be allowed to vote once.

Special Recognition

Many thanks go to Peter Diaczuk, photographer extraordinaire! As an unofficial member of the Newsletter Team, Peter has graciously provided the majority of photographs appearing in the ASTEE newsletters. Thank you Peter!!
**ASTEE at a Glance – Committee Updates**

**JASTEE Update**

We are happy to announce the latest and greatest JASTEE Editor – Jeremy Morris from the Johnson County Sheriff’s Office Crime Laboratory! Jeremy brings knowledge, experience, and energy to the efforts towards the inclusion of JASTEE in a searchable database. If you would like to submit an article for publication in JASTEE, please contact Jeremy (jeremiah.morris@jocogov.org).

**Education Committee Update**

Given the upcoming statistics workshop provided at the Impression, Pattern, and Trace Evidence Symposium, the Education Committee has shifted their efforts to organizing helpful webinars with RTI, one of our sponsors. With two webinars per year as the goal, 2017 brought webinars focused on paint and polymers as well as glass. For 2018, the Education Committee would like to hear your needs. They are organizing a survey for members to contribute ideas. The Education Committee would also like to remind ASTEE members of the accumulated list of routinely offered courses for various aspects of Trace Evidence including discipline specific testing and instrumental methods. This list is available on the ASTEE website for your reference.

**Membership Committee Update**

Excitingly, our membership continues to grow with both domestic and international applicants. For members that are eligible, please consider updating your membership status. That is especially applicable to student and affiliate members who are not eligible to vote or run for a position on the Board of Directors. Look for a new form (to be published soon) on the membership page of the ASTEE website with the intent to make the membership upgrade process easier and clearer. Contact the ASTEE membership chair, Lisa Schwenk, for more information (Lisa.Schwenk@atf.gov).

**Awards Committee Update**

**2017 Award Winners:**

- The 2017 ASTEE Professional Development Award was given to Mary Keehan.
- The first annual Student Research Project Award was given to Cassidy Schultheis for research on GSR settling velocity.
- The 2017 MAFS/SAFS/ASTEE Travel Awards were given to Suzanne Elliott and Tatiana Trejos.

**Upcoming Awards:**

ASTEE is pleased to offer four travel awards this year to assist with expenses to various meetings. Each travel award is $500. To apply, the applicant must be a member in good standing with ASTEE, presenting an oral presentation or poster presentation, and traveling greater than 50 miles. The applicant must send an essay of a maximum of 1000 words detailing why the applicant should be given this award, membership number, best address for the award, and details regarding the oral or poster presentation they will be giving at the meeting. The essay and details should be sent to Michelle Drake at Michelle.Drake@dfs.virginia.gov.
ASTEE at a Glance – Committee Updates continued...

- ASTEE will offer one travel award for the Inter-Micro meeting in Chicago, IL, June 11-15, 2018. The deadline to apply for the Inter-Micro travel award is May 29, 2018.
- ASTEE will offer three travel awards to the joint NEAFS/ASTEE meeting in Bolton Landing, NY, at the Sagamore Resort, from October 23-27, 2018. The deadline for the application is October 9, 2018.

The Edmond Locard Award for Excellence in Trace Evidence is presented annually to a nominee who, like the award’s namesake, has made a significant impact in the field, whether through teaching, training, research, or innovations in techniques, methods, or instrumentation. The only requirement of nominees is that they have been active in the field of Trace Evidence for at least ten years. Those making nominations must be ASTEE members in good standing. The award is presented in the form of a plaque. The deadline to submit this award is June 1, 2018.

Paint Webinar

On July 31, 2017, Dr. Edward Suzuki of the Washington State Crime Laboratory presented a webinar entitled the “Identification of Automotive Paint Binders Using Infrared Spectroscopy”. To 133 participants, Dr. Suzuki detailed the key absorptions to seek when identifying the binder and pigments present in an automotive sample. Classification of the peaks present in an infrared spectrum is an important step when utilizing the Paint Data Query (PDQ) system or when comparing automotive paint samples.

Thanks go to Dr. Suzuki for his excellent presentation and for passing along some of his vast knowledge.

The webinar was supported by ASTEE in association with RTI and an archived copy is available at https://forensiccoe.org/webinar/webinar-automotive-paint-binders-using-infrared-spectroscopy/.

Identification of Automotive Paint Binders Using Infrared Spectroscopy

ASTEE Webinar July 31, 2017

Speaker:
Edward M. Suzuki, PhD
Supervising Forensic Scientist
Washington State Crime Laboratory
Washington State Patrol
Seattle, Washington

Forensic Technology Center of Excellence
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[Image of Dr. Suzuki and webinar content]
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**News You Can Use**

*New terminology to be aware of – ‘Quadcoat’*

Can also be seen as “Quad Coat” or “quad-coat”. Refers to an OEM finish that involves at least a four-stage topcoat paint process. Above a metallic basecoat, at least three additional topcoat layers are applied. If not a silver vehicle, one or more of the upper topcoat layers is tinted and translucent to produce “...a bright vibrant color with depth...” (1). Quadcoats seem to have limited availability, although technical information is difficult to find. See a list of models advertising a quadcoat paint system, although not exhaustive, below:

<table>
<thead>
<tr>
<th>Model</th>
<th>Introductory Year</th>
<th>Color Option(s)</th>
<th>Reference(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lexus NX *</td>
<td>2016</td>
<td>Code 8X1, Name: Ultrasonic Blue Mica 2.0</td>
<td>(2)</td>
</tr>
<tr>
<td>Lexus RC</td>
<td>2015</td>
<td>Code 3T5, Name: Infrared; Code 8X1, Name: Ultrasonic Blue Mica 2.0</td>
<td>(1, 2, 3)</td>
</tr>
<tr>
<td>Toyota Prius</td>
<td>2016</td>
<td>Code 3T7, Name: Hypersonic Red</td>
<td>(2)</td>
</tr>
<tr>
<td>Ford Focus RS</td>
<td>2016</td>
<td>Code (possibly ‘DW’), Name: Nitrous Blue</td>
<td>(5, 6)</td>
</tr>
</tbody>
</table>

* Note: Lexus GS and IS models also available in Color Code 8X1 in introductory year 2016 (7)

Interestingly, in the PPG refinish books (6, 7), these systems are commonly noted as “Prl 3ct” (as in pearlescent three coat), distinguishing it from other designations “Prl” (as in pearlescent) or “B/C” (as in basecoat/clearcoat). For forensic paint examiners, the quadcoat OEM process may be mistaken for a refinish based on the layer sequence given the possible presence of an interior clearcoat layer (1, 3). See Figure 1 for some cross-section examples.

![Coating structure diagrams for 3T5 and 8X1 color codes for Lexus RC models](image)

It should be noted, the layer structures present in Figure 1 have yet to be confirmed by PDQ “street sample” submissions (T. Hodgins, personal communication, February 2, 2018).

References

News You Can Use continued...


Also of interest to forensic paint examiners:

“Did You Know that the majority of non-metallic white Toyota passenger vehicles do not have a clearcoat? According to PDQi, few Toyota vehicles from the 2006 model year or newer have clearcoats applied over non-metallic white basecoats while samples prior to 2006 don’t have any” (Royal Canadian Mounted Police. Oct. 2017. Inside PDQ. [Newsletter]. Author). According to PPG, the lack of clearcoat is common for non-metallic white basecoats on commercial and passenger vehicles produced in Asia (D. Wright, personal communication, February 1, 2018).

2018 Dues

It’s time to start thinking about dues again! If submitted before March 31st (note, a Saturday this year) dues are $25.00; after March 31st, they are $30.00. We offer three methods by which to submit your payment:

1.) Mail a check to the address on the dues form;
2.) Send a payment via PayPal to the ASTEE account at asteetrace@gmail.com (having a PayPal account of your own is necessary for this option), or;
3.) Use the PayPal button found in the Membership section of our website, www.asteetrace.org, which allows you to use a credit card (it is not necessary to have a PayPal account of your own for this option).

***New this year!***

A completed dues form (page 16) will only be necessary if any of your member information has changed and you have not yet notified us. If your info hasn’t changed and you do not submit a dues form, please be sure it is clear that the payment being made is for you, no matter which payment method you choose. For example, you can add your name and membership number (if known) in the “Add a note” field in PayPal or the appropriate fields when using the PayPal button. If this information is not included, we may not be able to associate your dues with you.
OSAC, What’s New?

As some OSAC member terms were ending in the fall of 2017, some of the Trace Evidence relevant subcommittees have seen the naming of new committee chairs and/or members. Congratulations to the new appointees! Since the previous update, each subcommittee has documents in various stages of voting, adjudication, and editing. The next in-person meeting for the Chemistry/Instrumental Analysis Scientific Area Committee, which includes the Trace Evidence Subcommittees, will be in March.

A couple of key notes:

Continuing the annual tradition, OSAC progress updates were presented at the AAFS meeting on February 20, 2018. Presentations included “Finding Meaning Through Forensic Chemistry – A Focus on the Progress Within the Chemistry/Instrumental Analysis SAC”. If you were unable to attend AAFS, you can catch the live webcast by registering at the following link: https://www.nist.gov/news-events/events/2018/02/what-osac-behind-scenes-look-join-us-aafs-2018. The archived presentation will be available within a week of the live broadcast.

The Materials (Trace) Subcommittee is seeking at least two participants from each laboratory that reports on trace exams to participate in a validation-type test of their significance assessment document. The test will consist of written scenarios and conclusions that participants will be asked to report on using the model and guidance set forth in the document. If you are interested in participating, please contact Andria Mehltretter (ahmehltretter@fbi.gov).

Important Dates

- **March 31**: Deadline for ASTEE Dues payments (see page 11).
- **May 29**: Deadline to apply for travel award to Inter-Micro (see page 8).
- **June 1**: Deadline for Edmond Locard Award nominations (see page 8).
- **June 11-15**: **Inter-Micro meeting!** More information regarding an ASTEE reception soon.
- **October 9**: Deadline to apply for travel awards to NEAFS/ASTEE meeting (see page 8).
- **October 23 – 27**: **Joint NEAFS/ASTEE meeting!** More information regarding an ASTEE reception soon.
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Joint ASTEE/MAFS Meeting

The 46\textsuperscript{th} Mid-Atlantic Association of Forensic Scientists (MAFS) Annual Meeting was held September 17 – 19, 2017, in Cincinnati, Ohio at the Westin Hotel. Members from both ASTEE and the Southern Association of Forensic Scientists (SAFS) were welcomed for the combined meeting. The collaboration was a big success!

Trace Evidence was well represented with 8 workshops (out of 32), covering topics such as hair, fibers, explosives, fire debris, SEM, impressions, and dust (see group photo from “What’s in that Dust” workshop below). Additionally, Trace Evidence topics were addressed in 15 presentations (out of 36) and 8 posters (out of 20). This was a sizable contribution considering we were contending with six other disciplines. In addition, there was a larger-than-usual crowd at the ASTEE reception, held September 19 at the Moerlein Lager House. Many thanks go to Allyson Karr for organizing another outstanding networking opportunity!

Congratulations to ASTEE’s 2017 Edmond Locard Award Winner

Dr. Diana Wright receiving the 2017 Edmond Locard Award for Excellence in Trace Evidence, as presented by Robyn Weimer, current ASTEE President-Elect, at the ASTEE reception at the 2018 Impression, Pattern, and Trace Evidence Symposium.
ASTEE Reception at 2018 IPTES

ASTEE was pleased to host a reception at the Impression, Pattern and Trace Evidence Symposium on Wednesday, January 24th, in Arlington, VA. Thirty-four attendees gathered for food and drinks at Jaleo’s Crystal City.
Dear ASTEE member,

Please remit the sum of $25.00 to ASTEE in payment of your membership dues for the 2018 calendar year by March 31, 2018. Please add a $5.00 late fee for payment received after March 31, 2018. 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.

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