



Organization of Scientific Area  
Committees for Forensic Science

<http://nist.gov/osac>

NIST OSAC

CSI Subcommittee Update

Michael P. Kessler, CSI Subcommittee Chair

Presented to Texas Division of the International Association for Identification (TDIAI)

13 June 2019



2009

National Academy of Science Report

*Strengthening Forensic Science  
in the United States: A Path  
Forward*


STRENGTHENING  
**FORENSIC  
SCIENCE**  
IN THE UNITED STATES


A PATH FORWARD

NATIONAL RESEARCH COUNCIL  
OF THE NATIONAL ACADEMIES




# GOALS OF OSAC IN FORENSIC SCIENCE

- » OSAC is a result of the 2009 NAS Report
  - » Joint project of DOJ and NIST to encourage consensus standards in forensic science
  - » Registry of Forensic Science Standards & Guidelines
  - » Identify research needs
- 

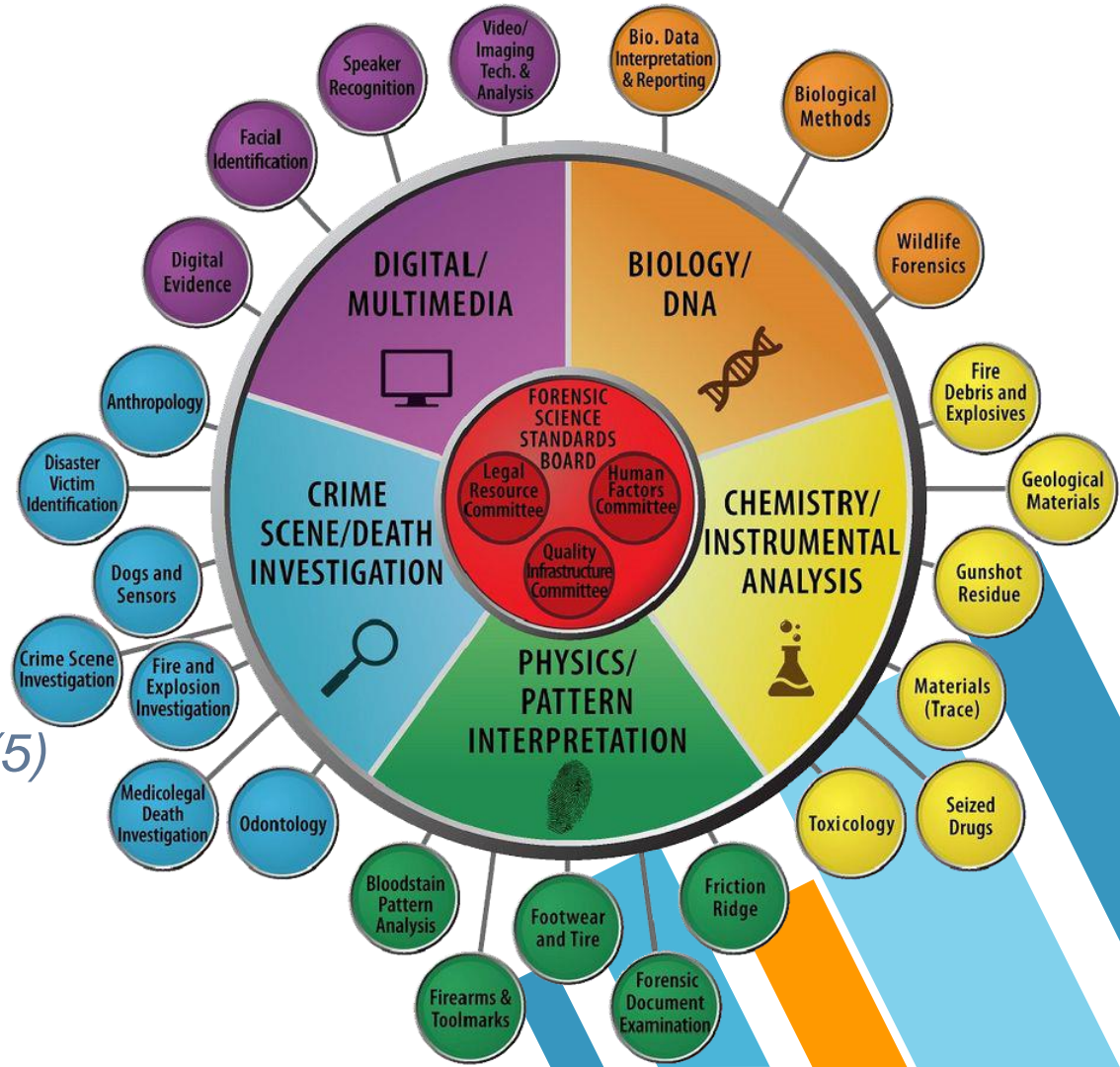


**“To create a sustainable organizational infrastructure dedicated to identifying and fostering the development of technically sound, consensus-based documentary standards and guidelines for widespread adoption throughout the forensic science community.”**



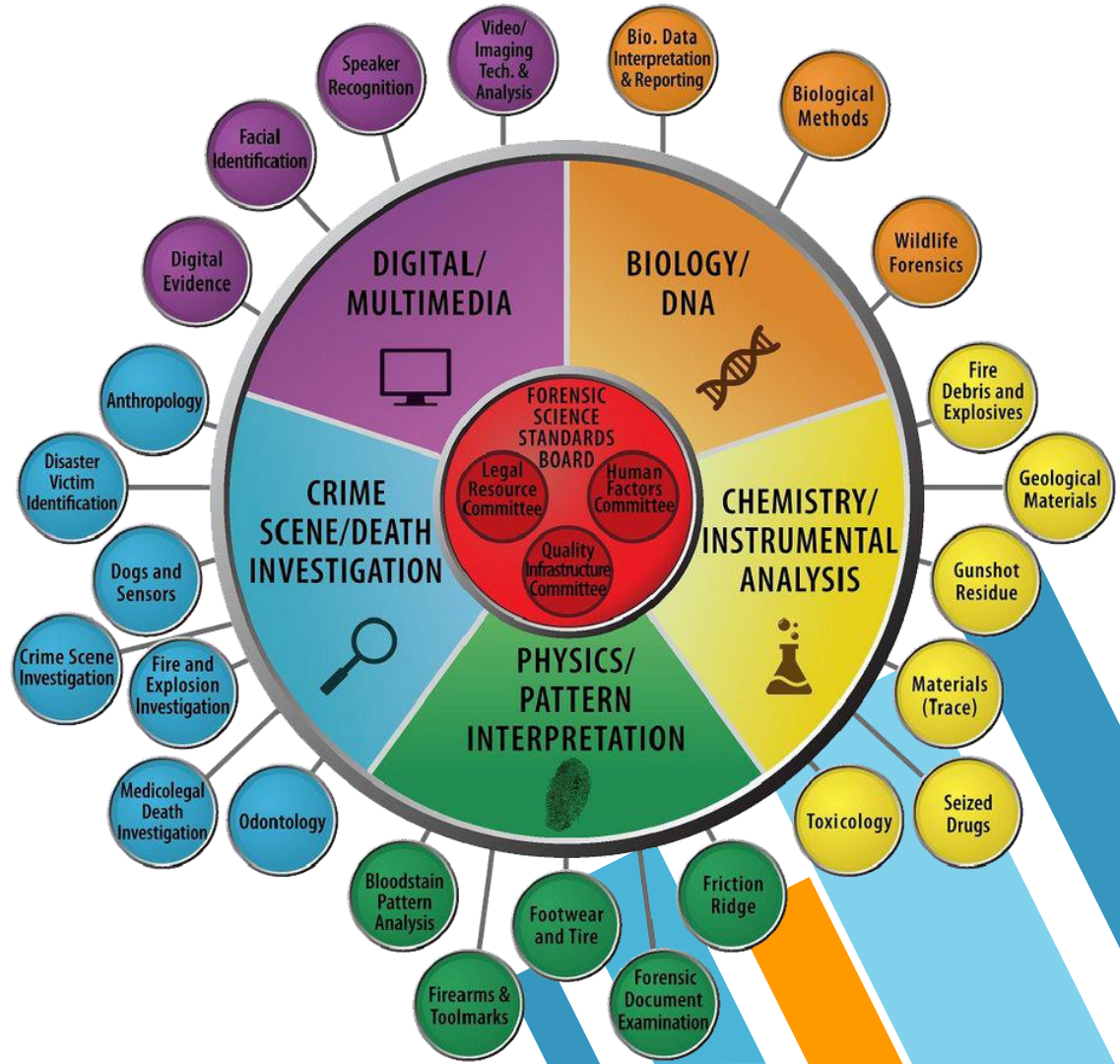
# OSAC STRUCTURE

- » *Forensic Science Standards Board*
- » *Resource Committees (3)*
- » *Scientific Area Committees (5)*
- » *Subcommittees (25)*
- » *Task Groups*

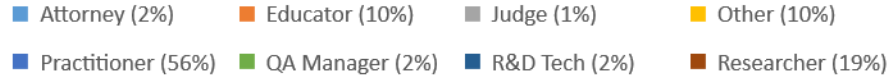


# OSAC CORE PRINCIPLES

- » *Openness*
- » *Balance*
- » *Consensus*
- » *Harmonization*



# OSAC MEMBER CURRENT JOB CLASSIFICATION



OSAC SNAPSHOT  
February 2017

## Makeup

565 Members

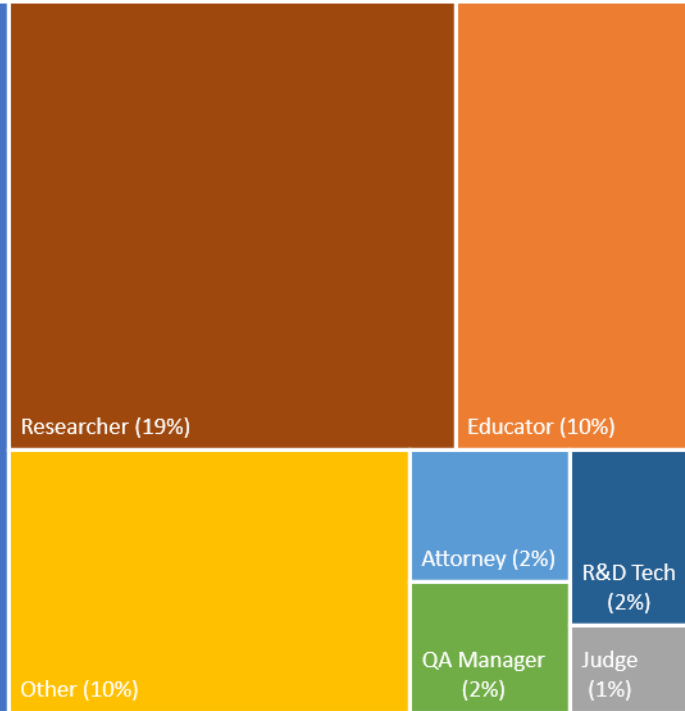
266 Affiliates

50 States represented

239 Task groups

2,470 Applications

Practitioner (56%)





# WHAT OSAC REALLY DOES

- » Evaluates existing standards published by SDOs for placement on the OSAC Registry
- AND**
- » Introduces draft documents into existing SDOs for formal development – drafts go through the SDO's consensus process
- 





OSAC REGISTRY

# OSAC REGISTRY PLACEMENT MEANS

## OSAC Registry

Serves as a trusted repository of high-quality, science-based standards and guidelines for forensic practice.

## Criteria

Standards and guidelines must have been developed using a **consensus-based process** and must pass OSAC review of **technical merit** by forensic practitioners, academic researchers, statisticians, and measurement scientists.

## Endorsement

Elevating a standard to the official OSAC Registry is an endorsement of the high quality of the document and encourages its adoption by all relevant agencies and practitioners.



STANDARDS DEVELOPMENT ORGANIZATIONS

**ASB**

American Academy of  
Forensic Sciences – AAFS  
Standards Board

**ASTM  
International**

American Section of the  
International Association  
for Testing and Materials

**NFPA**

National Fire Protection  
Association

**ADA**

American Dental  
Association

**NIST**

National Institute of  
Standards and Technology

**ISO**

International Organization  
for Standardization





## OSAC HAS NO AUTHORITY TO ENFORCE STANDARDS

### **Endorse Standards**

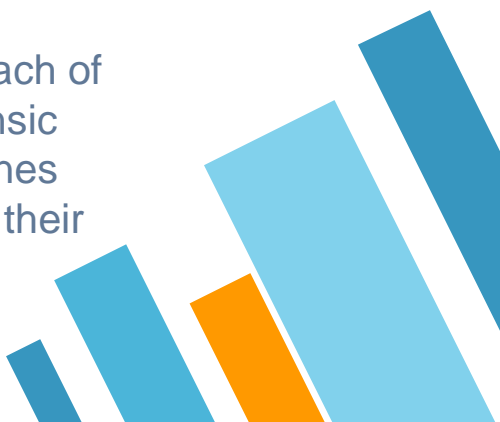
OSAC endorses standards and promotes their adoption by forensic science service providers and by accrediting bodies that audit participating agencies for compliance.

### **Fill the Gap**

While accredited forensic service providers are currently audited to general laboratory standards, there are very few discipline-specific standards that the laboratories can be audited against.

### **Facilitate Development**

The ultimate goal of OSAC is to facilitate the development of science-based standards for each of 25 distinct forensic science disciplines and to promote their widespread adoption.



## OSAC STANDARDS: IMPLEMENTATION PATHWAYS

### **Self Adoption**

Forensic Service providers incorporate OSAC standards in SOPs

### **Professional Associations**

Issue policy statements encouraging adoption

### **Criminal Justice (Courts)**

Attorneys begin demanding forensic practitioners use OSAC standards

### **Accrediting Bodies**

ISO 17025/20 supplemental standards or checklists

### **Funding Bodies**

Offer funding incentive to implement standards

### **Funding Bodies**

Require OSAC standards implementation to access funding



## OSAC NEWSLETTER

*Released monthly and includes notification of public comment periods, R&D needs, OSAC vacancies, OSAC meetings, and feature articles.*

*Sign Up at  
[www.nist.gov/osac](http://www.nist.gov/osac)*



### Inside this issue

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### Feature Article:

## OSAC Publishes the Standards/Guidelines Registry Approval Process

One aim of the OSAC is to identify and promote existing technically sound, consensus-based, and fit-for-purpose documentary standards that are based on sound scientific principles. This is achieved through the *OSAC Registry of Approved Standards* and the *OSAC Registry of Approved Guideline*. A standard or guidelines that is posted on the registry demonstrates that the methods it contains have been judged by forensic practitioners, academic researchers, measurement scientists, and statisticians, to be valid.

Once populated, forensic scientists and practitioners will be able to refer to the *OSAC Registry of Approved Standards* and the *OSAC Registry of Approved Guidelines* for a uniform set of high quality standards on how to produce scientifically sound and statistically valid test results, laboratory results, and courtroom testimony. These standards should help to increase confidence in the criminal justice system and the testimony put forth by practitioners.



The OSAC has recently developed and launched the *OSAC Registry Approval Process of Published Standards and Guidelines*, which is a rigorous process that includes checklist criteria against which existing standards and guidelines are to be analyzed before they are posted to the registries. This includes an analysis of technical merit, the openness of the development process (to ensure balanced interests are represented), consensus,

... Continued page 4

OSAC  
ANNUAL REPORT

*Summary of OSAC activities from  
February 2016 to February 2017  
including OSAC unit profiles.*

*Available at  
[https://www.nist.gov/sites/default/files/documents/2018/01/11/osac\\_annual\\_report\\_2017.pdf](https://www.nist.gov/sites/default/files/documents/2018/01/11/osac_annual_report_2017.pdf)*

OSAC Technical Series 0001



**Annual Report**  
**February 2016 – February 2017**

Annual Report Working Group  
*Organization of Scientific Area Committees for Forensic Science (OSAC)*

<http://dx.doi.org/10.29325/OSAC.TS.0001>





# LEXICON

»OSAC has created a lexicon of over 4,000 terms organized by forensic discipline. New terms will be added, revised or removed, as sources are verified, and as new standards are published.

»<https://lexicon.forensicosac.org/>



Crime Scene/Death Investigation SAC

*Consists of seven subcommittees.*







# Crime Scene Investigation

CSI

SUBCOMMITTEE

<https://www.nist.gov/topics/forensic-science/crime-scene-investigation-subcommittee>



# CSI

## Subcommittee

17 Subject Matter Experts

- » Crime Scene Investigators
- » Crime Scene Reconstructionists
- » Sexual Assault Nurse Examiners
- » CSI/Trace Examiners
- » Laboratory Managers
- » Firearms Examiner
- » Shooting Reconstructionists
- » Academic Researchers
- » Independent Practitioners
- » R&D/Industry Representatives






## CSI Subcommittee Officers

- » **Michael P. Kessler**, Chair, NFSTC@FIU
  - » **Charles S. DeFrance**, Vice Chair, Federal Bureau of Investigation
  - » **Kimberlee Sue Moran**, Executive Secretary, Rutgers University
- 

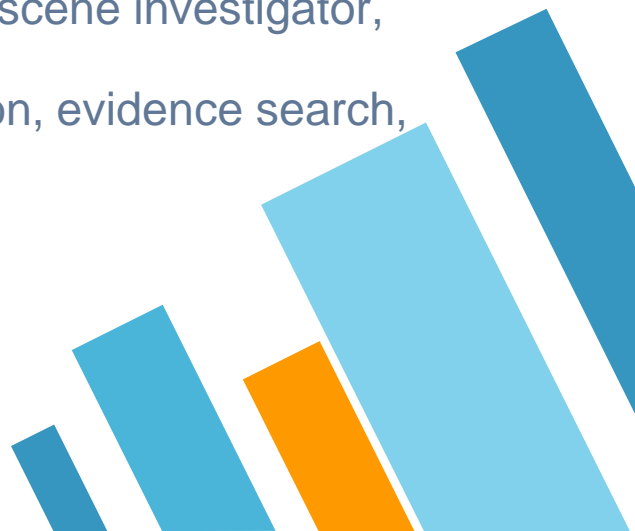


## CSI Subcommittee Members

- » **Adam Becnel**, Louisiana State Police
  - » **Teresa Devitt-Lynch**, Intrepid Forensics
  - » **Karen Green**, Green Forensics Inc.
  - » **Michael Haag**, Albuquerque Police Department Crime Laboratory
  - » **Kevin Kosiorek**, Boston Police Crime Laboratory Unit
  - » **Guy Nutter**, Michigan State Police Forensic Science Division
  - » **Kevin Parmelee**, Somerset County Prosecutor's Office (NJ)
  - » **Christine Pinto**, Los Angeles County Sheriff's Department
  - » **Stephanie Regan**, Kauai Police Department
  - » **Ryan Rezzelle**, Leica Geosystems
  - » **Kim Shapiro**, San Bernardino County Sheriff's Office
  - » **Joyce Williams**, Stevenson University
  - » **Troy E. Wilson**, Texas Department of Public Safety
  - » **Neil Zielinski**, Palm Beach County Sheriff's Office
- 




# PRIORITIES

- » Education, Credentials, Training
  - » Crime Scene Administration-report writing, evidence testing requests, data management
  - » Human Factors/Contextual Bias-detective vs crime scene investigator, hospital/nurse
  - » On Scene Activities-response, safety, documentation, evidence search, packaging/collection, final considerations
  - » Crime Scene Reconstruction
  - » Specialty Areas of Crime Scene Investigation
- 




# RESEARCH & DEVELOPMENT NEEDS

- » Assessing the Culture of Contextual Bias in Forensic Scene Evidence Collection, Handling, and Processing
  - » Assessment of Level of Personal Protective Equipment (PPE) Required at Crime Scenes
  - » Crime Scene Research: Creation of a Centralized Searchable Database
  - » Decontamination of Crime Scene Equipment
  - » Laboratory Techniques and Technologies at the Crime Scene
  - » Use of Technology for Crime Scene Documentation
  - ◇ <https://www.nist.gov/topics/forensic-science/osac-research-development-needs>
- 




# STANDARDS IN DEVELOPMENT

- » CSI Training and Education  
(Submitted to ASTM.)
- » Task Groups
  - General Evidence Collection and Preservation
  - Biological Evidence
  - Drug Evidence

- Weapons
  - Crime Scene Reconstruction
  - Shooting Reconstruction
  - Sexual Assault Investigation
- 




## Standards in Development with Other Subcommittees

- » Crime Scene  
Photography (VITAL)
  - » Footwear and Tire  
Impressions (5 already  
sent to SDO)
- 






## EXISTING ASTM STANDARDS SUBMITTED TO REGISTRY


- » E620 – Standard Practice for Reporting Opinions of Scientific or Technical Experts
  - » E678 – Standard Practice for Evaluation of Scientific or Technical Data
  - » E860 – Standard Practice for Examining And Preparing Items That Are Or May Become Involved In Criminal or Civil Litigation
  - » E1020 – Standard Practice for Reporting Incidents that May Involve Criminal or Civil Litigation
  - » E1492 – Standard Practice for Receiving, Documenting, Storing, and Retrieving Evidence in a Forensic Science Laboratory
- 



## EXISTING ASTM STANDARDS UNDER CONSIDERATION

continued


- » E1188 – Standard Practice for Collection and Preservation of Information and Physical Items by a Technical Investigator
  - » E1492 – Standard Practice for Receiving, Documenting, Storing, and Retrieving Evidence in a Forensic Science Laboratory
  - » E1459 – Standard Guide for Physical Evidence Labeling and Related Documentation
- 



“Laboratory accreditation and individual certification of forensic science professionals should be *mandatory*, and all forensic science professionals should have access to a certification process.”




## Standards Sent to SDO

- » Standard Practice for Crime Scene Investigator Training, Continuing Education, Professional Development, Certification, and Accreditation
- Current posted on OSAC website as a draft.
  - Submitted to ASTM
- 




# Highlights from CSI Training and Education Standard

» **Crime Scene Investigator** - a forensic science practitioner whose responsibility is to use the appropriate combination of knowledge, skills, and experience to undertake one or more of the following tasks in relation to a crime scene investigation: documentation, search for or identify evidence, evidence collection, and preservation of evidence. **OSAC Lexicon**






# Education Requirements

- » Associates degree with at least 8 hr of science.
  - » Strongly recommends a bachelor of science.
  - » Current experience can be substituted for the formal education requirement.
- 




## Continuing Education Requirements

- » Responsibility of parent agency
  - » Minimum of 48 hr over a 2-year period.
  - » Continuing education must be structured, measurable, and documented.
- 



## Certification/Accreditation

»“All crime scene units shall either have all crime scene investigation personnel certified or the crime scene unit shall be accredited. Ideally, all personnel will be certified and the crime scene unit will be accredited.”





This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.



Designation: E2917 – 19

## Standard Practice for Forensic Science Practitioner Training, Continuing Education, and Professional Development Programs<sup>1</sup>

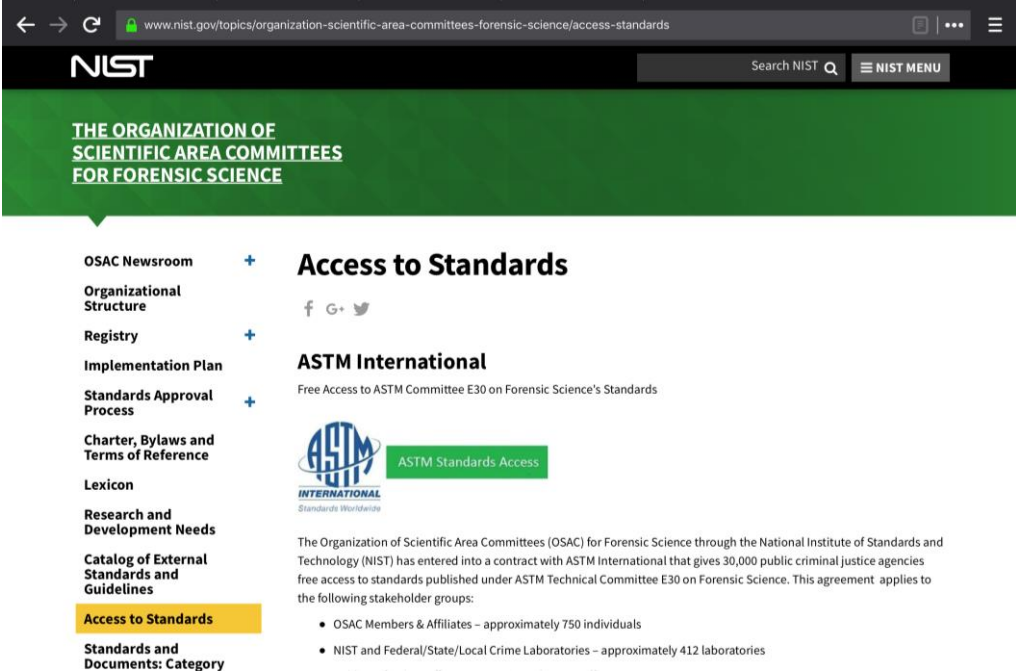
This standard is issued under the fixed designation E2917; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### INTRODUCTION

Some material in this practice is based on the Technical Working Group for Education and Training in Forensic Science, National Institute of Justice (TWGED, NIJ), Special Report, *Education and Training in Forensic Science: A Guide for Forensic Science Laboratories, Educational Institutions, and Students* (1).<sup>2</sup>

# Accessing Published Standards

- » ASB - public access
- » ASTM - free access via OSAC.



The screenshot shows a web browser window with the URL [www.nist.gov/topics/organization-scientific-area-committees-forensic-science/access-standards](https://www.nist.gov/topics/organization-scientific-area-committees-forensic-science/access-standards). The NIST logo is in the top left, and a search bar and 'NIST MENU' are in the top right. A green banner below the header contains the text 'THE ORGANIZATION OF SCIENTIFIC AREA COMMITTEES FOR FORENSIC SCIENCE'. On the left side, there is a vertical navigation menu with items: OSAC Newsroom, Organizational Structure, Registry, Implementation Plan, Standards Approval Process, Charter, Bylaws and Terms of Reference, Lexicon, Research and Development Needs, Catalog of External Standards and Guidelines, Access to Standards (highlighted in yellow), and Standards and Documents: Category. The main content area features the heading 'Access to Standards' with social media icons for Facebook, Google+, and Twitter. Below this is the heading 'ASTM International' and the text 'Free Access to ASTM Committee E30 on Forensic Science's Standards'. The ASTM International logo is shown, along with a green button labeled 'ASTM Standards Access'. A paragraph explains that NIST has entered into a contract with ASTM International providing free access to standards published under ASTM Technical Committee E30 on Forensic Science. This agreement applies to the following stakeholder groups:

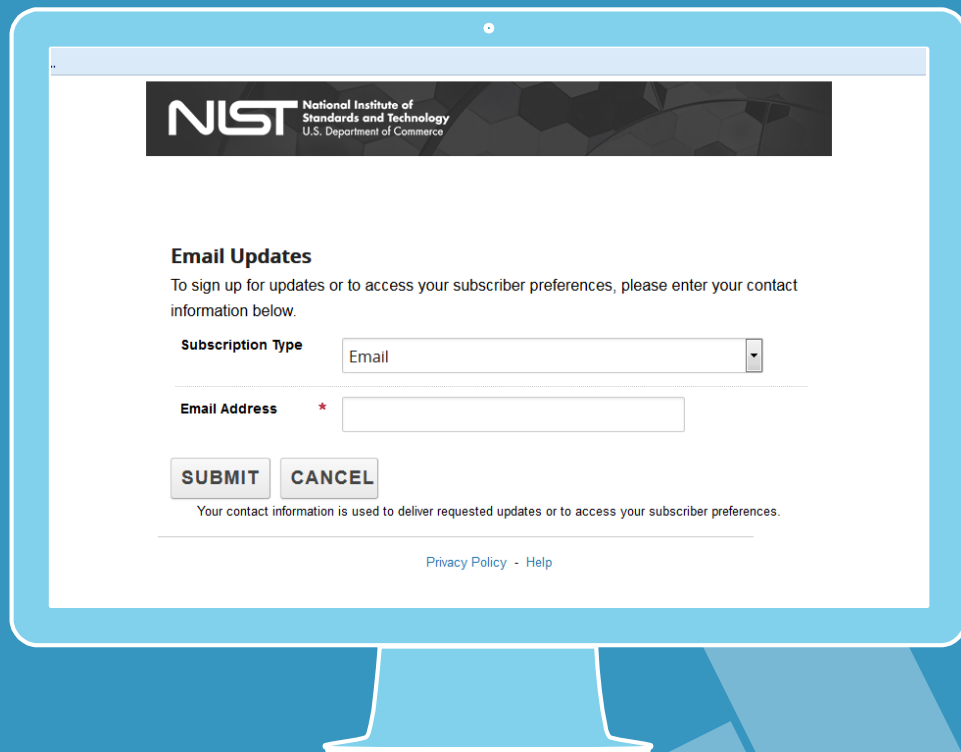
- OSAC Members & Affiliates – approximately 750 individuals
- NIST and Federal/State/Local Crime Laboratories – approximately 412 laboratories

# STAY

# INFORMED

<https://www.nist.gov/topics/forensic-science>

FOLLOW FORENSIC SCIENCE  
AT NIST

A screenshot of a web browser displaying the NIST email update form. The browser's address bar is empty. The page header features the NIST logo and the text "National Institute of Standards and Technology, U.S. Department of Commerce". The main content area is titled "Email Updates" and includes a brief instruction: "To sign up for updates or to access your subscriber preferences, please enter your contact information below." The form contains two input fields: "Subscription Type" with a dropdown menu currently set to "Email", and "Email Address" with a red asterisk indicating it is required. Below the fields are two buttons: "SUBMIT" and "CANCEL". A small disclaimer states, "Your contact information is used to deliver requested updates or to access your subscriber preferences." At the bottom right, there are links for "Privacy Policy" and "Help".

**NIST** National Institute of Standards and Technology  
U.S. Department of Commerce

### Email Updates

To sign up for updates or to access your subscriber preferences, please enter your contact information below.

**Subscription Type**

**Email Address** \*

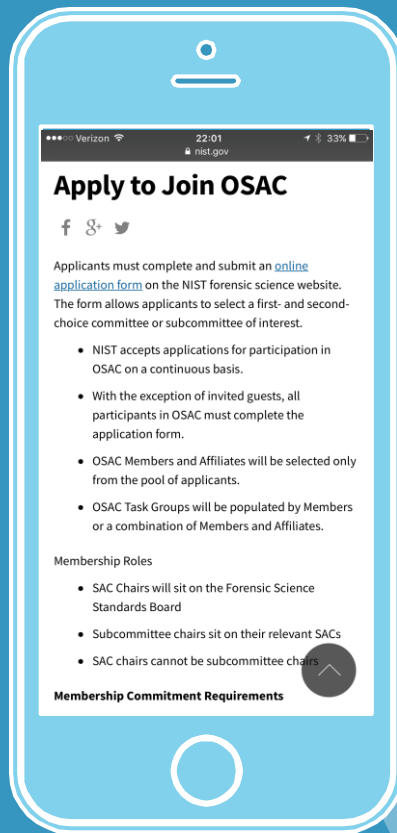
**SUBMIT** **CANCEL**

Your contact information is used to deliver requested updates or to access your subscriber preferences.

[Privacy Policy](#) - [Help](#)

# TO APPLY

[www.nist.gov/topics/forensic-science/osac-application](http://www.nist.gov/topics/forensic-science/osac-application)





# Web addresses

To apply

» [www.nist.gov/topics/forensic-science/osac-application](http://www.nist.gov/topics/forensic-science/osac-application)

Research & Development Needs

» <https://www.nist.gov/topics/forensic-science/osac-research-development-needs>

Stay informed


» <https://www.nist.gov/topics/forensic-science>

THANKS!

# Any questions?

You can find me at

» [mkessler@fiu.edu](mailto:mkessler@fiu.edu)



FOLLOW FORENSIC SCIENCE  
AT NIST

