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Friction Ridge Resources – Sources of Information for the Friction Ridge Examiner
Any opinions or views expressed in this lecture are my own and not indicative of the Santa Clara County Sheriff’s Office.
Concept

- General information for the latent print examiner
- Challenging occupation
- Highly critiqued
- Demand a high level of performance – self induced?
- Knowledge is power
- Testimony is teaching
- Practice, practice, practice
Networking and Knowledge Sharing

- Shouldn’t feel as though we are operating in a silo – even for one person shops
- Information is out there and available
- How do we get it ??
Friction Ridge Resources

- International Association for Identification
- California State Division
- Conferences and Seminars
- Training Providers and External Courses
- Internal Courses
- Referenced Textbooks
- OSAC – Friction Ridge Sub-committee
  - Legacy SWGFAST baseline documents
Friction Ridge Resources

- ASB - AAFS Standards Board (SDO)
- OSAC Registry
- ISO Standards
- Websites
- Journals
- Webinars
- Community Forums
- Podcasts
- Local Study Groups
- Email Lists
International Association for Identification

- Clearly everyone here is aware of the benefits of IAI membership
- Oldest and largest forensic association in the world
- Discounted attendance at Annual Conference
- Massive array of latest training available for all forensic disciplines
- Network of contacts and IAI members
- Aspiration of Certification in your field
Perhaps the biggest benefit is the receipt of the Journal of Forensic Identification (JFI)
Quarterly peer-reviewed scientific journal
  - Example: Review of Several False Positive Error Rate Estimates Based on the 2014 Miami-Dade PD Study – Ausdemore, Hendricks, Neumann
JFI Supplemental Report and Article Summary – up-to-date news, training opportunities and article summaries
Website (www.theiai.org) – Member Area
Searchable back catalog of JFI and Identification News
Welcome to the International Association for Identification

We are the oldest and largest forensic association in the world. This professional forensic association represents a diverse, knowledgeable and experienced membership that are assembled to educate, share, critique and publish methods, techniques and research in the physical forensic science disciplines.

Benefits of Becoming an IAI Member

Updates & News for Members

Presidential

2018 - 2019
IAI President
Lisa Hudson

Opioid Crisis Response Act of 2018

More Presidential Updates...

View All News

OSAC

- OSAC Newsletter
- Organization of Scientific Area Committees for Forensic Science (OSAC)
- OSAC Standards Bulletin

Conference

The 104th IAI International Educational Conference will be held August 11-17, 2019 at the Peppermill Resort, Reno, Nevada. The conference program is now available and registration is open.

The application period for lecture and workshop presentation proposals is now closed.
www.theiai.org

Member Menu

- Members
- Resources
- Multimedia

IAI Documents

- IAI Mission Statement
- IAI Operations Manual (updated 08.03.18)
- IAI Resolutions

IAI Forms

- Distinguished Member Application
- Expense Report
- Waiver and Release of Liability

Publications

- IDentification News
- Journal of Forensic Identification

Changes made to Member Info does not feed over to the Certification System

NOTE: If you are Certified by the IAI you must go to the Certification Website to update/change your information there also. Access the Certification Website.
OSAC Implementation is Coming - Are You a “Self Adopter”?

As the National Institute of Standards and Technology (NIST) liaison to the IAI, I have the honor of sharing some of the latest activities at NIST that may be of interest to my fellow IAI members. For this newsletter, I would like to share an update on the NIST administered Organization of Scientific Area Committees for Forensic Science’s (OSAC) implementation strategy for 2019 and beyond.

The OSAC started in 2014 and we know from day one that a two-fold approach was required for success – building standards and implementation of those standards. The OSAC objective is 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. During 2019, OSAC will focus efforts on encouraging laboratories to “self-adopt” standards listed on the OSAC Registry. At the time of this article, there are 15 standards on the OSAC Registry and most of them do not have an impact on the disciplines covered by the International Association of Identification (IAI). OSAC has 200 standards in development both within the organization and at Standards Developing Organizations (SDOs). The work products at the SDOs are what your laboratories should be watching now as they will be the future OSAC Registry standards.

Forensic Science Industry Stakeholders

- 409 Federal/State/Local Crime Laboratories
  - 88% accredited (as of December 31, 2014)
- 14,300+ full time personnel
- 18,000+ Law Enforcement Agencies
- 2,400+ Medical Examiner/Coroners Offices
- 2,300+ Prosecutor Offices
- 3,000+ Public Defenders Offices

Did you know OSAC introduced a standard entitled “Standard Practice for Forensic Science Practitioner Training, Continual Education, and Professional Development training, and continuous professional development!” This published standard will now start the OSAC review process for placement on the OSAC Registry. The OSAC Crime Scene Investigation (CSI) Subcommittee has developed a draft standard that builds from ASTM E2997-19 specific for the field of Crime Scene Investigation training and development and this future standard will impact many of you. The draft CSI document is being introduced to ASTM Subcommittee E9.11 on Interdisciplinary Forensic Science Standards and will follow the ASTM consensus development process for eventual publication as an ASTM standard. If you would like to participate in the ASTM consensus process, please consider joining ASTM and contribute to the document’s development.

Why does it take so long?

The concept of OSAC launched in February 2014 and our first meetings were held in January 2015. This means we have been operating for 4 years. When OSAC decided that one of the requirements for listing on the OSAC Registry was that the standard followed a “reasonable standards development process” and gave preference to documents developed in SDOs, that pointed the 25 OSAC subcommittees to begin to draft documents in their subcommittees and introduce them to SDOs for formal development. This adds time but it is very important. When standards are published by recognized SDOs, users know they were developed in an open and transparent manner, followed “due process” and general consensus was achieved regarding the
California State Division

- Once again an opportunity for up-to-date information and training available in the local area
- Website (www.csdiai.org) – Member Area
- Secretary-Treasurer emails out the California Identification Digest
- Now Christina Sams (csdiaisectreas@gmail.com)
- Access all previous bimonthly digests
- Established the “Google Group”
- https://groups.google.com/group/csdiai-current-members
President’s Message

The Executive Board would like to thank everyone who made the Burlingame Conference a success. The conference was a great success because of our attendees, speakers, vendors and hotel staff. We have received notes and comments from many people saying how much they appreciated the learning opportunities at the conference.

In addition, your Executive Board is excited about planning the next training seminar in Palm Springs, May 18-22, 2020. Our main goal is to provide the best training opportunity, experience and learning environment each year.

Thanks!

2019 – 2020
Executive Committee

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acbreglow@kendal.ca.gov

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sara.farnen@csdai.org

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2020 CSDAI ANNUAL TRAINING SEMINAR

KEEPING THE VISION IN FOCUS.
Conferences and Seminars

Annual IAI International Forensic Educational Conference

2019 Conference will be August 11 - 17, 2019 at the Peppermill Resort, Reno, Nevada
2020 Conference will be August 9 - 15, 2020 at the Rosen Shingle Creek Resort, Orlando, Florida
2021 Conference will be August 1 - 7, 2021 at the Gaylord Opryland Resort, Nashville, Tennessee
2022 Conference will be July 31 - August 6, 2022 at the CenturyLink Convention Center, Omaha, Nebraska
2023 Conference will be August 20 - 26, 2023 at the Gaylord National Resort, National Harbor, Maryland
2024 Conference will be August 11 - 17, 2024 at the Peppermill Resort, Reno, Nevada

Education and Professional Development are core aspects of the IAI mission. To meet this mission the IAI holds an annual educational conference that offers a week of high quality, cutting-edge education and hands on training in the fields of forensic physical evidence and crime scene investigation.

The IAI Conference is the largest in the world for Forensic and Crime Scene Professionals and offers a full week packed with scientific, technical and operational lectures, as well as hands-on workshops focused on a wide variety of topics. Topics include Crime Scene Investigation and Processing, Photography, the collection and examination of Latent Print, Footwear and Tire Track, and Bloodstain Pattern Evidence, Biometrics, and many other types of impression and identification evidence disciplines.

The IAI Conference is a cost-effective and time-efficient investment in your career as well as your standing in the profession. This is your opportunity to stay in tune with professional standards, certification, and the latest issues related to forensic science and crime scene evidence.

Further Information

General Conference Information:
Candace "Candy" Murray
Conference Planner
(407) 810-6112
Send email to Candy Murray

Conference Registration Information:
Roy Reed
Conference Registrar
(832) 696-9448
Send email to Roy Reed

Educational Program
(Lecture/Workshop/Poster):
Lesley Hammer
Education Coordinator
(907) 242-0229
Send email to Lesley Hammer
Keeping the Vision in 2020

MAY 18-22
2020

Save the Date

TRAINING CONFERENCE

LOCATED AT:
Omni Rancho Las Palmas
Resort & Spa

Speakers Chair – Marrkel SMITH
Msmith@fremont.gov
28TH ANNUAL CONFERENCE
OCTOBER 2-4, 2019
SAN DIEGO, CA
DOUBLETREE MISSION VALLEY
Group Code: AFO
7450 Hazard Center Drive
Reserve at 619.297.5466
Training Providers and External Courses

- Fantastic Support from External Training Providers out there
- Attend a course or host a course and allow other examiners in your area to attend quality training
- TRITECH (Official Training Partner of IAI)
  - https://www.tritechtraining.com/
- Ron Smith and Associates
- Evolve Forensics
- Other Forensic Providers
  - CK Hull and Associates, Forensic Pieces, Delta Forensics ...
Ideally you have some senior examiners at your agency that can impart the knowledge that they have gained over the years through their study, training and experience.

- Quality Manager / Training Officer
- Established training program
- Mentored, phase-based progression towards certification
- Competency Testing
- Individual training folder per examiner
- Annual Proficiency Testing
Head to the IAI website (www.theiai.org)

Requirements
- Educational, Technical Training, Experience

Written Examination questions (3x sources)
- The Fingerprint Sourcebook
- Quantitative-Qualitative Friction Ridge Analysis: An Introduction to Basic and Advanced Ridgeology
- Advances in Fingerprint Technology, Third Edition
IAI CLPE Program and Referenced Textbooks

The Fingerprint Sourcebook (U.S. Dept of Justice, National Institute of Justice)
by I.A.I. Scientific Working Group on Friction Ridge Analysis, Study and Technology (SWGFAST) et al Eric H. Holder, Laurie O. Robinson, John H. Laub

- Product Details
- PDF: 287 pages
- Publisher: National Institute of Justice (March 2011)
- Language: English
- NCI 225320

Downloadable PDF on NUI Website at: http://www.nij.gov/pubs-sum/225320.htm

Quantitative- Qualitative Friction Ridge Analysis: An Introduction to Basic and Advanced Ridgeology
(Crc Series in Practical Aspects of Criminal and Forensic Investigations) (Hardcover)
by David R. Ashbaugh

- Product Details
- Hardcover: 248 pages
- Publisher: CRC (October 27, 1999)
- Language: English
- ISBN-10: 0849370078

Advances in Fingerprint Technology, Third Edition (Forensic and Police Science Series) (Hardcover)
by Robert Ramotowski

- Product Details
- Hardcover: 528 pages
- Publisher: CRC Press; 3rd edition (2013)
- Language: English
- ISBN-10: 1420088342
The Friction Ridge Subcommittee will focus on standards and guidelines related to the forensic examination of friction ridge detail from the hands and feet.

- Clearly evident that our industry is seeking consensus based standardization (STD’s, BPR’s, TR released through SDO)
- Convoluted process – can feel like a quagmire
- OSAC FRS Website is a fantastic resource for the current information in this area

https://www.nist.gov/topics/forensic-science/friction-ridge-subcommittee
Friction Ridge Subcommittee

The Friction Ridge Subcommittee focuses on standards and guidelines related to the forensic examination of friction ridge detail from the hands and feet.

Officers | Members | OSAC Registry Approved Documents | Documents in Process | Research & Development Needs | Discipline-Specific Baseline Documents | Presentations

Officers
Discipline Specific Baseline Documents

OSAC Friction Ridge Subcommittee’s Response to the President’s Council of Advisors on Science and Technology’s (PCAST) Request for Additional References - Submitted December 14, 2016

OSAC Friction Ridge Subcommittee’s Response to the President’s Council of Advisors on Science and Technology’s (PCAST) Request for Information – Submitted December 2015

SWGFAST Position Statement on the Role of AFIS Ranks and Scores and the ACE-V Process

SWGFAST Guideline for the Articulation of the Decision-Making Process for the Individualization in Friction Ridge Examination (Latent/Tenprint)

SWGFAST Standard Friction Ridge Automation Training (Latent/Tenprint)

SWGFAST Standard for the Application of Blind Verification of Friction Ridge Examinations (Latent/Tenprint)

SWGFAST Recommendations for Competency Testing of Noncertified Latent Print Examiners (Latent) Position Statement

SWGFAST Standard for Consultation (Latent/Tenprint)

SWGFAST Standards for Examining Friction Ridge Impressions and Resulting Conclusions (Latent/Tenprint)

SWGFAST Standards for Examining Friction Ridge Impressions and Resulting Conclusions (Latent/Tenprint) Draft for Comment

SWGFAST A Model Policy for Friction Ridge Examiner Professional Conduct (Latent/Tenprint)

SWGFAST Standards for Minimum Qualifications and Training to Competency for Friction Ridge Examiner Trainees (Latent/Tenprint)

SWGFAST Standard for a Quality Assurance Program in Friction Ridge Examinations (Latent/Tenprint)

SWGFAST Standard for the Definition and Measurement of Rates of Errors and Non-Consensus Decisions in Friction Ridge
SWGFAST Standard for a Quality Assurance Program in Friction Ridge Examinations (Latent/Tenprint)

SWGFAST Standard for the Definition and Measurement of Rates of Errors and Non-Consensus Decisions in Friction Ridge Examination (Latent/Tenprint)

SWGFAST Standard for Simultaneous Impression Examination (Latent)

SWGFAST Standard for Friction Ridge Impression Digital Imaging (Latent/Tenprint)

SWGFAST Standard for Reporting Friction Ridge Examinations (Latent/Tenprint)

SWGFAST Standard for the Documentation of Analysis, Comparison, Evaluation, and Verification (ACE-V) (Latent)

SWGFAST Standard for the Documentation of Analysis, Comparison, Evaluation, and Verification (ACE-V) in Tenprint Operations (Tenprint)

SWGFAST Standard for Friction Ridge Comparison Proficiency Testing Program (Latent/Tenprint)

SWGFAST Standard for the Review of Testimony of Friction Ridge Examiners (Latent/Tenprint)

SWGFAST Standard Terminology of Friction Ridge Examination (Latent/Tenprint)

SWGFAST Standard for the Technical Review of Friction Ridge Examinations (Latent/Tenprint)

SWGFAST Uniform Automated Fingerprint Identification System (AFIS) Feature Symbols Position Statement (Latent/Tenprint)

SWGFAST Standard for the Validation and Performance Review of Friction Ridge Impression Development and Examination Techniques (Latent/Tenprint)
Documents in Process

- **Under Development**
  1. Analysis of Friction Ridge Impressions
  2. Comparison & Evaluation of Friction Ridge Impressions
  3. Consultation
  4. Verification
  5. Technical Review
  6. Reporting Results
  7. Conflict Resolution
  8. ACE-V Process Map
  9. ABIS Best Practices
  10. ASB 015, Standard for the Examination of Friction Ridge Evidence
  11. ASB 016, Terminology Related to Friction Ridge Examination

- **Work Product Sent to SDO:**
  1. ASB 012, Best Practice Recommendation for Articulating a Source Identification in Friction Ridge Examinations
  2. ASB 013, Standard for Friction Ridge Examination Conclusions
  3. ASB 014, Standard for Friction Ridge Examination Training Program

- **SDO Published:** None currently

- **Entered OSAC Registry Approval Process:** None currently
Would you like to be involved?

Apply to Join OSAC

Applicants must complete and submit an online application form on the NIST forensic science website. The form allows applicants to select a first- and second-choice committee or subcommittee of interest.

- NIST accepts applications for participation in OSAC on a continuous basis.
- With the exception of invited guests, all participants in OSAC must complete the application form.
- OSAC Members and Affiliates will be selected only from the pool of applicants.
- OSAC Task Groups will be populated by Members or a combination of Members and Affiliates.
- Applications are kept on file indefinitely by OSAC for use by the Forensic Science Standards Board (FSSB), Scientific Area Committees (SACs), Resource Committees (RCs), and Subcommittees to make future selections of members and affiliates.

Membership Roles

- SAC Chairs will sit on the Forensic Science Standards Board
- Subcommittee chairs sit on their relevant SACs
- SAC chairs cannot be subcommittee chairs

Membership Commitment Requirements

All positions on the OSAC will be 3-year terms. It is anticipated that the FSSB, SACs, resource committees, and subcommittees will conduct business using both in-person and virtual meetings. The FSSB, SACs, and subcommittees will conduct at least one in-person meeting per year. NIST will pay travel, lodging, and per diem expenses for members.

Virtual meetings will occur periodically to accomplish the objectives of all committees and subcommittees and are expected to require a total of 5 days or less throughout the year. Other time commitments include reviewing and editing documents on a periodic basis.

Virtual meetings and virtual training will be held prior to in-person meetings to ensure members are knowledgeable of their duties and OSAC processes. Please visit the OSAC Newsroom page for the latest updates.
AAFS established SDO
Dedicated to developing documentary standards for forensics
What to expect in the following years?
Widespread promulgation, adoption, and enforcement of recognized standards and, also likely, the true regulation of our profession.
Working as the SDO and in support of National Institute of Standards and Technology (NIST) Organization of Scientific Area Committees for Forensic Science (OSAC) effort, which began in 2014.

https://www.asbstandardsboard.org/
AAFS Standards Board Website

Documents Open for Public Comment

According to the ASB Policies and Procedures, “Notification of standards development activity shall be announced in suitable media as appropriate to demonstrate an opportunity for participation by all directly and materially affected persons.”

Documents & Forms

These documents explain our purpose and ways we operate. In addition, there are some documents that detail the requirements that we must follow to retain our accreditation.

Resources & Training

Resources available include the ASB’s Style Manual used to develop ASB Standards.

ASB Newsletter

Subscribe now for the most up-to-date information regarding the ASB.
According to the ASB Policies and Procedures, "Notification of standards development activity shall be announced in suitable media as appropriate to demonstrate an opportunity for participation by all directly and materially affected persons."

Redline Document
Updated Document
Comment Resolution

Re-circulation* – ASB Standard 053, Standard for Report Content in Forensic Toxicology, First Edition (Comment Deadline, September 16, 2019)
Redline Document
Updated Document
Comment Resolution


ASB Standard 062, Standard for Topography-Comparison Software for Toolmark Analysis, First Edition (Comment Deadline, August 26, 2019)

ASB Standard 063, Implementation of 3D Technologies In Forensic Firearms and Toolmark Comparison Laboratories, First Edition (Comment Deadline, August 26, 2019)

Re-circulation* – ASB Standard 088, General Guidelines for Training, Certification, and Documentation of Canine Detection Disciplines, First Edition (Comment Deadline, August 26, 2019)
Redline Document
Updated Document
Comment Resolution

Redline Document
Updated Document
Comment Resolution

Note: a specific Proposed Resolution must accompany each comment or it cannot be considered.

*Please note that comments on a re-circulation will only be accepted on revised sections of a document, comments made to text not revised from the original public comment period will not be accepted.

Please download the template for comments to documents posted for ballot, and return it to asb@aafs.org by the close of the comment period.
Would you like to be involved?
https://www.asbstandardsboard.org/

- Join the Friction Ridge Consensus Body?
- Join a Project Group as an observing non-voting member?
- Join the working group for each particular document?
- Make a Public Comment during that period?
- Sign up for the ASB newsletter?

- Please contact Teresa Ambrosius
- Email: (tambrosius@aafs.org)
OSAC Registry
– End goal after Public Comment, published at SDO

Friction Ridge Subcommittee

Members of the OSAC Friction Ridge Subcommittee (July 2019)

The Friction Ridge Subcommittee focuses on standards and guidelines related to the forensic examination of friction ridge detail from the hand to the foot.

OSAC Registry Approved Documents | Documents by Process | Research & Development Needs | Discipline-Specific Research Documents | Presentations.
OSAC Adds Two New Standards to Registry and Opens Comment Period on Two Disaster Victim Identification Standards

June 18, 2019

Two New Standards Placed on OSAC Registry

The Organization of Scientific Area Committees for Forensic Science (OSAC) is pleased to announce the Forensic Science Standards Board (FSSB) has approved the addition of two standards for listing on the OSAC Registry. The OSAC Registry serves as a trusted repository of high-quality, science-based standards and guidelines for the practice of forensic science. To be placed on the Registry, a standard or guideline must have been developed using a consensus-based process and passed the OSAC technical merits review by forensic practitioners, academic researchers, statisticians, and measurement scientists. OSAC encourages the adoption of standards listed on the OSAC Registry by all relevant agencies and practitioners.

The two latest OSAC Registry Approved standards include:

- **ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories** – from an OSAC Interdisciplinary Virtual Subcommittee, June 18, 2019. This document contains requirements for laboratories to enable them to demonstrate their competence and can generate reliable results, thereby promoting confidence in their work. Many forensic science laboratories are accredited under the 2005 version of this standard and are progressing to meet the updated requirements in the 2017 version. At such, the 2005 version of this standard will remain on the OSAC Registry through December 2020 to accommodate those laboratories making the transition to the 2017 version. OSAC supports this transition to meeting the requirements of the updated standard. In addition to laboratories, this standard is also useful to universities, research centers, government agencies, regulators, inspection bodies, and conformity assessment bodies with the need to do testing, sampling, or calibration.

- **ANAB/ASQ Standard Q17: Standard Practices for Measurement Traceability in Forensic Toxicology** – from the OSAC Toxicology Subcommittee, June 18, 2019. This standard defines the minimum requirements for establishing measurement traceability in forensic toxicology laboratories. This is the first forensic toxicology standard to be placed on the OSAC Registry. The OSAC Toxicology Subcommittee is championing many more standards through both the standards development process and the OSAC Registry Approval process to continue to enhance the discipline.
ISO Standards and Accreditation

- Purchase a copy of ISO 17020 or ISO 17025 from ANSI
- Additional requirements as set out by ANAB
  - ISO 17020 – Inspection Bodies (Fingerprint Comparison)
  - ISO 17025 – Forensic Laboratories
- Requirements met in audit Nimonik Checklist and Sharefile
Journals and Publications

- Chicago - Brandon Max – List of critical documents
- OSAC Website has those “Baseline Standards”
- What about the relevant articles???
- Already shown have easy access to JFI articles
- Journal of Forensic Science International
- Journal of Royal Statistical Society
- NIST Publications – Human Factors Report
- NCFS – Analysis based on Task-relevant information
- Leverage the “free source” locations of these documents
- PNAS, Open Access, PlosOne, Elsevier etc
- List of references in “Articulation Document”
- Just “Google” the titles looking for free PDF’s
- Compile your own local “Electronic Library”
Journals and Publications

This document has been accepted by the Academy Standards Board (ASB) for development as an American National Standard (ANS). For information about ASB and their process please refer to asb.nist.gov. This document is being made available at this stage of the process so that the forensic science community and interested stakeholders can be more fully aware of the efforts and work products of the Organization of Scientific Area Committees for Forensic Science (OSAC). The documents were prepared with input from OSAC Legal Resource Committee, Quality Infrastructure Committee, and Human Factors Committees, as well as the relevant Scientific Area Committee. The contents of the documents listed below is subject to change during the standards development process within ASB, and may not represent the contents of the final published standard. All stakeholder groups or individuals are strongly encouraged to submit technical comments on this draft document during the ASB’s open comment period. Technical comments will not be accepted if submitted to the OSAC Scientific Area Committee or Subcommittees.


DRAFT

OSAC

DRAFT DOCUMENT
Journals and Publications

- PNAS, Open Access, PlosOne, Elsevier etc
- List of references in “Articulation Document”
- Just “Google” the titles looking for free PDF’s
- Compile your own local “Electronic Library”
- Network your local FR examiners and email groups for free PDF versions that are shareable
SAURO - The Use of Gelatin Lifters for the Preserving of Fingerprints in Dust  
SCCSO - Establishing Foundation for Latents and Tenprints  
SCCSO - International Fingerprint Standards - IAI Resolution 1973 and Neutronium Declaration 1995  
SRIRAM et al. Discriminability of Fingerprints of Twins  
SRIRAM et al. Statistical Study of Twins' FP  
State of N.C v. Broggsdale Motion to Exclude Transcripts  
SWOFFORD, KOERTNER et al. - A method for the statistical interpretation of friction ridge skin impression evidence - Method development and validation  
The impact of proficiency testing information and error aversions on the weight given to fingerprint evidence  
THE PEOPLE v. LATANYA STAMPS  
THOMPSON TANGEN MCGATHY - The Performance of Genuine Crime Scene Latent Fingerprints  
THOMPSON TANGEN MCGATHY - Identifying Fingerprint Expertise  
Thompson, How Should Forensic Scientists Present Source Conclusions-Published  
THOMPSON et al - After Uniqueness - The Evolution of Forensic Science Opinions  
Tolerances for release to LP community  
TRIPLETT COONEY - The Etiology of ACE-V and its Proper Use - An exploration of the relationship between ACE-V and the scientific method of hypothesis testing - JFI-Z...  
ULEY - 5th NOBLIS Black Box Study Exclusions Preco by Tatiana  
ULEY HICKLIN BUSCAGLIA ROBERTS - Accuracy and reliability of forensic latent fingerprint decisions  
ULEY HICKLIN BUSCAGLIA ROBERTS - Repeatability and Reproducibility of Decisions by Latent Fingerprint Examiners  
ULEY HICKLIN ROBERTS BUSCAGLIA - Factors associated with latent fingerprint exclusion determinations  
ULEY HICKLIN ROBERTS BUSCAGLIA - Measuring what latent fingerprint examiners consider sufficient information for individualisation determinations  
USACIL Information Paper - Using Likelihood Ratios in Reporting  
Vucelich Video-HD  
Washington Court of Appeals 3.11.2019 letter-opinion on PCAST  
WERTHEIM MACAO - The Critical Stage of Friction Ridge and Pattern Formation  
WERTHEIM LANGENBURG MOENSSENS - A Report of Latent Print Examiner Accuracy During Comparison Training Exercises  
WERTHEIM, Pat Jackson Pollock Report - Forgery
Accuracy and reliability of forensic latent fingerprint decisions

Bradford T. Ulery*, R. Austin Hicklin*, JoAnn Buscaglia†, and Maria Antonia Roberts*

*National Institute of Standards and Technology (NIST), Gaithersburg, Maryland, USA; †FBI Laboratory Division, Quantico, Virginia, USA

The interpretation of forensic fingerprint evidence relies on the expertise of latent print examiners. The National Research Council of the National Academies and the legal and forensic sciences communities have called for research to measure the accuracy and reliability of latent print examiners' decisions, a challenging and complex problem in need of systematic analysis. Our research is focused on the development of empirical approaches to studying this problem. Here, we report on the first large-scale study of the accuracy and reliability of latent print examiners' decisions, in which 169 latent print examiners each compared approximately 100 pairs of latent and exemplar fingerprints from a pool of 744 pairs. The fingerprints were selected to include a range of attributes and quality encountered in forensic casework, and to be comparable to searches of an automated fingerprint identification system containing more than 58 million subjects. This study evaluated examiners on key decision points in the fingerprint examination process; procedures used operationally include additional safeguards designed to minimize errors. Five examiners made false positive errors for an overall false positive rate of 0.1%. Eighty-five percent of examiners made at least one false negative error for an overall false negative rate of 7.5%. Independent examination of the same comparisons by different participants (analogous to blind verification) was found to detect all false positive errors and the majority of false negative errors in this study. Examiners frequently differed on whether fingerprints were suitable for reaching a conclusion.

The interpretation of forensic fingerprint evidence relies on the expertise of latent print examiners. The accuracy of decisions made by latent print examiners has not been ascertained in a large-scale study, despite over one hundred years of the forensic
Repeatability and Reproducibility of Decisions by Latent Fingerprint Examiners

Bradford T. Ulery¹, R. Austin Hicklin¹, JoAnn Buscaglia*, Maria Antonia Roberts³

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Abstract

The interpretation of forensic fingerprint evidence relies on the expertise of latent print examiners. We tested latent print examiners on the extent to which they reached consistent decisions. This study assessed intra-examiner repeatability by retesting 72 examiners on comparisons of latent and exemplar fingerprints, after an interval of approximately seven months; each examiner was reassigned 28 image pairs for comparison, out of total pool of 744 image pairs. We compared these repeatability results with reproducibility (inter-examiner) results derived from our previous study. Examiners repeated 89.1% of their individualization decisions, and 90.1% of their exclusion decisions; most of the changed decisions resulted in inconclusive decisions. Repeatability of comparison decisions (individualization, exclusion, inconclusive) was 90.0% for matched pairs, and 85.9% for nonmatched pairs. Repetitiveness and reproducibility were notably lower for comparisons assessed by the examiners as “difficult” than for “easy” or “moderate” comparisons, indicating that examiners’ assessments of difficulty may be useful for quality assurance. No false positive errors were repeated (n = 4); 30% of false negative errors were repeated. One percent of latent value decisions were completely reversed (no value even for exclusion vs. value for individualization). Most of the intra- and inter-examiner variability concerned whether the examiners considered the information available to be sufficient to reach a conclusion; this variability was concentrated on specific image pairs such that repeatability and reproducibility were very high on some comparisons and very low on others. Much of the variability appears to be due to making categorical decisions in borderline cases.


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Measuring What Latent Fingerprint Examiners Consider Sufficient Information for Individualization Determinations

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Abstract

Latent print examiners use their expertise to determine whether the information present in a comparison of two fingerprints (or palmprints) is sufficient to conclude that the prints were from the same source (individualization). When fingerprint evidence is presented in court, it is the examiner's determination—not an objective metric—that is presented. This study was designed to ascertain the factors that explain examiners' determinations of sufficiency for individualization. Volunteer latent print examiners (n = 170) were each assigned 22 pairs of latent and exemplar prints for examination, and annotated features, correspondence of features, and clarity. The 320 image pairs were selected specifically to control clarity and quantity of features. The predominant factor differentiating annotations associated with individualization and inconclusive determinations is the count of corresponding minutiae; other factors such as clarity provided minimal additional discriminative value. Examiners' counts of corresponding minutiae were strongly associated with their own determinations; however, due to substantial variation of both annotations and determinations among examiners, one examiner's annotation and determination on a given comparison is a relatively weak predictor of whether another examiner would individualize. The extensive variability in annotations also means that we must treat any individual examiner's minutia counts as interpretations of the (unknowable) information content of the prints: saying “the prints had N corresponding minutiae marked” is not the same as “the prints had N corresponding minutiae.” More consistency in annotations, which could be achieved through standardization and training, should lead to process improvements and provide greater transparency in casework.


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Webinars – DOJ-CFRSG

- California Friction Ridge Study Group
  - Host a monthly webinar at DOJ
  - 2nd Wednesday month 9-11am
  - Email: Lori.orr@doj.ca.gov
  - Email: Derrick.Morisawa@doj.ca.gov

- CLEW Website (California Law Enforcement Web)
  - Email: Lori.orr@doj.ca.gov
  - Website: www.clew.doj.ca.gov/home (create account)
  - Website has a repository of all agendas, minutes and recordings of past webinar presentations
CLETS Subscriber Agreement reviser February 2019 – The Agency Head must sign the revised CLETS Subscriber Agreement form and return a signed copy to the CLETS Administration Section at CAS@dj.ca.gov no later than Friday, March 8, 2019.

If you have multiple ORIs, submit one report and list all ORIs for your agency, if applicable.

Forms may be e-mailed to CAS@dj.ca.gov or faxed to 916-227-0698. If you have any questions, please contact the CLETS Administration Section at 916-210-4240.

CLETS Misuse Investigation Reporting

IMPORTANT MESSAGE for all Agency CLETS Coordinators: ACTION REQUIRED

Pursuant to Section 6.10.3.1 System Misuse of the CLETS Policies, Practices and Procedures, after January 1, 2019 but before February 1, 2019, your agency must submit an annual CLETS Misuse Investigation Reporting form indicating the number of investigations performed in 2018 related to CLETS misuse, and any disciplinary action taken.

If you have multiple ORIs, submit one report and list all ORIs for your agency, if applicable.

Please make sure this has been done, as the Misuse Investigation Reports are due...

If your agency did not have any reported misuse, you still must submit the form with your agency contact information and the form marked no investigations performed. The form, which is fillable, can be found on CLEW under the Resources tab. On the Forms link, it is labeled HDC 0010.

Forms may be e-mailed to CAS@dj.ca.gov or faxed to 916-227-0698. If you have any questions, please contact the CLETS Administration Section at 916-210-4240.

18-09-CJIS: California Law Enforcement Telecommunications System (CLETS) Technical Guide - CLETS Message Header Requirements

IMPORTANT MESSAGE for all CLETS Subscribing Agencies

Effective March 1, 2020, the California Department of Justice (DOJ) will begin enforcing message header requirements for the successful execution of CLETS transactions by rejecting all messages that do not meet the header requirements outlined in the CLETS Technical Guide. The DOJ has made several attempts over the years to implement these changes and is no longer able to grant extensions. With the onset of future enhancements, it is critical the headers meet the requirements prior to implementation of these enhancements.

Download the information bulletin.
Webinars – CSAFE

- Center for Statistics and Applications in Forensic Science (CSAFE)
  - Build statistically sound and scientifically solid foundation for analysis and interpretation of forensic evidence
  - Funded by NIST
  - Host training resources and webinars for forensic examiners
  - [https://forensicstats.org/](https://forensicstats.org/)
RECENT ACTIVITIES

WEBINAR
Archival coming soon
Emerging Research in Forensic Biology

WEBINAR
Archival coming soon
Surviving Sexual Assault – It Takes A Village

WEBINAR
Archived April 2019
Building Forensic Capacity Post-Conflict: Lessons from Uganda (HHRRC Ilorin)

WEBINAR
Archived April 2019
Emerging Research in Forensic Chemistry

REPORT
Published April 2019
Success Story: Improving DNA Mixture Interpretation with the Help of Machine Learning

WEBINAR
Archived March 2019
Emerging Research in Medicolegal Death Investigations

WEBINAR
Archived March 2019
DNA Evidence in Gropping Sexual Assault Cases

PODCAST
New Episode 4/8
Identification, Just the Double Loop Podcast Crossover
Community Forums and Websites

- Complete Latent Print Examination (CLPEX)
  - Community Forum where latent print examiners can come together and discuss relevant topics
  - Also allows other forum members, from all different industry post on issues
  - Public chat board
  - Create a profile and login
  - Moderated by Boyd Baumgartner and Steve Everist
  - http://www.clpex.com
Nehemiah Grew – 1684

If anyone will but take the pains, with an indifferent glass to survey the palm of his hand, he may perceive... innumerable little ridges of equal bigness and distance, and everywhere running parallel one with another.
Community Forums and Websites

- http://www.onin.com/
- Moderated by Ed German
- Great source of fingerprint related information
Community Forums and Websites
http://www.in-the-loop.net.au

- Moderated by Michael Whyte
- Great source of fingerprint related information

http://www.in-the-loop.net.au
Podcasts

- Double Loop Podcast
  - Glenn Langenburg and Eric Ray
  - [Just passed 200 Episodes !!!!](https://soundcloud.com/double-loop-podcast)
  - Weekly show discussing latent print topics, current events in forensic science, the newest research articles, interesting guests, and analysis of notable cases from a forensic scientist perspective
  - [https://soundcloud.com/double-loop-podcast](https://soundcloud.com/double-loop-podcast)

- Forensic Technology Center of Excellence (FTCoE)
  - Website: [http://www.forensiccoe.org](http://www.forensiccoe.org)
  - Website has a repository of webinars, podcasts and training resources
Local Friction Ridge Study Groups

- Northern California Friction Ridge Study Group
  - Host quarterly in person meetings
  - Website: [https://ckhullforensics.com/ncfsq/](https://ckhullforensics.com/ncfsq/)
  - Email: Cindy Hull - cindy@ckhullforensics.com

- California Central Coast Friction Ridge Study Group
  - Host quarterly in person meetings
  - Email: Tatiana Shlafer - Tatiana.Shlafer@santacruzcounty.us

- Southern California Association of Fingerprint Officers
  - Host bi-monthly in person meetings and annual conferences
  - Website: [https://www.scafo.org](https://www.scafo.org)
  - Email: Jessica Callinan - jessica@scafo.org
Local Friction Ridge Study Groups

- Bay Area Friction Ridge Study Group
  - Host quarterly in person meetings
  - Email: Heather Pulford – Heather.Pulford@hayward-ca.gov
Email Share Groups

- Email share groups are a fantastic resource to be able to leverage for recent issues, articles and discussions in your local area

- Cindy Hull Email Group
  - Website: [https://ckhullforensics.com/](https://ckhullforensics.com/)
  - Email: Cindy Hull - cindy@ckhullforensics.com

- Michele Triplett Email Group
  - Email: Michele Triplett - Michele.Tripelett@kingcounty.gov

- Sandy Siegel Email Group
  - Email: Sandy Siegel – ssiegel@houstonforensicscience.org
Friction Ridge Resources

- International Association for Identification
- California State Division
- Conferences and Seminars
- Training Providers and External Courses
- Internal Courses
- Referenced Textbooks
- OSAC – Friction Ridge Sub-committee
  - Legacy SWGFAST baseline documents
Friction Ridge Resources

- ASB - AAFS Standards Board (SDO)
- OSAC Registry
- ISO Standards
- Websites
- Journals
- Webinars
- Community Forums
- Podcasts
- Local Study Groups
- Email Lists
Keeping the Vision in 2020

MAY 18-22 2020

Save the Date

TRAINING CONFERENCE

LOCATED AT:
Omni Rancho Las Palmas Resort & Spa

Speakers Chair – Marrkel SMITH
Msmith@fremont.gov
Questions?

Steven Brock, CLPE
Latent Fingerprint Examiner Supervisor

Sheriff’s Identification Unit
Santa Clara County Sheriff’s Office

Phone: +1(408) 808-4750
Fax: +1(408) 995-6005
Cell: +1(408) 876-9292
Email: steve.brock@shf.seegov.org

Friction Ridge Resources – Sources of Information for the Friction Ridge Examiner