

Midwest Forensics Resource Center

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July 15, 2013

The Midwest Forensics Resource Center at Ames Laboratory is funded through the National Institute of Justice, under interagency agreement number 2009-DI-BX-K206. The Ames Laboratory is operated for the U.S. Department of Energy by Iowa State University, under contract number DE-AC02-07CH11358.

To view past issues of the MFRC Newsletter, please visit www.ameslab.gov/mfrc and log into Partners Web. If you need help accessing the Partners site, please contact the MFRC office at 515-296-MFRC or email mfrc@ameslab.gov.

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News

Midwest Crime Lab Directors Annual Meeting:

The Midwest Crime Lab Directors annual meeting was held June 25-26, 2013 at the Louisville Marriott Downtown in Louisville, KY. Attendees participated in seminars and discussions during the day and enjoyed networking in the evenings.

USACIL Sponsored Firearms Error

Rate Study:

The MFRC is developing an error rate study for determining false positive and false negative rates in cartridge case examinations. Participation will be open to actively practicing firearms examiners who work at ASCLD member laboratories or who are members of AFTE. Invitations to participate will be circulated through those organizations. Please consider participation if you qualify and you receive the invitation. The study has been delayed somewhat by the current poor availability nationally of center fire ammunition and semiautomatic handguns.

Technical Innovations in Management & Infrastructure (TIMI):

In collaboration with Iowa State University and the Minnesota Bureau of Criminal Apprehension Forensic Science Lab (BCA) in St. Paul, we developed an expert system for evidence submission. A prototype was uploaded on the Ames Lab server and reviewed by BCA evidence technicians and forensic scientists. Their feedback was used to make software modifications and to develop a final version of the Evidence Submission Expert System. That system and associated guidelines for installation and operation are currently awaiting transfer to the BCA. In the future, we hope to receive comments from the BCA on the use of the system as it can easily be customized for implementation and use by other MFRC partner crime labs.

If you are interested in learning more about the evidence submission expert system, please contact Rudi Luyendijk at 515-294-2931 or rluyendi@ameslab.gov.

Education:

If you have input or suggestions for university based forensic science educational efforts, please contact Todd Zdorkowski at 515-294-5640 or Zdorkowski@ameslab.gov.

Casework Assistance

The MFRC currently receives a constant level of requests for referrals for services. We welcome these inquiries, as well as any requests for other types of consultation or analyses. In addition to providing referrals to existing services, this program is designed to provide free access to new expertise and instrumentation.

If you would like more information, or to discuss the casework assistance program, please let us know. We would be happy to discuss

the program, answer any questions you may have, and walk through the process with you. Stan Bajic, the Casework Assistance Coordinator, can be reached at 515-294-2086 or via email at sjbajic@ameslab.gov.



Casework Assistance by the MFRC

Training and Technology Transition

The MFRC collaborated with the Johnson County Sheriff's Department, LeeAnn Singley and NIST in announcing the following events during the last quarter:

Measurement Science and Standards in Forensic Handwriting Analysis Conference & Live Webcast was held June 4-5, 2013 at the NIST Campus in Gaithersburg, MD. This was a free workshop and webcast offered by NIST.

This meeting enhanced the current state of forensic handwriting analysis through the use of advancements in measurement science and the latest research investments in quantitative analysis capabilities. NIST coordinated the event in collaboration with the American Academy of Forensic Sciences – Questioned Documents Section, the American Board of Forensic Document Examiners, the American Society of Questioned Document Examiners, the Federal Bureau of Investigation Laboratory, the National Institute of Justice, and the Scientific Working Group for Forensic Document Examination.

Bugs and Bones Forensic Workshop was held July 15 - July 18, 2013. The instructors were Dr. Neal Haskell, PhD (Bugs) and Dr. Michael Finnegan, PhD (Bones).

This 4-day course addressed Entomology and Anthropology and the information they may provide to forensic investigations. For additional information, please contact Ryan M. Rezzelle, Johnson County Sheriff's Office at 913-826-3268 or ryan.rezzelle@jocogov.org.

Basic Bloodstain Pattern Analysis Workshop was held June 3-7, 2013 at the Northeast Forensic Training Center in Bethlehem, PA. The instructor for this course was LeeAnn Singley, MS.

This 40 hour introductory workshop provided the foundation for bloodstain pattern analysis. The participants learned the basics of bloodstain pattern analysis and gained an understanding of how valuable this forensic discipline can be to investigations involving bloodshed. Hands on experiments and practical exercises were conducted throughout the week and were supplemented with lecture in order to convey the material. The course curriculum conformed to the recommended standards established by The International Association of Bloodstain Pattern Analysts (IABPA).

The MFRC is collaborating with several partners to announce and promote forensic science training in the following upcoming events:

Advanced Bloodstain Pattern Analysis Workshop will be held September 23-27, 2013 at the Northeast Forensic Training Center in Bethlehem, PA. The instructors will be Toby Wolson, MS and LeeAnn Singley, MS.

This advanced level course is designed for practitioners who have successfully completed basic instruction in Bloodstain Pattern Analysis, and who desire to build toward greater expertise in the discipline. The workshop will begin with a brief review of the basic concepts of BPA and will require the student to apply those concepts in mock crime scene settings. The crime scenes, with their associated clothing and physical evidence, will be completely processed. This will involve BPA documentation, stain selection, bloodstain pattern analysis, report writing, verbal presentation of findings, and defense of those findings. In this way, the entire range of BPA methodology will be practiced and employed. Some cases will involve the consideration of autopsy findings and forensic biology reports. All cases will involve discussion of case specific analytical limitations, quality assurance and context bias. For more information, contact LeeAnn Singley at 717-554-3739 or lsingleysa@msn.com or contact Andy Kehm at 484-201-1054 or akehm@northampton.edu.

Shooting Incident Reconstruction Course will be held August 28-30, 2013. The instructor will be Michael G. Haag and the course will be held at the Johnson County Sheriff's Office in Olathe, KS.

This 3-day course is designed for Crime Scene Investigators, Criminalists, Firearm Examiners, ID Techs, and Crime Scene/Homicide Detectives. This course has frequent LIVE-FIRE components to it. You will see exactly how the evidence at shooting scenes is generated.

The course will cover: practical, hands-on trajectory measurement techniques and comparison of known impact angles to measured angles on walls, in cars, other objects and materials; training in correct usage of trajectory analysis equipment (rods, lasers, protractors, and more); a review of the small arms ammunition and projectile design characteristics critical to shooting reconstruction; a review of common questions and issues in shooting incidents (with numerous case illustrations); instruction in



MFRC Training Website
<https://www.ameslab.gov/mfrc/training>

**Shooting
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August 28-30,
2013.**

Training Continued

shooting incident investigation and reconstruction procedures; the properties of specific terminal ballistic events (shot sequence, direction of fire, etc.); examination of the projectile penetration, perforation, and deflection characteristics of: sheet metal, glass, wall materials, wood, tires; laboratory examination of recovered bullets from a reconstructive standpoint – and more.

For more information on class content, student-supplied class materials, certificates, testing and other matters, please visit,

www.forensicfirearms.com or contact Ryan M. Rezzelle, MFS, CSCSA at 913-826-3268 or ryan.rezzelle@jocogov.

Bloodstain Pattern Analysis on Fabrics will be held July 29- August 2, 2013. The instructors are Mark Reynolds, PhD. and Ted Silenieks. The class will be held at the Northeast Forensic Training Center in Bethlehem, PA.

This advanced level course is designed for practitioners who routinely examine bloodstained fabrics and other textiles, and who are required to assess, interpret and report on bloodstain patterns as part of those examinations. The course builds upon fundamental knowledge of the forensic discipline of BPA and is designed to facilitate an improved level of BPA examination, interpretation and reporting. The primary focus of the course is to develop the skills required for the examination of bloodstain patterns found on clothing items commonly encountered in an investigation. Prior completion of a 40 hour basic workshop in Bloodstain Pattern Analysis is required for admittance into this course.

For more information, contact LeeAnn Singley at 717-554-3739 or lsingleygsa@msn.com or Andy Kehm at 484-201-1054 or akehm@northampton.edu.

R & D Program

We have completed the projects on the chemical characterization of emerging designer drugs, the random probability match procedure for statistical comparison of mass spectral data, and the development of a new model to study firearms related blood spatter. We are currently developing the new MFRC R&D Program Summary Booklet to highlight these three projects. Besides a description of the project and the forensic need it addresses, the booklet provides information on the project's methodology and experimental design as well as the project's final results and accomplishments. A brief discussion is also provided on the project's benefits to our partners and stakeholders and on the venues used to disseminate the research findings. Finally, the booklet presents the principal investigator's plans to continue the research or to transfer the new technology or method to the forensic practitioner.

The 2013 version of the R&D Program Summary Booklet also includes a list of articles, and their abstracts, which resulted from the fifty-seven projects the MFRC has funded to date and that have been published in peer reviewed journals. We have included them for two reasons. First, this year marks the 10-year anniversary of the MFRC R&D program. Second, peer-reviewed published research is a *Daubert* factor for establishing the validity of scientific testimony. The ability of forensic practitioners to acquire and utilize the peer-reviewed, published scientific and technical information contained in these articles is, therefore, of paramount importance to the practice of forensic science.

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