

THE FORENSIC EXHIBIT.

Forensic Science Australia (FSA) is a not-for-profit organisation that represents the interests of forensic science practitioners in Australia and New Zealand. FSA is a member of the International Association of Forensic Sciences (IAFSS) and the International Association of Forensic Sciences (IAFSS) is a member of the International Association of Forensic Sciences (IAFSS).

**Volume 2
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Nov 2019**

Shining a spotlight on the work of the Australia New Zealand forensic science community

Your NIFS Team Member Update



Stephen Smith
Business Analyst, ANZPAA NIFS

Welcome to the third edition of The Forensic Exhibit for 2019. I am pleased to provide you with the latest update on the work of the Australia New Zealand forensic science community.

ANZPAA Police Conference 2019 and 2020

ANZPAA NIFS were proud to be a part of and support the ANZPAA Police Conference 2019 (PC19) that was held in Melbourne in July. It is the only conference designed by police for police and explores issues affecting and influencing policing now and into the future. PC19 offered a forum for ANZPAA NIFS to provide real world examples of how forensic science agencies are driving innovation and how leaders at all levels can own the transformation journey.

The theme for PC20 is 'Smart Connected Policing' and the conference will run from 25-26 March 2020. PC20 will bring together 450+ current and future decision makers and leaders in law enforcement across Australia, New Zealand and the world. Registrations are now open for PC20 and more information can be found via the link below:

► <http://www.anzpaa-pc20.org.au>

ANZPAA NIFS Groups Meetings

The ANZPAA NIFS Groups, consisting of 10 Specialist Advisory Groups (SAGs), the ANZPAA Disaster Victim Identification

Committee (ADVIC) and the Chemical Warfare Agent Laboratory Network (CWALN), recently held their annual meetings across Australia. The ANZPAA NIFS Groups provide an important mechanism for the Australia New Zealand Forensic Executive Committee (ANZFEC) and ANZPAA NIFS to support and promote the continuous improvement of forensic disciplines, and encourage collaboration and innovative thinking across forensic agencies. I would like to take this opportunity to thank each of the members of the ANZPAA NIFS Groups, specifically the outgoing Chairs, for their hard work and dedication in progressing and delivering their respective Group's strategic priorities and activities.

ANZPAA NIFS Website and Twitter Accounts

Our website (www.anzpaa.org.au/nifs) and our Twitter account (@NIFS_ANZ) are continually updated with a range of information on the work and activities of the Australia and New Zealand forensic community. I would encourage you to check these communication channels regularly as they are a key method through which ANZPAA NIFS facilitates information-sharing across national and international stakeholders.

ANZPAA NIFS Team

Robert Morgan, ANZPAA NIFS Senior Forensic Project Officer, has recently accepted a 12-month secondment to the Victoria Police Forensic Services Department (VPFSD) as an Executive Advisor. On behalf of the ANZPAA NIFS team, I would like to wish Robert all the very best for this exciting 12-month secondment with the VPFSD.

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ANZPAA
Australia New Zealand
Policing Advisory Agency



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News from the forensic community

Research and Innovation Advisory Committee

This year the Research and Innovation Advisory Committee (RIAC) annual meeting was held at ANZPAA NIFS on 9 July 2019. One of the main roles of RIAC is to provide advice to ANZFEC on the key research priorities for forensic science. As such, the committee reviewed the top 3-5 research questions provided by the Specialist Advisory Groups for each forensic discipline to be included in the “ANZPAA NIFS Research and Innovation Roadmap - 2020 Annual Projects”. The 2020 Annual Projects document was prepared using the advice of RIAC and it was subsequently approved by ANZFEC in August 2019. It represents an agreed list of priority research projects informed by forensic science service providers from Australia and New Zealand.

How to use the 2020 Annual Projects document?

- The research questions (annual projects) posed in this document can be used by researchers and forensic science practitioners to explore opportunities to address research priority areas for police and government forensic science facilities across Australia and New Zealand. The document will assist in targeting research and innovation initiatives towards operationally relevant areas, in an effort to increase the efficiency and effectiveness of forensic science service provision in Australia and New Zealand.
- Researchers and practitioners can use this document to demonstrate to potential research partners and funding providers that their area of research aligns with the priority areas of operational forensic science facilities in Australia and New Zealand.

Maximise collaboration - Tell us about your work!

- Where researchers and forensic science facilities advise us of their current or future research that aligns to one or more annual projects, ANZPAA NIFS will in return connect researchers with other researchers and forensic science facilities that share common interests. This will assist to maximise collaborations, reduce duplication of effort and promote the distribution of resources across the different research priority areas.

For more information about the ANZPAA NIFS Research and Innovation Strategy, Roadmap and Annual Projects please visit

► <http://www.anzpaa.org.au/forensic-science/our-work/projects/research-and-innovation-project>

or email us at

► secretariat.nifs@anzpaa.org.au

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News from the forensic community

ANZPAA NIFS Project Support

As previously reported, we received a total of 34 applications for ANZPAA NIFS support across two submission rounds during 2018-19. The projects that were approved for funding contribution in the second round were reported in the last newsletter (The Forensic Exhibit – Volume 2, Issue 2) and a more detailed overview is provided in the following section.

Round 2 Project Overviews:

Examining optimal methods of communicating forensic expert opinions to lay stakeholders

*A/Prof Kristy Martire, Ms Stephanie Summersby & Ms Agnes Bali
(UNSW Expertise and Expression Laboratory)*

Research has shown that lay people can misunderstand and misuse forensic science evidence. Our project examines how to improve the communication of forensic expert opinions to lay people, taking into account the different roles, decisions and information needs of different stakeholders in the criminal justice system. We have proposed two experiments to progress research in this area; one experiment focused on communicating evidence during the pre-trial process, and a second experiment focused on communicating evidence to jurors during the trial process.

In **experiment 1**, we will present participants with an expert report, where the presence or absence of sections of the report will be randomised between participants. We will then examine how different versions of the report affect pre-trial decisions like those commonly made by defense attorneys.

In **experiment 2**, we will present jury-eligible participants with an expert report. The information and expression type presented in the report will vary. We will then examine how performance on a series of comprehension measures is affected by report type. We hope our findings will contribute to the development of recommendations for improving the communication and comprehension of forensic science evidence.

This research project commenced in mid-2019, and is currently in the design and coding phase. Ethics approvals have been granted for both experiments. The expected completion date for the project is early 2020.

Field testing of Illicit Drugs – An Evaluation of Current and Emerging Technology

Karen Blakey and Helen Eldridge, QHFSS

QHFSS in conjunction with QPS are evaluating two pieces of equipment for the analysis of illicit drug samples in the field. One is based on infrared spectroscopy and one on mass spectrometry. ANZPAA NIFS funding and support has facilitated the trial of these instruments over a three-month period to assess the instrument capability compared with results obtained in the laboratory. It is anticipated that this study will provide more detailed information regarding the application and effectiveness of these field technologies for the analysis and identification of illicit drugs in Queensland drug seizures.

QHFSS chemists will analyse a range of exhibit types encountered in illicit drug case work, including tablets, capsules, powders and liquids, to compare the results of the mobile equipment with those obtained in the laboratory. Selected samples are being collected over a six-month period to provide a representative cross-section of drug exhibits encountered in Queensland. New technology to the market will be assessed for field portability and robustness outside of a laboratory environment. Both pieces of equipment are currently in the laboratory and analysis has commenced. It is anticipated that the majority of results will be collected by the end of 2019 with data to be collated and presented in early 2020.

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News from the forensic community

Quantifying the usefulness of facial features for reliable facial image comparison

Dr. Alice Towler, UNSW Sydney

The goal of our project is to empirically determine which facial features are most useful for facial image comparison. Internationally recognised feature-lists exist, but these do not provide evidence-based guidance on the most valuable features.

Methodology we developed in 2017 allows us to objectively calculate the diagnostic value of facial features for identification. Using this methodology, in Phase 1 we will calculate the diagnostic value of facial features in optimal conditions – where images are compliant, high-quality and captured front-on under standardised studio conditions. In Phase 2, we will calculate the diagnostic value of facial features in sub-optimal conditions – where images are non-compliant, low-quality and captured from a range of angles and distances under unconstrained conditions.

This research will produce evidence-based feature lists which describe the value of each facial feature for reliable facial image comparison in optimal and sub-optimal conditions. It will also provide an empirically-derived understanding of how image quality (e.g. resolution, camera angle and subject-to-camera distance) and subject factors (e.g. age and race) affect the diagnostic value of facial features. This documentation can then be used to develop evidence-based training and best-practice documents.

Phase 1 of the project is well underway, with preparation of experimental materials complete and testing of face identification experts scheduled for early December. Phase 2 will commence in January with the appointment of a research assistant to create a 'sub-optimal' face identification test. Once complete, we will recruit face identification experts with experience in sub-optimal imagery to participate. Stay tuned!

Investigating deep learning for handwriting examination authorship opinions

Carolyn Bird, Senior Forensic Scientist, Forensic Science SA

A collaboration between the University of Adelaide, School of Mathematical Sciences and Forensic Science SA, aims to:

1. Identify and collate available datasets suitable for use in the development of an automated system for handwriting examination, and
2. Develop and test deep learning approaches for an automated identification system for natural, disguised and simulated handwriting.

Since the late 1980s, research into automated handwriting identification and verification approaches have resulted in a number of handwriting feature recognition systems. Most systems focus on large-scale processing of questioned writing within a closed set, and have not been tested to determine if they can address questions about authorship in cases where simulation and disguise may be encountered, or where the data available for comparison may be of different content.

This project seeks to develop a handwriting identification system tailored to the forensic context, which will allow less subjective assessments of case material to aid the forensic examiner in formulating their opinion. Ultimately, any automated approach will also improve the efficiency of processing large-scale questioned handwriting cases.

The funding obtained from ANZPAA NIFS for this project will provide a top-up scholarship for an Honours student. We anticipate this proof of concept work commencing in early 2020, in line with Adelaide University's usual Honours program.

Elemental glass database and statistical modelling with likelihood ratios in forensic investigations - Project Update

Hayley Brown, Manager Chemistry, Forensic Science SA

This project commenced mid-2019, with funding support from ANZPAA NIFS. Forensic Science SA staff are supporting the research by providing specialist advice to the University of Adelaide Mathematical Sciences Masters student Oliver Lountain. Oliver was fortunate enough to attend a recent ChemCrim SAG Workshop on Elemental Glass Analysis and Interpretation, which provided him with 'forensic' context for the project.

The project aims to publish a national elemental database. Oliver will analyse data from various LA-ICPMS systems and determine what information is most appropriate to be captured from casework, and on what platform, in order to develop a cross-jurisdictional frequency database. It is proposed this will be completed by July 2020. Once this is achieved, Oliver aims to develop a statistical model with likelihood ratios (LR) using LA-ICPMS data, incorporating Bayesian analysis of transfer and persistence of glass, and combining existing glass refractive index models, to provide stronger likelihood ratios for casework interpretations. This second stage of the project is expected to be completed by July 2021.

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News from the forensic community

ANZFSS Update

Adrian Linacre, ANZFSS President

**Australian and New Zealand
FORENSIC SCIENCE SOCIETY**



The ANZFSS symposia are always a showcase for the great research and case studies happening in this part of the world. Publication in international peer-reviewed journals is another indication of the research and case reports that are novel and of interest.

There are a range of journals with long pedigrees into which our work is submitted. Journals that span much of the forensic science arena include the official journal of the ANZFSS: The Australian Journal of Forensic Science, edited by our own Dan Franklin at the University of Western Australia. The Editor-in-Chief of Forensic Science, Medicine and Pathology is Roger Byard, based at the University of Adelaide. Internationally there is the Journal of Forensic Sciences (official journal of the American Academy), Science & Justice (official journal of the UK Forensic Science Society) and Forensic Science International.

In my work outside of the ANZFSS, I have the honour of being an Associate Editor of FSI: Genetics which currently has the highest impact factor of any forensic-related journal. Last year Australia was the third ranked country to have papers accepted by FSI: G (where the lead author is based in a country), only behind China and the USA. If you consider this comparison in terms of population of forensic scientists,

then this is a truly remarkable achievement. Indeed, New Zealand came 10th, which given it is the work of ESR and relatively few universities is also an excellent achievement. Our papers from Australasia are also read by others internationally; papers from this part of the world are among the most cited and downloaded. What is striking is how many of these top cited papers come from operational laboratories or via a collaboration with a university. Although subject-specific, forensic genetics, it is an excellent indicator of the research activity ongoing in Australia and New Zealand; this despite very limited funding opportunities. With the call for abstracts already announced for our meeting in Sydney next year, this bodes extremely well that the science to be presented from this part of the world will be as high as ever.

The Forensic Exhibit.

News from the forensic community

IAFS2020 – 22nd Triennial Meeting in Conjunction with the 25th ANZFSS Symposium



Distinguished Professor Claude Roux
(President, International Association of Forensic Sciences, University of Technology Sydney)

Sydney gearing up to host major international forensics conference

It is an exciting time to be a Forensic Scientist in Australia and New Zealand, as we count down to one of the most memorable international forensic science conferences.

The huge 22nd Triennial Meeting of the International Association of Forensic Science (IAFS 2020), in conjunction with the 25th Symposium of the Australian & New Zealand Forensic Science Society (ANZFSS), will welcome leading experts and colleagues from around the globe to discuss best practices and share experiences.

The call for abstracts opened on the 23rd September 2019 and will close on the 31st January 2020. Don't spoil your summer (or winter...) holiday and submit your abstract today.

<https://iafs2020.com.au/abstracts/>

As part of the theme “Forensic Science 2020 – Where to from here?”, the Meeting also aims to improve operational contributions and effectiveness in the light of current and future challenges.

The Organising Committee has been working with enthusiasm with the Advisory Committee and no less than 85 discipline convenors from around the world to stage the world's most memorable meeting of its kind.

We are proud to announce an exciting and thought-provoking plenary program that will bring together speakers from across four continents:

- Dr Rebecca Bucht, Head of CSI services at the Forensic Science Laboratory of the Finnish National Bureau of Investigation;
- Prof Olivier Delémont, Professor of Forensic Science at the Ecole des Sciences Criminelles (School of Criminal Justice) of the University of Lausanne, Switzerland;
- Ms Caroline Gibb, forensic researcher at the Netherlands Forensic Institute (NFI), and PhD student at the Leverhulme Research Centre of Forensic Sciences, University of Dundee, UK;
- Prof Pierre Margot, former Douglas M. Lucas Medallist, Emeritus Professor of Forensic Science at the Ecole des Sciences Criminelles (School of Criminal Justice) of the University of Lausanne, Switzerland;
- Prof Didier Meuwly, Principal Scientist at Netherlands Forensic Institute (NFI) and Professor of Forensic Biometrics at the University of Twente, The Netherlands;
- Prof Michelle D Miranda, Associate Professor in the Department of Security Systems and Law Enforcement Technology at Farmingdale State College, State University of New York, USA;

- Dr Thomas Parsons, Director of Science and Technology, International Commission on Missing Persons, The Hague, The Netherlands;
- Dr Jason Payne-James, Honorary Clinical Professor, William Harvey Research Institute, Queen Mary University of London, UK;
- Prof James Robertson, Professor of Forensic Science, National Centre for Forensic Studies, University of Canberra, Australia;
- Prof Anuruddhi Samanthika Edirisinghe, Carder Chair Professor of Forensic Medicine, University of Kelaniya, Sri Lanka;
- Prof Denise Syndercombe-Court, Professor of Forensic Genetics at King's College London;
- Dr Linzi Wilson-Wilde OAM, Director of the National Institute of Forensic Science at the Australia New Zealand Policing Advisory Agency.

The plenary program will also include presentations by the recipients of the following awards:

- *Adelaide Medal*;
- *Douglas M. Lucas Medal*;
- *IAFS Humanitarian Award*.

Overall, the plenary program will cover many critical challenges and opportunities in forensic science. Keynote presentations will include areas such as intelligence, biometrics, digital transformations, ethics, evidence evaluation, crime scene, gender-based violence, humanitarian forensic action, missing persons and future directions. In addition, regular oral presentations, electronic posters across 22 disciplines and up to 20 pre-conference workshops will further enhance the education element.

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News from the forensic community

Take your participation to the next level and consider proposing a workshop in your area of expertise.

For more information about workshop preparation and submission visit <https://iafs2020.com.au/workshops/>

As previously indicated, we don't just want the impacts of IAFS 2020 to stay within the walls of the brand-new International Convention Centre in Sydney (ICC). The Organising Committee is keen for the conference to leave a long-lasting legacy in forensic science. This will include capacity building in the form of support for emerging delegates and delegates from emerging countries and a forensic science strategic blueprint for many years to come. An entertaining social program will complement the conference while many other activities and partnerships are being discussed. I will be able to provide more information in my next message. At this stage, I can guarantee that delegates and participating organisations will have a unique experience.

If you come from overseas and/or with an accompanying delegate, take the opportunity to extend your trip for some pre- or post-Meeting travel to a myriad of unique Australian and New Zealand destinations including snorkelling the Great Barrier Reef, Uluru in the Outback desert, sampling Australian wine in the Hunter Valley or meeting the local seals and penguins in Milford Sound. For more information on what you can do in Sydney, Australia and New Zealand, please visit the website below.

► <https://iafs2020.com.au/sydney-and-surrounds/>

No doubt the next few months will be crucial, and we hope the fantastic support we received from Australia, New Zealand and overseas will continue. Sponsorship opportunities are selling fast and I recommend anyone interested to get in touch now.

I take this opportunity to thank the members of the various Committees for their dedication and support including the Organising Committee, Advisory Committee, Discipline Convenors and the community in general for their support. IAFS comes to our shores only once in a working life, join us and be part of history in the making!

IAFS 2020 will be held at ICC Sydney on 21-25 September 2020 under the theme "Forensic Science 2020 – Where to from here?". Visit the website <https://iafs2020.com.au/> for more information.

Join the conversations

 facebook.com/IAFS2020/

 [@iafs2020](https://twitter.com/iafs2020)



▲ The IAFS Koala ambassador has been promoting IAFS at international meetings. Lookout for him at a meeting near you!

ANZPAA

PC

20

POLICE

CONFERENCE

25-26 MARCH

2020

anzpaa-pc20.org.au

smart
connected
policing



ANZPAA

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Forensic project update

In brief:

Recently Published ANZPAA NIFS Documents

BAU

- ANZPAA NIFS Strategic Plan 2019-22
- ANZPAA NIFS Business Plan 2019-20
- Research and Innovation Roadmap - 2020 Annual Projects

Projects

Deliverable

- A Multi-Disciplinary Approach to Crime Scene Management (deliverable of the ANZPAA NIFS Best Practice Guideline for Crime Scene Managers project)
- Case Record Review in Forensic Science (deliverable of the ANZPAA NIFS Peer Review in Forensic Science project)
- Empirical Study Design in Forensic Science – A Guide to Forensic Fundamentals (deliverable of the Forensic Fundamentals project)

Visit the ANZPAA NIFS website to download the latest publications:

► <http://www.anzpaa.org.au/forensic-science/our-work/products/publications>

Workflow Mapping for Fingerprint and Drug Analysis

Update

Fingerprint Analysis

Phase 1 of the Fingerprint Analysis project has been completed and jurisdictional workflow mapping frameworks are currently being finalised. A number of jurisdictions have already found value in the workflow mapping frameworks developed and full reports will be made available to stakeholders by ANZFEC 15 (February 2020). The Phase 2 data collection is currently on hold to allow a number of other fingerprint related projects to be finalised.

Drug Analysis

Jurisdictional visits to scope and workshop the processes, general methods and equipment used for drug analysis in Australia and New Zealand were completed between September 2018 and January 2019. Information gathered during these visits informed the development of a process mapping framework which was approved by ANZFEC members out-of-session in October 2019, ending Phase 1 of the project. A detailed list of metrics and metadata will shortly be developed in consultation with the jurisdictional contacts nominated for this project and the Drug SAG prior to data collection.

IT Infrastructure

New

In collaboration with ANZPAA, a project has been commenced to update both the ANZPAA and NIFS websites. This exciting project will deliver an enhanced user experience for our forensic stakeholders. Further updates will be provided in future newsletters.

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Forensic project update

In focus:

AFSAB Overview

Update



Australasian Forensic Science
Assessment Body

Closure of the AFSAB Review Implementation Project and commencement of the AFSAB Enhancement Project

The AFSAB Review Implementation project was closed at ANZFEC meeting 13 on 29 August 2019 following the delivery of the approved recommendations from the AFSAB Future Directions Report (previously AFSAB).

This project aimed to strengthen an already robust certification program and streamline the process across the disciplines of Fingerprint examination, Firearm examination and Crime Scene investigation.

The outcomes of the project were achieved with strong support from the forensic science community – the ANZPAA NIFS team are sincerely grateful to everyone who has contributed and supported this project. A collaborative effort has resulted in enhanced process for the independent assessment of competency of forensic examiners, but this is not the end! In the last issue we hinted at the desire to establish mechanisms for the continuous improvement of AFSAB. The AFSAB Enhancement project to aid in this process and aims to:

- Enhance the operations of the Australasian Forensic Science Assessment Body (AFSAB) through implementation of a digital record management system and the development of new practical assessment materials.
- Audit all AFSAB records to ensure data migration to the digital management system is complete and consistent with ANZFEC decisions.

AFSAB Policy, Candidate Guides and Forms

An updated AFSAB Policy and Processes for Certification, and associated forms, were uploaded to the ANZPAA NIFS website in July 2019. AFSAB Candidate Guides specific to each discipline were also uploaded. An email notification was sent to AFSAB Experts and AFSAB Assessors on 26 July 2019. If you did not receive this email and you believe you should have, please contact:

► secretariat.nifs@anzpaa.org.au

The **policy** details information on the AFSAB processes, including changes that have been implemented as part of the AFSAB Review Implementation project. As such, there are quite a number of changes to the policy so we encourage you to take the time to familiarise yourself with it. Changes to the policy over the past 24 months include:

- A new application process which details requirements and time frames for candidates applying for certification
- A new assessment process including new assessment material
- Addition of a five-yearly recertification process
- Addition of a formal grievance and appeals process
- Addition of a formal eligibility criteria for AFSAB assessors
- Addition of an AFSAB Code of Ethics and Professional Conduct
- Addition of a process for observers to attend AFSAB Oral assessments

Guides for candidates have been developed. These guides are living documents and will be updated as required. The candidate guide aims to assist individuals preparing to undergo their AFSAB assessment and details the core and discipline specific competencies that will be assessed, the assessment structure and recommended resources.

AFSAB Recertification

Applications for AFSAB recertification are due on 1 January 2020.

Fingerprint examiners who were certified before 1 January 2015 will be due for five-yearly recertification on this date (Form 4). Firearms and Crime Scene examiners certified between 1 January 2014 and 31 December 2014 will also be due for five-yearly recertification on 1 January (Form 4). All other AFSAB certified practitioners will be required to apply for yearly recertification (Form 3). All applications can be downloaded from the ANZPAA NIFS website -

<http://www.anzpaa.org.au/forensic-science/resources/afsab>

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Forensic project update

In brief:

Forensic Fundamentals - Phase 2

Update

Overview

The aim of the Forensic Fundamentals project is to identify the underpinning science and validation requirements for forensic science disciplines. This project represents a long term activity for ANZPAA NIFS and will see a gap analysis performed for multiple forensic science disciplines. These gap analyses will inform ongoing updates to the Research and Innovation Roadmap Annual Projects document.

Claim assessment & Gap Analysis

The assessment of firearms, fingerprints and explosives has been completed with the assistance of expert practitioners across the three disciplines. Each working group mapped the claims made within their discipline, including claims surrounding underpinning principles and expert knowledge and interpretative ability. Literature was then assessed for each claim to determine the level of empirical support that exists. The final gap assessment and claim analysis was approved by ANZFEC, and has been disseminated to working group members, SAGs and ANZFEC agencies, along with the collated literature review information.

Empirical Study Guideline

The Empirical Study Guideline is now available on the NIFS website (<http://www.anzpaa.org.au/forensic-science/our-work/products/publications>), having been approved by ANZFEC in August. This guideline is presented to promote best practice in the design of empirical studies in forensic science and provide a means to assess the quality of published studies. The Guideline has been trialled during the literature assessment conducted this year for the three disciplines and has proved a useful product to enable consistent assessment and education of practitioners about appropriate empirical design.

Model Framework for Double Blind System Testing in Forensic Science

Update

Overview

A comprehensive framework has been developed by the working group, outlining key steps and considerations for the development of double blind system testing. Stages to consider with a program include the test design, including which methods will be tested, how realistic stimuli can be created and the information necessary for case construction. Following design, guidance is given on the recruitment of police investigators to submit evidence through standard channels, tracking of cases through the laboratory system and the assessment of results and casefiles. Finally,

recommendations around practitioner and system feedback, reporting trial results and continuous improvement of the program.

Double Blind System Testing Pilot

Following the conceptual design of the framework, it will be piloted across interested Australian and New Zealand laboratories in the next year, in the disciplines of Fingerprint and Drug Analysis. Forensic practitioners and police investigators will be recruited from participating jurisdictions to provide further refinement to the framework during the pilot.

Forensic Standards Development

Update

The following ISO TC272 standards were sent for country member commenting:

- ISO/WD 21043:3 – Forensic Sciences – Analysis
- ISO/WD 21043:4 – Forensic Sciences – Interpretation
- ISO/WD 21043:5 – Forensic Sciences – Reporting

Standards Australia committee CH041, the Australian mirror committee to TC272, met on 3 September 2019 to discuss the standards and submitted a number of comments on each of the standards to ISO. A further meeting was held on 15 October 2019 to review the comments submitted by other countries and agree to a position. That position was then represented by the Australian delegation at the meeting of TC272, which was held in Singapore 18–22 November 2019.

The three standards will now be sent out to member countries for a future round of comments. To this end, CH041 will meet in the new year to discuss the revised document.



The Forensic Exhibit.

Meetings and workshops

Workshop Report:

ANZPAA NIFS Groups Update

ANZPAA NIFS Groups meetings were held in 2019 under the operation of the new ANZPAA NIFS Groups Terms of Reference. Meetings were held by all 12 groups - 10 Specialist Advisory Groups (SAGs), the ANZPAA Disaster Victim Identification Committee (ADVIC) and the Chemical Warfare Agent Laboratory Network (CWALN).

The new process for agenda led meetings ran smoothly and we are already seeing the tangible benefit of the outcome driven groups. On 23rd October 2019, Group Chairs presented a summary to ANZFEC of their Group's activities over the last 12 months and the strategic priorities they will be tackling in 2020.

Report from the 2019 ENFHEX and EFPWG Joint Meeting – Interpretative Forensic Sciences, Common Issues

Date: 9-12 September 2019
Location: Porto, Portugal

Dr Kaye Ballantyne

The European Network of Forensic Science Institutes (ENFSI) maintains seventeen Expert Working Groups to support the aims and objectives of ENFSI within their specialist working areas. Although the working groups generally meet separately, the Forensic Handwriting Expert (ENFHEX) and European Fingerprint Working Group (EFP-WG) held their first joint meeting this year in Porto, Portugal. Although

the discipline pairing may seem like an unlikely one, the first day of presentations demonstrated the common issues that face both of these feature comparison tasks, including evidence recovery, human factors, collaborative testing, reporting, note taking and digitisation of evidence. A joint presentation from members of the NIST Human Factors Working groups on Latent Print Examination and Handwriting Examination adeptly showed the large extent of crossover between subjective, cognitively based tasks performed by experts, and the factors that need to be considered when performing, managing or evaluating opinions in such domains. The results of a joint collaborative exercise between ENFSI laboratories on DNA, handwriting, fingerprints and document examination were presented, and discussed both the complexities of doing such complex exercises, but also the value that can be obtained from addressing multi-disciplinary sequencing and examination.

The two disciplines separated for the second and third days of the Meeting, to enable experts to discuss specific issues and present the latest research. Within the Handwriting stream, a series of hands-on workshops gave participants valuable practice on disguised and simulated signatures, Arabic and Latin-based script and the comparison of signatures and writing. As well as being great group exercises, the immediate feedback received in these workshops gave the chance for participants to learn and reflect on the concepts presented, and the errors made. A number of presentations also addressed the growing area of digitally captured signatures, and the need to develop methods and validation studies for this new type of examination. Overall, the research presented at the meeting was of a high standard and addressed issues of importance not just to these two disciplines, but across many areas of forensic science. The chance for practitioners to meet, discuss and engage across different disciplines was invaluable, and the development of common solutions to common issues reduces duplication of effort, increases engagement, and strengthens the science of all disciplines.

11th Annual Meeting and Symposium of the Asian Forensic Sciences Network (AFSN)

Date: 17-20 September 2019
Location: Ho Chi Minh City, Vietnam

Distinguished Professor Claude Roux
University of Technology Sydney

Over the years, the Asian Forensic Sciences Network (AFSN) has become pivotal to the quality of forensic services in support of criminal justice in Asia. It has also established a strong reputation for delivering high-quality meetings, including an international plenary program and technical working groups across most areas of forensic science.

The 2019 meeting was no exception. The plenary program brought together the best scientists from Asia and around the world, including Prof. Jose Lorente (University of Granada, Spain), Dr Justice Tetley (United Nations Office on Drugs and Crime), Rolf Fauser (Forensic Institute Stuttgart, Germany), Hao Jinping (Institute of Forensic Science, China), Anna Davey (Forensic Foundations) and Prof. Claude Roux (UTS).

The program was complemented by two days of workshops and meetings delivered across eight technical working groups and one committee: DNA, trace evidence, crime scene investigation, illicit drugs, toxicology, digital forensic science, questioned documents, fingerprints and quality assurance & standards committee.

The meeting, once again, demonstrated the dynamism of the Asian region in forensic science. It was very well organised and well attended with some 400 delegates. Mr Phan Van Hieu, MD, MSc, Chair of the meeting & symposium and his committee must be congratulated on this success. The 12th AFSN Annual Meeting & Symposium will be held in the Philippines.

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Meetings and workshops

Workshop Report:

Chemical Criminalistics SAG Workshop – Interpretation of Glass Evidence using Bayesian and Chemometric Approaches

Date: 3-6 September 2019
Location: Melbourne, Australia

Kari Pitts
ChemCentre WA

Workshop Details

16 participants from 11 organisations joined 3 presenters from NZ, Australia and Florida for a workshop on the interpretation of glass evidence using Bayesian and Chemometric statistics. Held in Melbourne from the 3rd to 6th September 2019, the workshop consisted of 3 days of course work and a guided tour of the Oceania Glass float line and Viridian Glass processing factory on the final day. Participants were provided with a take-home test, to be submitted within 6 weeks, and passed with a mark over 90% to achieve successful completion.

Topics covered within the course included deriving likelihood ratios for various glass-breaking scenarios, the understanding and critical evaluation of multivariate statistics and the use of trace elemental comparisons for further differentiations of glass sources. Discussions were had surrounding the future requirements within glass evidence, with the following aspirations established:

1. the strong need for all jurisdictions to have the ability to access equipment for trace elemental comparisons. This may

be in the form of LIBS, μ -XRF or LA-ICP-MS but jurisdictions should no longer rely solely on RI.

2. for stronger assistance to the courts, some form of interpretation should be used in glass cases. This may be worded in the form of verbal 'levels of support' based on the derivation of likelihood ratios or in terms of 'being close to a broken window', where appropriate.
3. the ultimate goal is the ability to undertake 'activity-level' reporting for all glass cases. As such, databases which utilise elemental data and RI data are required, as well as studies for the updating of background glass data from older studies and to establish the influence of mobile phone glasses.

Workshop Outcomes

Based on the representatives present, agreement was established on a practitioner level that jurisdictions:

1. following the ASTM 2927 standard will share data with FSSA for the Masters project currently underway.
2. will collate data on a proforma, regarding groups of glass fragments recovered from clothing in case-work.
3. will consider student projects aimed at updated studies for 'random man' subjects.
4. will establish and continuing to grow connections internationally to allow for the sharing of appropriate databases globally.

Generalised feedback from participant's and pass rates will be collated at a later stage, however preliminary feedback has been positive.

The Forensic Exhibit. Events Calendar

2019

DECEMBER

2019 ANZSOC Conference – Justice Reimagined: The Intersection between Academia, Government, Industry and the Community

10-13 December
Perth, Australia

► <http://anzsocconference.com.au/>

2020

JANUARY

Unfamiliar Facial Identification Group Meeting (UFIG) 2020

7-9 January 2020
Sydney, Australia

► <http://forensic.psy.unsw.edu.au/ufig.html>

FEBRUARY

2020 American Academy of Forensic Sciences (AAFS) Annual Meeting

17-22 February, 2020
Anaheim, CA

► <https://www.aafs.org/home-page/meetings/2020-aafs-annual-scientific-meeting/>

MARCH

Police Conference 2020 – Smart Connected Policing

25-26 March 2019
Melbourne, Australia

► <https://www.anzpaa-pc20.org.au/>

2020 ASCLD Symposium – Together Toward Tomorrow

29 March – 2 April 2020
Denver, CO

► www.ascldsymposium.com

SEPTEMBER

ISHI: International Symposium on Human Identification

14-17 September 2020
San Antonio, Texas

► <https://www.ishinews.com/>

22nd Triennial Meeting of the International Association of Forensic Sciences (IAFS) in conjunction with the 25th Symposium of the Australian and New Zealand Forensic Science Society

21-25 September 2020
Sydney, Australia

► <https://iafs2020.com.au/>

NOVEMBER

58th Annual The International Association of Forensic Toxicologists (TIAFT) Meeting

1-6 November 2020
Cape Town, South Africa

► <http://www.tiaft.org/tiaft-agenda.html>

2021

AUGUST

9th European Academy of Forensic Science Conference (EAFS)

20 August – 3 September 2021
Stockholm, Sweden

29th Congress of the International Society for Forensic Genetics (ISFG)

23-28 August 2021
Washington, DC

► <http://www.isfg2021.org>

The Forensic Exhibit.

Next edition focus

More information:

Newsletter contributions

If you would like any further information on ANZPAA NIFS or would like to contribute to the next edition of *The Forensic Exhibit* please contact Tracie Gould:
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