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Centre for Forensic Science
Newsletter
August 2019

From the Director's Desk

Dear Centre's Members, Associates, Colleagues and Friends,

We live in both exciting and challenging times whose only constant is change. Our environment and space of interest are rapidly changing, and the only way to move forward and keep relevancy is to adapt quickly. However, this does not mean that this should occur as a series of uncoordinated actions solely aimed at 'quick wins'. These would probably only be short-lived.

On the contrary, our transversal problem-orientated approach based on a robust forensic science philosophy provides much-needed guiding principles so we can continue to serve the needs of the community successfully. And this is very much aligned with the recently released UTS2027 Strategic Plan that articulates the University's purpose to advance knowledge and learning through research-inspired teaching, research with impact and partnerships with industry, the professions and community. This statement is music to my ears!

We are further comforted in our directions by the outcomes of two national assessments by the Australian Research Council (ARC) released earlier this year. In the ARC Excellence in Research for Australia (ERA) assessment, CFS research contributed to the ratings of "well above world standard" (highest level) and "above world standard" in Analytical Chemistry and Other Chemical Sciences (a category that includes Forensic Chemistry), respectively. Further, CFS research was assessed "high" (highest level) for engagement and "high" for impact in the ARC Engagement & Impact (EI) assessment. Our fingerprint research impact study is on the ARC website as an example of high impact research.

These successes, along with many positive outcomes presented in this issue, are the testament of a talented and committed team. However, we cannot stop there. The rapidly changing environment described above and also the revamped Bachelor of Forensic Science and the new Master of forensic science prompted a need for new strategic appointments. I am pleased to welcome Drs Georgina Meakin, Manoranjan Mohanty and Marie Morelato as new continuing academic staff members. With respective backgrounds in crime scene and transfer & persistence of DNA, digital forensic science and forensic intelligence, they embody some of the areas of forensic science growth internationally. I am also pleased to welcome A/Prof. Jodie Ward, our new Director of the Facility for Taphonomic Experimental Research (AFTER) who will also maintain a position at the NSW Forensic & Analytical Science Service (FASS). Jodie has a real passion for identifying unknown remains to resolve long-term missing persons cases, and it is only natural for her to make UTS her new home.

These new CFS staff members will complement an already very active and successful team. An expanded team will create additional synergies and capabilities, along with our partners, to help address many of the challenging problems faced by society in the area of crime, deviant behaviour and security as a whole.

With IAFS 2020, the 22nd Triennial Meeting of the International Association of Forensic Sciences in conjunction with the 25th Symposium of the Australian & New Zealand Forensic Science Society around the corner, our region in general and UTS, in particular, is becoming the centre of gravity for forensic science worldwide.

I thank everyone, including our partners and collaborators in Australia and overseas. I wish you exciting times ahead.

Distinguished Professor Claude Roux

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Research Highlight: Sam Armen

Research Associate Sam Armen

My name is Sam Armen and I am a research associate at CFS currently undertaking research within the field of fingerprints. I am currently working on a project titled "The development of next-generation fingermark lifters and on-the-spot visualisation devices". I have always had a passion for science and spent many afternoons of my childhood reading the fortnightly issue of Horrible Science. Upon the completion of my schooling, I looked through the various science degrees on offer throughout universities in Sydney and was intrigued when a certain degree caught my eye. The degree titled "Bachelor of Forensic Science in Applied Chemistry" offered by UTS sounded like such an exciting way to apply chemistry. When learning about fingermark detection and identification in Physical Evidence (now titled Criminalistics) and conducting my own fingermark comparison in a mock case, I was hooked and knew this was the field for me.

In 2017 I commenced my honours degree, working on a project titled "The Field Use of 1,2-Indanedione Zinc" under the supervision of Dr Xanthe Spindler in collaboration with the NSW Police Force. I was able to successfully demonstrate that 1,2-indanedione zinc may be utilised in the field through application with a sprayer and treated with a heat gun. The work has since been presented at EAFS 2018, ANZFSS 2018 and IFRG 2019 and has been well received. Soon after completing my honours degree, I was presented with the opportunity to continue researching within CFS, this time as a staff member. Thrilled at the idea of continuing as a part of the CFS fingerprint research group, I was all but hesitant to accept the offer. I currently conduct research on next-generation fingermark lifters in a collaborative project between UTS, Western Sydney University and Northern Illinois University.

The next generation fingermark lifter research explores the possibility of splicing conventional fingermark lifters with amine sensitive fingermark regents or pH sensitive indicators to lift and treat fingermarks found in crime scenes in a single step method. The project is funded by the National Institute of Justice, an agency within the United States Department of Justice. I am working under the supervision and guidance of Professor Oliver Hoffstetter from Northern Illinois University, the lead PI of the project. Here, within the CFS and WSU I also have Professors Claude Roux and Chris Lennard as well as Drs Xanthe Spindler and Sebastien Moret providing their own expertise within the field of fingermarks to ensure my research is valid and meaningful.

Along with my research, I enjoy demonstrating practical sessions here at UTS in subjects such as Criminalistics, CSI and Forensic Imaging. I try my best to express my overall passion for forensic science to students and communicate my thoughts on how a transdisciplinary and holistic approach will be invaluable to the future of forensic science. In the near future, I'd like to cement my time as a member of CFS by publishing my 1,2-indanedione zinc work and convey how much my time as a researcher, both as student and staff at CFS has meant to me.

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Congratulations

- Congratulations to Prof Shanlin Fu was re-elected as Vice President of the Forensic and Clinical Toxicology Association (FACTA) for a further 2-year term (2019-2021).
- FACTA 2019 conference travel scholarship winners: Rhiannon Alder, Laura Clancy, Joshua Klingberg, Huey Sze Leong, Jingya Yan (Olaf Drummer Travel Scholarship)
- TIAFT 2019 conference travel scholarship winners: Rhiannon Alder, Laura Clancy and Joshua Klingberg (UTS VC Travel Scholarship)
- Dr Matthieu Maitre for his PhD degree conferral on 'Detection and interpretation of organic gunshot residues'
- Congratulations to Vitor Taranto who submitted his PhD thesis for review

Twitter Page and CFS Website

Make sure you follow us on Twitter: **@CFS_UTS** for the latest updates about upcoming events and information!

Also make sure to check out our website: www.forensics.uts.edu.au that has been recently upgraded!

It is an exciting time to be a Forensic Scientist in Australia and New Zealand, as we count down until one of the biggest conferences for our industry in the Southern Hemisphere.

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.

Importantly, 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 to stage the world's most memorable meeting of its kind.

As evidence for this, we are proud to announce two exciting partnerships:

- DFRWS (Digital Forensic Research Workshops) to integrate the rapidly evolving field of digital forensic science and deliver the first DFRW APAC as part of the meeting. In other words, for the first time, traditional and digital forensic science and medicine will meet and integrate in a tangible way to meet some of the most critical challenges in our field; and
- ICRC (International Committee of the Red Cross) who is already actively working with the Scientific Committee to profile and shape the Humanitarian Forensic Science program, another emerging theme of forensic science and medicine.

An exciting plenary program will bring together speakers from across four continents, including Dr Linzi Wilson-Wilde OAM (Director, ANZPAA NIFS), and hold, for the first time, a topical panel discussion comprising traditional and modern perspectives as part of the "Where to from here?" debate, which promises to be one of the Meeting highlights.

Keynotes, regular oral presentations and electronic posters will further enhance the education element across twenty-two disciplines, in a program that is being shaped by no less than 85 convenors from around the world. These subject matter experts are essential to ensure the scientific excellence of our program and must be gratefully acknowledged. The call for abstracts will open on Monday 23 September 2019.

But we don't just want to the impacts of IAFS2020 to stay within the walls of the brand new International Convention Centre in Sydney Sydney (ICC); the Organising Committee is putting in place a number of initiatives including mini-summits in order to produce a strategic legacy after the conference. Workshops and an entertaining social program will complement the conference while many other activities and partnerships are being discussed. I can guarantee that delegates and participating organisations will have a unique experience.

It is impossible to organise such a conference without sponsors who, this time, will have access to the largest and broadest spectrum of forensic-related people and organisations ever gathered in our region. Sponsorship opportunities are selling fast and I recommend anyone interested to get in touch now.
Finally, 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!

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

Visiting PhD – Elodie Lefrancois

By Dr Marie Morelato

Between January and June 2019, Elodie Lefrancois, a PhD student from the University of Lausanne, conducted some research at UTS. In collaboration with the Medically Supervised Injecting Centre (MSIC) in Kings Cross and to improve prevention messages, she analysed the residual drug content of used injecting paraphernalia. The results were presented to the MSIC staff and consumer action group. The results were also presented at the CFS meeting in May 2019.

Dr Marie Morelato with Elodie Lefrancois

Gait Workshop CFS and FEIT

On 12th of June, a gait workshop to establish collaborations between the Centre for Forensic Science and the Faculty of Engineering and IT successfully took place. Both Centre for Forensic Science and FEIT presented their research in their respective fields and the workshop resulted in fruitful outcomes.

CFS and FEIT Presenters within the Gait Workshop

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In the News

'Two Perspectives on Pill Testing'

Dr Marie Morelato, Prof Shanlin Fu and Distinguished Prof Claude Roux wrote an opinion paper on pill testing for the U magazine entitled "Two perspectives on pill testing". One highlighted quote on their opinion is as follows: '

'While testing does not make recreational drugs safer, it certainly helps mitigate some of the risks associated with it. We believe the benefits of pill testing outweigh the disadvantages.'

To access the full article, type in the following link:
http://newsroom.uts.edu.au/news/2019/05/two-perspectives-pill-testing

'This is going to affect how we determine time since death': How studying body donors in the bush is changing forensic science – The conversation

Dr Maiken Ueland spoke on 'the conversation' about the research underway at the University of Technology, Sydney's AFTER facility, which is yielding some surprising new findings about how bodies decompose in the Australian bush.

To access the full article, type in the following link:
https://theconversation.com/this-is-going-to-affect-how-we-determine-time-since-death-how-studying-body-donors-in-the-bush-is-changing-forensic-science-117662

Dr Maiken Ueland at the AFTER Facility

Welcoming CFS Academics

Dr Georgina Meakin

Dr Georgina Meakin

Dr Georgina Meakin is an Associate Professor at the Centre for the Forensic Sciences at University College London (UCL), where she has been teaching on the Crime and Forensic Science MSc programme and conducting and supervising forensic science research since 2013, when she initially joined UCL as a Research Fellow. In addition to a PhD and employment history in molecular genetics, Georgina completed an MSc in Forensic and Analytical Science at the University of Huddersfield in 2008 and practiced as a Forensic Scientist at The Forensic Institute in Glasgow from 2010 to 2012. At UCL, Georgina has continued to provide advice and consultancy in casework in the UK, USA, Australia and Canada. Building on this casework experience, Georgina's research focuses on investigating the transfer, persistence, prevalence and recovery of DNA and other trace evidence. She is particularly interested in the indirect transfer of DNA and how this affects the evaluation of trace DNA in casework, and has co-authored two of the major review articles on this subject. . In recent years, Georgina's research interests have expanded to include topics, such as, examining the recovery and packaging of trace evidence at the crime scene and investigating the recovery of human DNA in wildlife casework scenarios. In addition to teaching, research and casework, Georgina is very active in public engagement and has contributed to a range of activities, such as public lectures at the London Science Museum and for 'Pint of Science', giving talks for various societies, and interviewing for TV and radio shows.

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Welcoming CFS Academics

Dr Manoranjan Mohanty

Dr Manoranjan Mohanty

Manoranjan will join us as a lecturer in November 2019. Currently, he is a Lecturer in Digital Security at the University of Auckland, New Zealand. His research interest is on digital forensics and cybersecurity, with current focus mainly on source camera attribution, child explicit content detection, fake food detection, privacy-aware forensics, cloud and IoT forensics, and application of deep learning and blockchain for forensics. His work on privacy-aware forensics received the best paper award in IEEE Trustcom 2018 conference. Manoranjan received his Ph.D. in Computer Science from the National University of Singapore, Singapore in 2014. After that, he spent a year as an ERCIM Alain Bensoussan research fellow at SICS Swedish ICT, Sweden, and two years as a research fellow at New York University.

Welcoming CFS Academics

Dr Marie Morelato

Dr Marie Morelato

Marie Morelato completed her Bachelor and Masters degree in Forensic Science at the School of Criminal Justice of the University of Lausanne (Switzerland) in 2009. After completing her studies, she worked at the Wallis State Police (Switzerland) as a forensic scientist before moving to Australia to complete a one-year project on Gunshot residues at the Centre for Forensic Science (UTS).

In 2015, she completed her PhD on drug intelligence at UTS. The project was conducted in collaboration with the Australian Federal Police and the University of Lausanne. In 2016, she obtained the prestigious UTS Chancellor's Postdoctoral fellowship. Her research focuses on the use of forensic case data in a forensic intelligence perspective. Since April 2019, she has been employed as a Senior Lecturer at UTS developing capacity in the area of forensic intelligence.

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Academic Highlight: Dr Jodie Ward

Dr Jodie Ward

I have joined the Centre for Forensic Science (CFS) as the new Director of the Australian Facility for Taphonomic Experimental Research (AFTER). I will also maintain a position at the Forensic & Analytical Science Service (FASS) as their Forensic DNA/Identification Specialist. I am passionate about using modern forensic techniques to identify unknown remains in order to resolve long-term missing persons cases. My role as Director of AFTER will provide me with new opportunities to expand Australia's forensic human identification capacity and capability to locate, recover and identify unknown and missing Australians.

I have been involved in the field of biological criminalistics for over 15 years. Prior to this Joint Appointment, I was the Team Leader of the Specialist DNA Laboratory at FASS and the Team Leader of the Mitochondrial DNA Unit at the NSW Police Force. These positions involved the development and validation of a mitochondrial DNA testing capability for criminal and coronial casework. Furthermore, this is the first ISO/IEC 17025 accredited forensic laboratory of its kind in Australia, specialising in the identification of human remains using specialised extraction methods and nuclear, Y chromosome and mitochondrial DNA technologies. This unique service is also being used nationally by police, military and government agencies to identify challenging skeletal samples. I am also an expert in mitochondrial DNA testing, and provide expert evidence for both criminal and coronial cases. My first operational role in forensics was as a Forensic Biologist at the Australian Federal Police.

My academic roles have included being a lecturer at the Canberra Institute of Technology (CIT), primarily convening and delivering forensic biology and forensic research project subjects. Additionally, I developed and coordinated CIT"s Certificate IV in Biometric Technologies. I was also one of the lead curriculum developers for the Bachelor of Forensic Science (Crime Scene Examination). I also hold an Adjunct Associate Professor position at the University of Canberra for having assisted with teaching forensic molecular biology subjects in the Bachelor of Applied Science in Forensic Studies, international biological criminalistics training courses for the National Centre for Forensic Studies, and supervising and assessing postgraduate research students.

Prior to making the transition to human forensics, my research interests were focussed on the application of DNA tools to identify animal and plant evidence (to complement my degree major in botany and zoology). My Honours and PhD research involved developing a DNA-based identification system to identify grass evidence for forensic botany. Chloroplast and mitochondrial DNA loci of 100 Australian grasses were sequenced to identify single nucleotide polymorphisms and insertions/deletions that were diagnostic of clade, subfamily, tribe, genus and species taxonomic levels. This sequence variation was used to design a series of PCR-based molecular markers that could progressively identify an unknown grass sample to a given taxonomic rank.

My research interests now include investigating emerging DNA technologies and complementary forensic techniques to aid identification casework for compromised human remains. I am currently supervising a number of PhD projects being conducted at AFTER focussed on improving the efficiency and effectiveness of the DNA-based identification of large numbers of mass disaster victims, modelling DNA degradation with increasing post mortem intervals, and assessing the

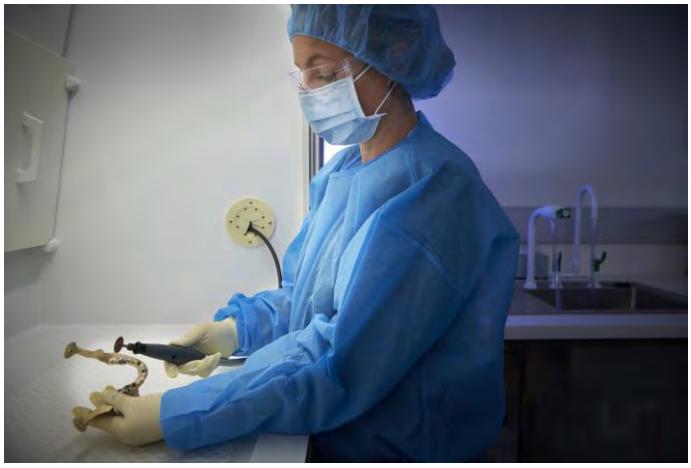
efficacy and complementarity of imaging, anthropological, radiocarbon dating and DNA methods for human identification. I have also led the exploration of massively parallel sequencing (MPS) applications for identification casework in NSW and been part of collaborative interagency investigations of this technology. I am particularly interested in using MPS for sequencing of whole mitochondrial DNA genomes to decrease the costs and labour involved in large-scale DNA testing efforts, coupled with an increase in throughput, genetic information, discriminatory power, and potentially accuracy and sensitivity, to more efficiently and effectively process large numbers of challenging forensic samples.

A career highlight for me was being awarded a 2015 Churchill Fellowship to investigate world-leading DNA identification techniques for missing persons and disaster victims. I have since devised, published and promoted a number of international best-practice recommendations for the establishment of an Australian Centre for Forensic Human Identification. This culminated in a TEDx talk last year, where I described my journey as a forensic humanitarian championing the introduction of a national DNA program to resolve Australia's unidentified and missing person cold cases. My dedication to increase awareness, generate support and drive change for missing persons has seen me be invited to be a Board Member for the Missing Persons Advocacy Network charity.

In 2017, I was recognised as one of Science and Technology Australia's 2017 Superstars of STEM. As a Superstar of STEM, I have embraced the opportunity to share my love for science with the public, be a role model for girls and advocate for gender equity in the forensic sciences. I was also recognised as one of the Australian Financial Review's 2018 100 Women of Influence for pioneering the specialist DNA identification facility assisting with the genetic identification of both modern and historical human remains.

My new joint role will put me in a unique position within the forensic sector, allowing me to influence the development and application of forensic human identification techniques in Australia, integrate forensic training across industry and academia, and translate forensic research into operational outcomes. There is also scope to expand the type of authentic research and training exercises being conducted at AFTER to enhance integration with operational partners, and produce more impactful outcomes for its stakeholders and the community.

With hundreds of unidentified human remains in Australia, it is vital Australian experts are adopting international best-practices, cutting-edge technologies and interdisciplinary approaches for identification casework, to determine if any of our long-term missing persons are represented amongst the deceased. Ultimately, my long-term vision is to create an Australian Centre for Forensic Human Identification; a dedicated facility where experts, technologies and methods come together under one roof to forensically examine and identify human remains, and lead research and development initiatives in this field. This Centre would span academic, industry and research sectors, putting facilities such as AFTER at its core.



Dr Jodie Ward

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Out and About

Forensic & Clinical Toxicology Association (FACTA) conference, 16th – 19th June

By Laura Clancy

Prof. Shanlin Fu and six PhD students from the drugs and toxicology research group attended the 10th Forensic & Clinical Toxicology Association conference in Adelaide 16-19th June. The conference was attended by 146 delegates from Australia, Austria, the Netherlands, New Zealand, Singapore, UK, and the US. CFS was very well represented at the conference with 9 oral presentations out of 43 total oral slots.

Jinni Yan was awarded the Olaf Drummer education award allowing her to attend not only this conference but the TIAFT conference in Birmingham later this year. Four other PhD students, Rhiannon Alder, Joshua Klingberg, Huey Sze Leong and Laura Clancy were awarded FACTA travel awards allowing them to attend and present their research in Adelaide.

The conference was filled with high quality presentations from many aspects of the forensic toxicology community. Highlights included keynote presentations from Dr. Marc LeBeau, Senior Scientist at the FBI Laboratory, who shared insights into improvements in forensic science and the challenges surrounding drug and alcohol-facilitated sexual assault. Dr. LeBeau also treated delegates to a guest appearance on a live recording of TOXPOD hosted by Adelaide local toxicologists, Tim Scott and Peter Stockham who chatted all things toxicology and the emerging risks. Another keynote was presented by Dr. David Caldicott, (Calvary Hospital ACT) an emergency clinician and is also known as the pioneer of pill testing in Australia. Dr. Caldicott spoke about the development of pill testing in Australia, how and why it works and the evidence behind combining science and intervention to reduce drug related harm.

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CFS researchers with David Caldicott at the FACTA2019 conference: Joshua Klingberg, Bethany Keen, Rhiannon Alder, David Caldicott, Laura Clancy, Jingya (Jinni) Yan, Huey Sze Leong, Prof Shanlin Fu

Sixth International Conference on Novel Psychoactive Substances, 8th – 9th April

By Dr Marie Morelato

In April 2019, Dr Marie Morelato and Dr Aimee Lloyd (former UTS PhD student who is currently working for the Institute of Environmental Science and Research, New Zealand) presented their research on cryptomarkets and online drug discussion forum at the sixth International Conference on Novel Psychoactive Substances in Maastricht.

3rd International Conference on Materials Sciences and Nanomaterials (ICMSN 2019) – Oxford, UK

PhD candidate at WSU and a member of CFS, Timothy Lee, was selected as the best oral presentation to present at the ICMSN Conference. Tim's research is part of the ARC Linkage Project entitled 'Next-Generation Latent Fingermark Detection Using Functional Nanomaterials' with WSU, AFP, Victoria Police and Rofin Australia.

Timothy Lee with his Best Oral Presentation award

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Out and About

International Fingerprint Research Group (IFRG) Meeting – Sheffield UK, 24th – 28th June

By Drs Scott Chadwick and Xanthe Spindler

On the 24th – 28th of June, two CFS academics, Drs Xanthe Spindler and Scott Chadwick, were invited to present research from the Fingerprint Research Group at the IFRG Meeting in Sheffield UK. This meeting brings together world leading researchers and practitioners to present and discuss on the latest in fingermark detection and identification research. The conference was hosted by Sheffield Hallam University and delegates were treated like royalty by the gracious host Professor Simona Francese. Regular IFRG Meeting attendees often joke that the week is a marathon, not a sprint, with action-packed scientific and social programs, and this year's meeting was no exception. Apart from the scientific program, delegates got a private tour of the West Yorkshire Police facility where they have revolutionised their approach to crime scene analysis (digital casenotes, rapid fingerprint searching tools) and the official conference dinner was held in Chatsworth House, a location famous for being the backdrop of the BBC adaptation of Pride and Prejudice (a saturated Colin Firth was not present). This conference provided an excellent opportunity for CFS to showcase some of the exciting research being conducted by the fingermark research group and the discussions had (that may or may not have been encouraged by a delightful gin tasting) will lead to some bountiful collaborations in the future.

Dr Xanthe Spindler and Dr Scott Chadwick and delegates

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Dr Xanthe Spindler and Dr Scott Chadwick and delegates

Research on Ancient Mayan Remains in Chiapas Mexico

In early January, our CFS PhD candidate Dilan Seckiner travelled to Mexico with Central Queensland University (CQU) colleagues to help uncover Ancient Mayan mysteries from 1000 years ago. The human remains were excavated from a cave in previous years, where then Dilan and the CQU team analysed the remains within the 'Universidad de Ciencias y Artes de Chiapas' laboratory.

PhD Candidate Dilan Seckiner at Chiapas, Mexico

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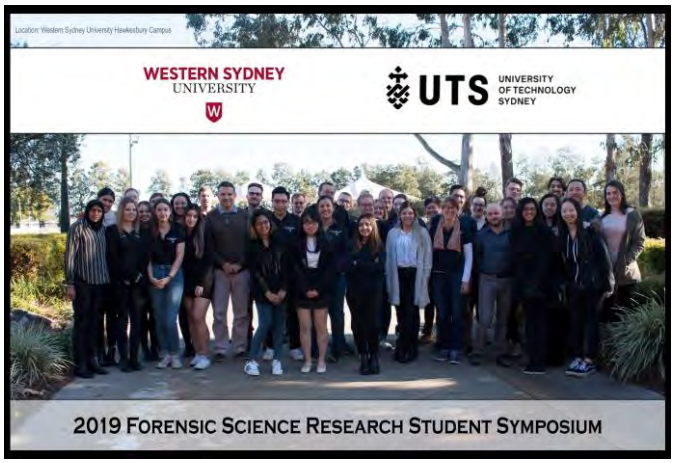
WSU-UTS Forensic Science Research Student Symposium

The UTS-WSU symposium displayed a range of interdisciplinary research that is currently being undertaken by Honours, Masters and first year PhD students. They presented their research with the broader UTS and WSU forensic science research communities, where ideas and feedback were shared.



Presenters and attendees at the WSU-UTS symposium

InterFORENSICS 2019

The second edition of InterFORENSICS, a major conference organised by the Brazilian Academy of Forensic Science, was held on 21-24 May 2019 in Sao Paulo. The meeting was well attended with over 1,500 delegates, mainly from Brazil and Latin America. Australia was represented by Distinguished Professor Claude Roux, President of the International Association of Forensic Sciences and UTS, and Doctor Carolyne Bird, Secretary of the Australian & New Zealand Forensic Science Society and Forensic Science South Australia. They respectively delivered a plenary presentation and a workshop, in addition to keynote presentations. A 22-member delegation from the American Academy of Forensic Sciences, including President Zeno Geradts and President-Elect Jeri Ropero-Miller also travelled to Brazil and attended the conference as part of their

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their International Educational Outreach Program (IEOP) in Forensic Science. Overall, InterFORENSICS 2019 showed that this meeting has the clear potential to become the main regional forensic science conferences for Latin America, complementing ANZFSS, EAFS and AAFS events in other parts of the world. InterFORENSICS 2021 will be held in Curitiba.

Some of the plenary speakers at InterFORENSICS 2019, Prof Zeno Geradts (AAFS President), Dr Angeline Yap (Singapore) and Profs Duarte Nuno Vieira and Claude Roux (past- and current IAFS Presidents) with Drs Helio Buchmuller Lima and Joao Carlos Ambrosio

Prof. Claude Roux, Dr Carolyne Bird (ANZFSS Secretary and FSSA) and Dr Joao Carlos Ambrosio (President, Brazilian Academy of Forensic Science)

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Inaugural AFP Forensic Academia Engagement Day in Canberra on Friday 19th July 2019

CFS Members were part of a diverse and dynamic group of almost 100 participants with a shared interest in Forensic Science, from a range of tertiary, industry and government partners, who gave their time to attend and contribute to the event.

The primary goal of the event was to bring together the law enforcement and academia community, to identify potential opportunities for enhanced collaboration to address the identified challenges AFP Forensics are facing and to explore how we go about achieving outcomes in a mutually beneficial way and timeframe.

The meeting was a success by all accounts.

Members from both UTS and WSU attending the Inaugural AFP Forensic Academia Engagement day

6th annual meeting of the Scientific Advisory Board of the Office of the Prosecutor of the International Criminal Court, The Hague, The Netherlands.

Distinguished Professor Claude Roux took part in this meeting in his capacity of President of the International Association of Forensic Sciences on 20 and 21 June 2019. The Board provides recommendations to the Prosecutor on developments in technologies and scientific methods and procedures that can further reinforce the Office's

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capabilities in the collection, management and analysis of scientific evidence relating to the investigation and prosecution of crimes listed in the Rome Statute (i.e. war crimes, genocides, torture, etc). In addition to the review of Standard Operating Procedures, other issues discussed during the annual meeting included expansion of the Board's scientific support to the Office of the Prosecutor and capacity in priority areas. It was also a great opportunity to meet again with UTS Forensic Biology graduate (international student from Sweden), Nelly Lind, currently intern at the ICC. It is a small world!

Prof Claude Roux with Nelly Lind

Members of the Scientific Advisory Board at ICC

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10th International Conference on Forensic Medicine and Sciences, (AUFT 2019), 9-11 April 2019, Hurghada, Egypt

Distinguished Professor Roux attended and presented at the Arab Union of Forensics and Toxicology Conference in Hurghada. Under the theme "Humanitarian Forensics - Education, Training and Practice, the conference attracted participants in the fields of Forensic Medicine & Sciences, who are interested in discussing various topics and identifying challenges and solutions regarding the forensic practice in Middle East Countries. Scientific sessions included keynote lectures by distinguished speakers from leading International Forensic Organizations and countries. The warm welcome and beautiful scenery were also much appreciated.

Prof Roux presenting at the Arab Union of Forensics and Toxicology Conference

FameLab 2019

PhD Candidate Dilan Seckiner, Australian FameLab Finalist

FameLab is a live science communication competition that aims to discover charismatic early career scientists to inspire people to see the world from new perspectives. It is run annually in Australia and in over 25 countries across the world.

PhD candidate Dilan Seckiner was runner up at the Australian FameLab semi-finals where she secured a position and travelled to Fremantle, Perth to compete within the Australian Finals of FameLab. With only the use of props, she communicated her research in three minutes to the public and via live stream.

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The examination of documents for forensic intelligence purposes – How can we exploit questioned documents to obtain useful knowledge about the source?

The traditional handwriting examination process is that it focuses on the identification of the writer, primarily for court purposes. However, specimen material may not be available for comparison, i.e. at the beginning of the investigation where no suspects have been identified. In such a situation, can we still obtain relevant and useful information from handwriting that could feed complimentary processes like intelligence and investigation? This question is at the crux of this project sponsored by ANZPAA-NIFS and primarily undertaken by the UTS PhD student and AFP document examiner Anna Agius. It is hypothesised that a writer retains the class characteristics of their native alphabet (regional characteristics) in their non-native writing.

In the last twelve months, Anna started to identify the handwriting characteristics inherited from learning their native alphabet that have been retained in their English handwriting. Preliminary results demonstrating the potential of the approach on a data set of 'Vietnamese vs Australian English writers' were presented at the ANZFSS Symposium in Perth in September 2018. The focus since then has been on investigating feature extraction software and expanding handwriting collection to include broader nationality groups. The next steps will be to improve our understanding of the regional handwriting characteristics of other nationalities and to further develop a predictive statistical model. The ultimate challenging goal is to deliver a semi-automated and proactive tool that can be deployed in an operational environment. In addition to Anna Agius, the research team includes Drs Scott Chadwick, Kylie Jones, Marie Morelato, Sebastien Moret, and Prof. Claude Roux.

Farewell to Dr Simone Gittelson

Dr Simone Gittelson

The UTS Centre for Forensic Science has been fortunate to appoint four new academic staff this year. Unfortunately, there is also some movement the other way. Unfortunately, Dr Simone Gittelson left UTS at the end July to start new adventures in the USA. Simone joined UTS in 2017. In a relatively short period with us, she has been pivotal to update the so important topic of forensic interpretation and inference to the 21st Century level. She also contributed to put UTS on the global map with her leading research in this area. Thank you Simone for your hard work and contributions. We wish you all the best for your future endeavours. We will miss you (although we will still continue research collaborations)!

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