From the Director’s Desk:

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

I was fortunate enough to be invited to speak at an international conference in September in Nicolet, Canada. A theme like Tracking the Science in Criminalistics could only generate interesting debates, especially that most of the best thinkers in the field were present (see page 4). I won’t surprise you if I am telling you that I came back with a re-enforced view about our discipline and about our own directions. Without rejecting the enabling sciences pillars we are built on, it is time to extract ourselves of the traditional framework to fully realise our opportunities. Developing and fostering a strong forensic science culture is crucial, and this implies changes in the way we identify research priorities, how we fund and undertake research and how we educate and train forensic scientists. I do not pretend to have all the answers. I am only wondering: with the exponential rate of changes in knowledge and technology, along with never-ending financial constraints and higher scrutiny, where does the future lay for forensic science? Probably not in the forensics (specialism) paradigm that has been dominant over the last 50 years and tends to force us to re-invent the wheel every six months...

Professor Claude Roux

Research Spotlight – Marie Morelato – The Missing ‘Think’

To date, forensic science has predominantly focused on generating evidence for judicial proceedings. Forensic intelligence plays a new role in forensic science through its proactive approach to forensic data analysis. Forensic intelligence is derived from traces (i.e. remnant of an activity or a source) that when extracted, analysed and interpreted, generate timely knowledge aiming to support decision-making in policing and in the broader security context.

Marie’s research investigates this new role of forensic science, with a particular emphasis on drug intelligence at the Australian Federal Police (AFP) in Australia. She works in close collaboration with the Forensics section of the AFP.

One of the aims of her study was to investigate the possibility of prioritising techniques utilised at the AFP for the chemical profiling of 3,4-methylenedioxymethamphetamine (MDMA). She showed that, from an intelligence perspective, there is no need to apply multiple analytical methods. This finding is valuable as it greatly reduces the time needed to obtain usable results, which is essential in an intelligence perspective. Furthermore, it also shows that chemical profiling of illicit drugs can be used to provide meaningful links between seizures and samples. The method proposed by Marie could be directly integrated in the AFP database giving an indication of potential connections between cases in a timely fashion. Her latest results were recently published in Science and Justice (see details on page 4).

Upcoming Events:

Centre for Forensic Science Honours Presentations
15th November 9:30 AM – 4:30 PM, City Campus, Room CB04.02.36 – For full programme please visit www.forensics.uts.edu.au

NSW ANZFSS Branch Annual Dinner
22nd November 2013 – For details please visit www.anzfss.org.au/nsw

Forensic and Clinical Toxicology Association (FACTA) Conference
2nd- 4th December 2013 – For details please visit http://www.facta.org.au/2013_meeting/
Congratulations

- PhD student Aimee Lloyd recently submitted her doctoral thesis. We wish her the best of luck with the examiners reports.

- Natasha Stojanovska and Scott Chadwick on their admission to the degree of Doctor of Philosophy with theses entitled *Rapid qualitative and quantitative analysis of novel drug analogues via Desorption Electrospray Ionisation - Mass Spectrometry (DESI-MS)* and *Near Infrared Laser Dyes for Latent Fingerprint Detection*.

- Research conducted by Morgan Philp and Verena Taudte were featured on the front covers of their respective journals. Congratulations to all those involved with this exciting research. The full details on their articles can be found on page four.

- Three articles published by researchers within the Centre were recently included in the top 25 most downloaded articles for Forensic Science International for January – June 2013. The full details for these papers can be found on page four.

- A paper published by Dr Unnikrishnan Kuzhiumparambil and Dr Shanlin Fu was recently featured as one of the hottest articles published in Analytical Methods.

- Congratulations to Professor Philip Doble for winning a UTS Vice-Chancellor’s Award for Excellence in Research (Partnership category).

- The UTS Centre for Forensic Science submitted six papers for consideration for the National Institute of Forensic Science Best Paper Awards (various categories) for 2013. We wish the authors the best of luck with the referees’ decisions.

Out and About

Visiting Scholar

The Centre was recently visited by Pierre-Hugues Stefanuto a PhD student from the University of Liège. Pierre-Hugues is currently working on developing a method for profiling complex volatile organic compound (VOC) mixtures and was able to work closely with Professor Shari Forbes’ research group in relation to decomposition odour analysis. During his visit he was able to assist in the sampling of decomposition VOCs as well as help elucidate patterns on the decomposition process from the two-dimensional gas chromatography (GCxGC) data. In addition to this, he was also able to develop a fast GC x GC method for explosive VOC monitoring, while the results obtained from this work provide significant promise for future work in this area.

While Pierre-Hugues worked incredibly hard during his visit he was able to experience Sydney life and was a frequent visitor to Friday night drinks. Pierre-Hugues would like to thank the Centre for allowing him this opportunity and special mention must go to both Professor Shari Forbes and Katelynn Perrault for all their assistance during his stay.

The NSW Branch of the ANZFSS proudly invites you to the ANZFSS Annual Dinner

**Friday 22nd November 2013**

**AERIAL FUNCTION CENTRE**

Level 7, Building 10
250 Jones St, Ultimo

Complimentary parking in Building 6 at UTS
Pre-dinner drinks from 6:15 pm
AGM and Special Meeting from 6:45 pm
Dinner service to commence 7:30 pm

Join us for a delicious three course meal, including beer, wine and soft drinks

$80 for members
$95 for non-members

VISIT: www.anzfss.org.au/nsw for ticket purchasing info

www.forensics.uts.edu.au
The International Association of Forensic Toxicologists (TIAFT) 2013 Funchal Madeira – Portugal 2nd – 6th September

Dr Shanlin Fu and Dr Unnikrishnan Kuzhiumparambil represented the Centre and presented four research papers covering forensic toxicology and forensic chemistry. This was an excellent opportunity to display the interesting research being conducted in the Centre and well as establish strong international contacts for future collaboration.

University of Lausanne Doctoral School, Zermatt – Switzerland

Fiona Jackson and Katelynn Perrault, two PhD students from the Centre were fortunate enough to attend the 2nd Doctoral School organised by the University of Lausanne. This series of lectures and workshops aimed to improve communication skills in presenting scientific research through presentations and posters. Other students and guest speakers from around the world were able to give feedback on each presentation in a constructive and friendly environment. During their free time, delegates were able hike in the Swiss Alps for a view of the Matterhorn as well as indulge in some of the finer culinary delights that Switzerland has to offer.

Australian Academy of Forensic Sciences Symposium - Efficient Forensic Science: Are we Using our Experts Effectively? - Sydney, 24th - 25th August

This excellent and well-attended symposium looked into the way forensic science is treated in criminal proceedings and beyond. Amongst a number of high profile speakers, it is worth noting plenary presentations by The Chief Justice of Queensland, the Honourable Paul de Jersey and by Karen Squibb-Williams, practising barrister in the UK. The theme of this symposium is close to the Centre’s interests through our various projects on forensic intelligence and the ARC LP Effectiveness of Forensic Science we collaborate on with the University of Tasmania and the University of Lausanne.

In his presentation, Prof. Claude Roux discussed how to develop the future forensic expert given the great changes forensic science is experiencing in not just technology but also the approach to forensic case investigation, service delivery and reforms in general.

Ultimo Science Festival 2013

This year’s Ultimo Science Festival was a hit! As part of an interesting and varied program running over 11 days, Prof. Shari Forbes gave a public talk on Death, Decomposition and Detector Dogs with 380 in attendance on 12 September, making this event one of the best sellers to date!

Defence Science & Technology Organisation Projects

Dr. Lucas Blanes and Reasmey Tith have been appointed as Research Associates for respectively the projects Explosives Detection Using MicroPADs and Immunogenic Detection of Fingermarks. Welcome on board Lucas and Reasmey!
International Conference on Criminalistics 2013
Nicolet - Canada 10th - 13th September

This conference was organised by the École nationale de police du Québec in collaboration with the Université du Québec à Trois-Rivières (UQTR), Sûreté du Québec, RCMP, a number of law enforcement organisations and associations. The theme of this conference was Tracking the Science in Criminalistics. The quality of the presentations and informal discussions was unsurprisingly excellent with leading scientists being present, including Profs. Pierre Margot and Christophe Champod (Lausanne), Frank Crispino (UQTR), Drs. Glenn Langenburg (Minneapolis), David Stoney (Virginia), Della Wilkinson (RCMP Ottawa), Hélène Leblanc (University of Ontario Institute of Technology) and Sherah VanLaerhoven (University of Toronto). Claude revisited (in)famous cases with a presentation entitled Quality Assurance to Warrant the Scientificity of Forensic Science: Hope or Illusion?

Publication News

Some recent statistics outlined below show the significant impact that research conducted at the Centre has had on the greater forensic community.

4th in the Top 5 most downloaded article of Forensic Science International over January-June 2013:


10th in the Top 25 most downloaded article of Forensic Science International over April-June 2013:


Publication News

14th in the Top 25 most downloaded article of Forensic Science International over April-June 2013 (and still standing since 2006!):


Publications in 2013 (Sept – Nov)


R. V. Taudte, A. Beavis, L. Wilson-Wilde, C. Roux, P. Doble, L. Blanes, A portable explosive detector based on fluorescence quenching of pyrene deposited on coloured wax-printed µPADs. Lab on a Chip 13 (21), p: 4164-4172


M. Ueland, H.A. Breton, S. Forbes, Bacterial populations associated with early-stage adipocere formation in lacustrine waters, International Journal of Legal Medicine, August 2013.


S. Luong, S. Fu, Detection and identification of 2-nitromorphine and 2-nitro-morphine-6-glucuronide in nitrate adulterated urine specimens containing morphine and its glucuronides, Drug Testing and Analysis 2013, Article in Press.