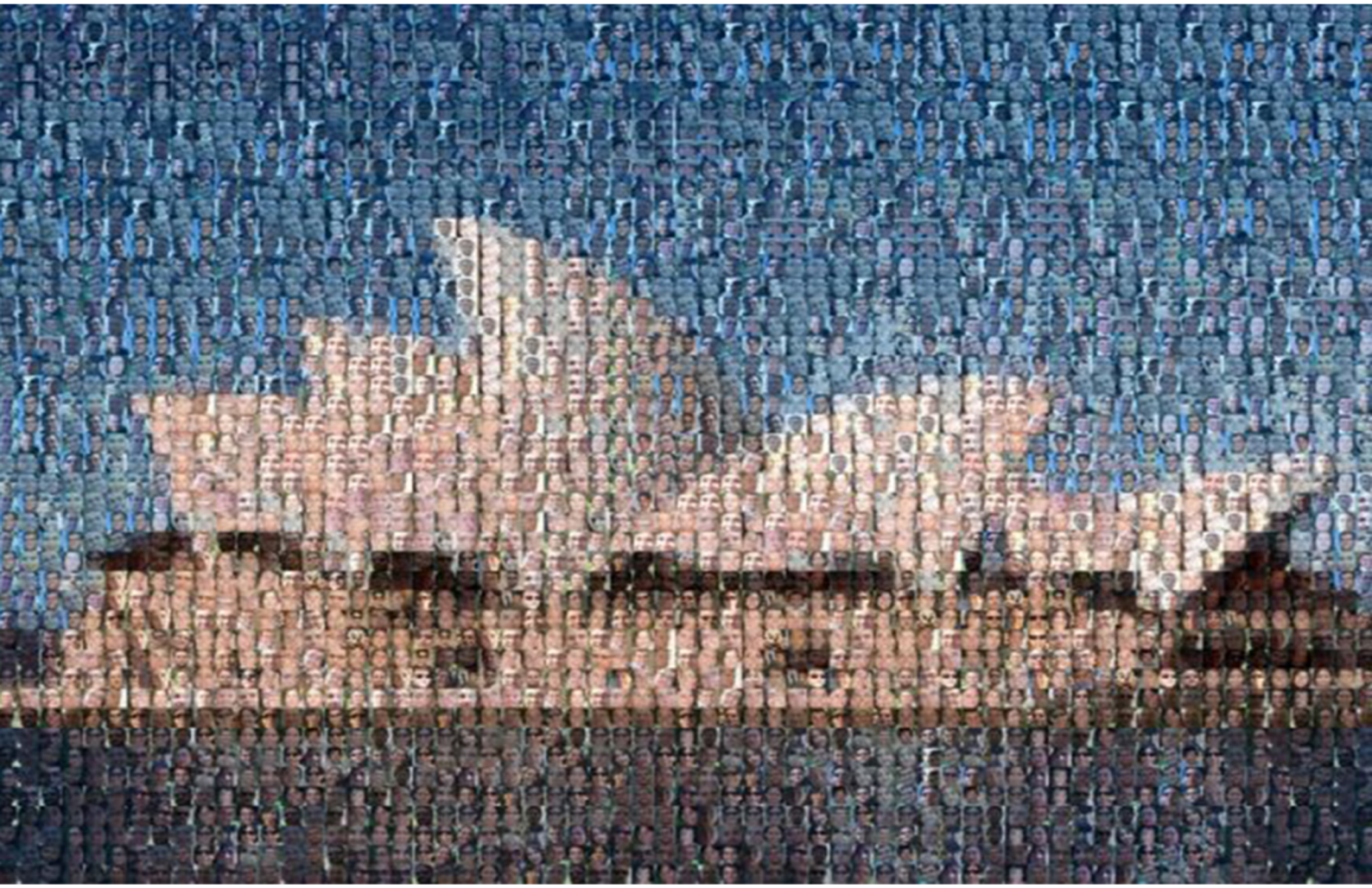
# UNFAMILIAR FACE IDENTIFICATION GROUP



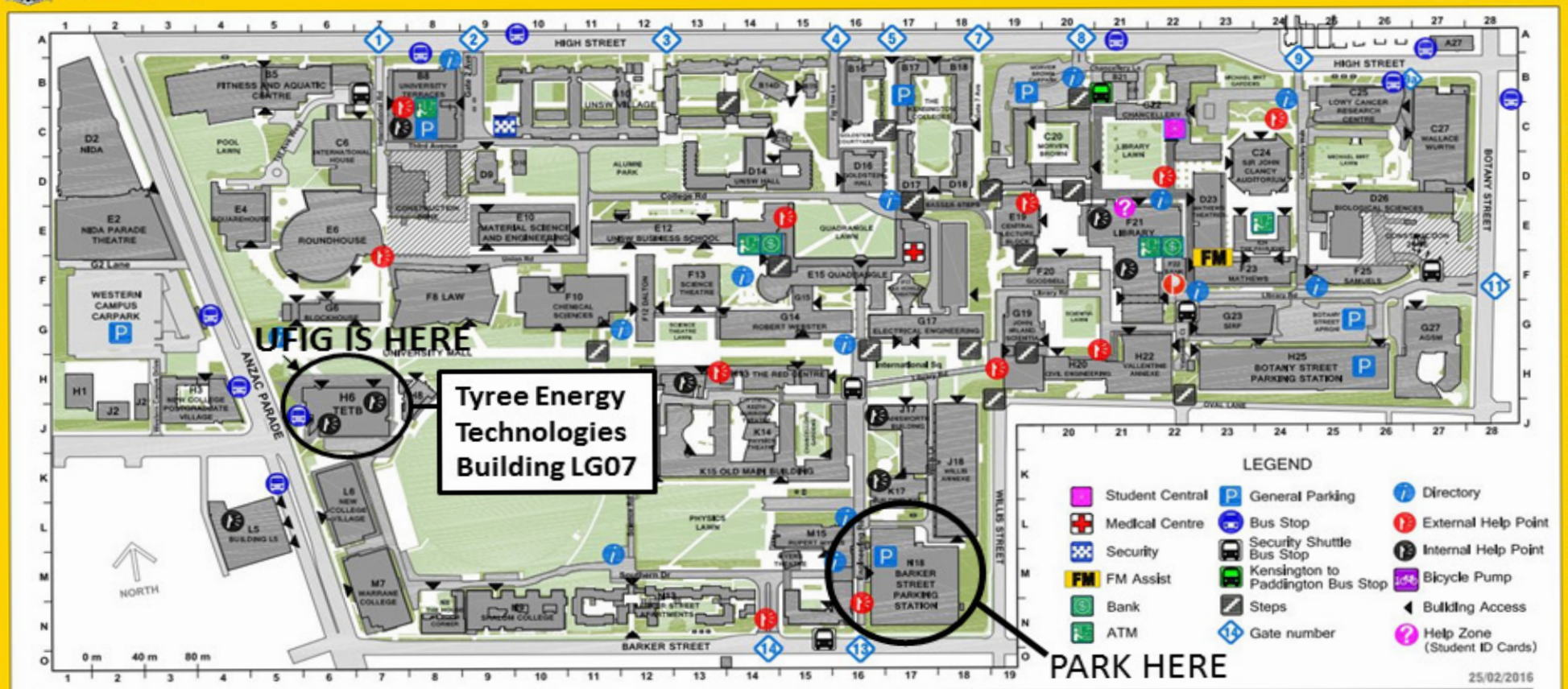
# CONFERENCE PROGRAM 2019

Thursday 7th & Friday 8th February

UNSW SYDNEY

UNSW AUSTRALIA

# Kensington Campus




FM:\Space Management\Information Services\ePlans@UNSW\Campus Maps\Kensington\Web Maps\KENC-Campus

## Buildings

| | |
|---|---|
| AGSM | G27 |
| Ainsworth Building | J17 |
| Biological Sciences | D26 |
| Blockhouse | G6 |
| Building D10 | D10 |
| Building L5, 223 Anzac Parade | L5 |
| Chancellery | C22 |
| Chemical Sciences | F10 |
| Civil Engineering | H20 |
| Colombo House | B16 |
| Computer Science | K17 |
| Dalton | F12 |
| Dangerous Goods Store | F17A |
| Electrical Engineering | G17 |
| Golf House, 38 Botany Street | A27 |
| John Goodsell | F20 |
| John Niland Scientia | G19 |
| Law | F8 |
| Library | F21 |
| Lowy Cancer Research Centre | C25 |
| Material Science and Engineering | E10 |
| Mathews | F23 |
| Mathews Arcade | E24a |
| Morven Brown | C20 |
| Newton | J12 |
| NIDA | D2 |
| Old Main | K15 |
| Pavilions | E24 |
| Quadrangle | E15 |
| Red Centre | H13 |
| Robert Webster | G14 |
| Roundhouse | E6 |
| Rupert Myers | M15 |
| Sam Cracknell Pavilion | H8 |
| Samuels | F25 |
| SIRF | G23 |
| Squarehouse | E4 |
| Tyree Energy Technologies | H6 |
| Valentine Annexe | H22 |
| Wallace Wurth | C27 |
| Willis Annexe | J18 |
| University Regiment | H1 |
| UNSW Business School | E12 |

## Student Accommodation

| | |
|---|---|
| Barker Apartments | N13 |
| Basser College | D17 |
| Colombo House | B16 |
| Creston College | A25 |
| Fig Tree Hall | B18 |
| Goldstein College | B17 |
| Goldstein Hall | D16 |
| International House | C6 |
| New College | L6 |
| New College Postgrad. Village | H3 |
| Phillip Baxter College | D18 |
| Shalom College | N9 |
| Warrane College | M7 |
| University Terraces | B8 |
| UNSW Hall | D14 |
| UNSW Village | B10 |
| UNSW Residential Communities | B17 |

## Faculty Offices

| | |
|---|---|
| Arts and Social Sciences | C20 |
| Built Environment | H13 |
| Engineering | K17 |
| Law | F8 |
| Medicine | C27 |
| Science | F12 |
| UNSW Business School | E12 |

## Theatres

| | |
|---|---|
| AGSM Theatres | G27 |
| Allens Arthur Robinson | F8 |
| Central Lecture Block | E19 |
| Chemical Sciences Theatres | F10 |
| Civil Engineering (Room G1) | H20 |
| Clancy Auditorium | C24 |
| Colombo Theatres | B16 |
| Fig Tree Theatre | B14d |
| Gonski Levy Theatre | F8 |
| IO Myers Studio | D9 |
| Keith Burrows Theatre | J14 |
| Law Theatres | F8 |
| Macauley Theatre | E15 |
| Mathews Theatres | D23 |
| New South Global Theatre | G14 |
| Old Main Theatres (Room 112) | K15 |
| Parade Theatres | E2 |
| Physics Theatre | K14 |
| Red Centre Theatre | H13 |
| Rex Vowels Theatre | F17 |
| Ritchie Theatre | G19 |
| Rupert Myers Theatre | M15 |
| Webster Theatres | G15 |
| Science Theatre | F13 |

## Services

| | |
|---|---|
| Accommodation Services | C18 |
| Admissions and Enrolments | C22 |
| Alumni Association | C22 |
| Arc @ UNSW | D17 |
| Careers and Employment Office | E15 |
| Cashier | C22 |
| Chaplains | E4 |
| Co-op program & Scholarship | F21 |
| Counselling Service | E15 |
| Educational Support Service | F20 |
| Equity and Disability Unit | F20 |
| Facilities Management | F23 |
| FM Assist ID Cards & Parking | F23 |
| Foundation Studies Permits | L5 |
| Freehills Law Library | F8 |
| Future Students Office | F20 |
| Graduate Research School | M15 |
| Help Zone (Student ID Cards) | F21 |
| Human Resources | C22 |
| Institute of Languages | L5 |
| IT Service Desk | F21 |
| Kingsford Legal Centre | F8 |
| Learning & Teaching Unit @UNSW | F21 |
| Library | F21 |
| Lifestyle Clinic | A27 |
| Mall Centre | F23 |
| Marketing Development | C22 |
| New South Innovations | M15 |
| Nura Gili - Balnaves Place | G17 |
| Optometry Clinic | M15 |
| Physiotherapy Clinic | B8 |
| Post Office | F22 |
| Print Centre | F23 |
| Religious Centre | E4 |
| Research Services | M15 |
| Security | B10 |
| Sports Association | H8 |
| Squash Courts | B7 |
| Swimming Pool | B4 |
| The Learning Centre | C22 |
| University Health Services | E15 |
| UNSW Bookshop | E15 |
| UNSW International Student Centre | H13 |
| UNSW Residential Communities | B17 |
| UNSW Scholarships | F21 |
| UNSW Fitness and Aquatic Centre | B5 |
| UNSW Student Central | C22 |
| Venues and Events | F23 |

## Childcare Centres

| | |
|---|---|
| Kangas House, 52 Barker St | O14 |
| House at Pooh Corner | N8 |
| Tigger's Honeypot, 22 Botany St | BS22 |
| Owl's House, 9 Kennedy St | KS9 |

# Introduction

Welcome to the 7th Unfamiliar Face Identification Group Meeting.

UFIG aims to bring together delegates from government, police, industry and universities to discuss key issues in unfamiliar face identification, in an informal setting.

The first UFIG was attended by around 30 delegates from 7 organisations. This year, we have 100 delegates from 30 organisations. UFIG is now a diverse group that includes users and developers of face identification systems, academic researchers that study human and computer components of these systems and scholars interested in their legal implications.

We believe that the popularity of this meeting stems from the broad interest in this topic. It is of academic interest to researchers in the field of face recognition and of practical significance to those who use these systems to identify customers, passengers, citizens or offenders.

You may notice a theme in the schedule year, with a number of presentations on 'Super-recognisers'. The discovery of individuals with natural talent in face recognition is an excellent example of a topic that has profound theoretical and practical significance. UFIG is an excellent opportunity to discuss the emerging scientific understanding on this topic, and ways in which these people might help improve face identification systems in the future.

This year we are particularly pleased to be able to welcome our keynote speakers, Dr. Josh Davis, Reader in Applied Psychology at the University of Greenwich in London and Dr. Ted Dunstone, founder of Biometix and the Biometrics Institute. Our ability to attract influential local and international speakers to this meeting is supported by the generosity of our sponsor this year, Westbourne Group (http://www.westbournegroup.com.au).

Over the next two days, we will hear a variety of presentations from system managers, users, developers, lawyers, researchers and others. You will see that we have allocated 10 minutes to each presentation with 10 minutes after each talk for discussion. We hope that you will feel able to contribute your perspective to these discussions as they are an essential part of UFIG.

Australia has emerged as a world leader in applied face processing research and policy. This is in no small part due to the remarkably close relationships that have developed between the various stakeholders in this field. We think that the UFIG meeting has played a role in developing and maintaining these relationships, and are very grateful for your contribution to this important endeavour.

# Contents

# Schedule

| Time | Topic | Presenter |
|---|---|---|
| **Thursday 7th February**<br>Tyree Energy Technologies Building, Lower Ground Floor, LG07 | | |
| 9.00 - 10.15 am | Networking breakfast (BYO) | |
| 10.15 - 10.30am | Introduction | Richard Kemp (UNSW) |
| **Keynote Presentation 1** | | |
| 10.30 - 11.30am | Improving face matching performance using orthogonal multi-modal Fusion | Ted Dunstone (Biometix) |
| **Session 1** | | |
| 11.30 - 11.50am | DST's Child Identification R&D Program: Overview and human research | Dana Michalski (DST) |
| 11.50 - 12.10pm | DST's Child Identification R&D Program: Algorithm evaluations and development | Martyn Hole (DST) |
| 12.10 - 12.30pm | With the evolution of video content analytics for safety and security efficiencies, is there real value of combining both smart analytics and face recognition? | Stephen Meltz (Zooti Consulting) |
| | 12.30 - 1.30pm Lunch | |
| **Session 2** | | |
| 1.30 - 1.50pm | When errors breed errors: Incorrect identity attributions increase errors on subsequent face-in-crowd search tasks | James Dunn (UNSW) |
| 1.50 - 2.10pm | Image variability can improve unfamiliar face matching across changes in viewpoint | Simone Favelle (UOW) |
| 2.10 - 2.30pm | Selfies and face recognition – the challenges | Bill Perry (Home Affairs) |
| 2.30 - 2.50pm | Community reactions to biometric compromise: An IDCARE client perspective | David Lacey and Kathy Allen (USC & IDCARE) |
| 2.50 - 3.20pm Afternoon break | | |
| **Session 3** | | |
| 3.20 - 3.40pm | Do priors matter for unfamiliar face identification? | James Wayman (San Jose State University) |
| 3.40 - 4.00pm | Predictive accuracy of estimating facial appearance from the skull: The Belanglo 'Angel' | Susan Hayes (UOW) |
| 4.00 - 4.20pm | Improving rates of identification for long-term unidentified deceased persons | Xanthe Mallett (University of Newcastle) |
| 4.20 - 4.40pm | Legal Q&A Panel | Gary Edmond and Mehera San Roque (UNSW) |
| **4.40 - 5.40pm General Discussion** | | |
| 6.00pm Dinner at Penny Lane, UNSW (must RSVP beforehand to attend) | | |

| Time | Topic | Presenter |
|---|---|---|
| **Friday 8th February**<br>Tyree Energy Technologies Building, Lower Ground Floor, LG07 | | |
| **Keynote Presentation 2** | | |
| 9.30 - 10.30am | The worldwide search for super-recognisers in the police, security and the general public | Josh Davis (University of Greenwich) |
| 10.30 - 11.00am Morning break | | |
| **Session 1** | | |
| 11.00 - 11.20am | Facial comparison in the Canada Border Services Agency and forensic expertise in Canada | Carolyn Dutot (Canada Border Services Agency) |
| 11.20 - 11.40am | Queensland Police Service - The search to identify super-recognisers to strategically improve crime prevention and public safety | Chris Tritton (QLD Police) |
| 11.40 - 12.00pm | What happens when super-recognisers do the ENFSI proficiency test? | Alice Towler (UNSW) |
| 12.00 - 12.20pm | Super-recognisers: From the lab to the world and back again | David White (UNSW) |
| 12.20 - 1.30pm Lunch | | |
| **Session 2** | | |
| 1.30 - 1.50pm | Understanding and improving forensic voice identifications | Tanya Wayne (UNSW) |
| 1.50 - 2.20pm | An update on face matching in the Australian Passport Office | Shashi Samprathi (APO) and Chris Malec (DST) |
| 2.20 - 2.40pm | Data analysis on an academic budget | Andrew Burr (Westbourne Group) |
| 2.40 - 3.00pm | Strengthening image-based identification evidence: A panel model | Richard Kemp and Gary Edmond (UNSW) |
| 3.00 - 3.30 pm Afternoon break | | |
| **Session 3** | | |
| 3.30 - 4.30pm | Panel Discussion: Perspectives on super-recognition | Chair: David White |
| 4.30 - 5.15pm | Super-recognisers in organisations: Linkage project proposal | Richard Kemp |
| 5.15 - 5.30pm | AOB | Chair: Richard Kemp |

# Keynote Presentation 1

**Thursday, 7 February 2019**

**10.30 - 11.30am**

## Dr. Ted Dunstone

*Biometix*

Dr. Ted Dunstone has been involved with biometrics and authentication for over twenty-five years, both academically and commercially. He founded Biometix in 1998, and has subsequently been involved in the delivery of major projects around the world including UK Home Office, Frontex (European Border Agency), IOM, US DHS and US DoD, as well as in the Asia Pacific region. Biometix implemented the first automated border control system using face in 2001 for the Australian government (SmartGate). He is the co-author of a book on data analysis and biometrics "Biometic System and Data Design" published by Springer.

Dr. Dunstone also founded the Biometrics Institute, a not-for-profit organisation engaged in research, analysis and education for biometric users, vendors and government agencies. The Institute has become the leading forum for government and industry on biometrics issues.

**Title:** Improving face matching performance using orthogonal multimodal fusion.

**Talk summary:** There are a variety of techniques that have been proposed to improve biometric performance using a fusion of different algorithms. These approaches have mostly focused on mixing sensor, feature, score or decision results. Orthogonal multimodal fusion matching looks to improve performance by applying one or more matching algorithms to the candidate list of a primary matcher, thereby exploiting the different strengths of each additional matcher in order to improve the ranking of true matches.

This presentation will talk about early results from our research as well as some practical consequences from its application.

# Keynote Presentation 2

**Friday, 8 February 2019**

**9.30 - 10.30am**


## Dr. Josh P. Davis

*University of Greenwich*


Dr Josh P Davis is a Reader in Applied Psychology at the University of Greenwich in London. His PhD was on the "Forensic Identification of Unfamiliar Faces in CCTV Images" (2007) and he has since published research on human face recognition, jury decision making, facial comparison methods, and eyewitness identification. His first co-edited book "Forensic Facial Identification: Theory and Practice of Identification from Eyewitnesses, Composites and CCTV" (Wiley Blackwell) was published in 2015, while his recent research has mainly focused on so called 'super-recognisers' with exceptional face recognition abilities. This led to changes in the management of CCTV images by London's Metropolitan Police Service, substantially enhancing suspect identification rates. He has since worked with worldwide police and businesses to assist in the deployment and recruitment of super-recognisers.

**Title:** The worldwide search for super-recognisers in the police, security and the general public.


**Talk summary:** The primary case evidence in most of the 5,000 convicted London 2011 rioters was identification from CCTV by London's Metropolitan Police Service (MET) police officers. A third were identified by MET 'super-recognisers', some of whom had previously been found to possess exceptional face recognition abilities. Subsequently, the MET established a full time "Super-Recogniser Unit" leading to 1,000's of suspect identifications per annum. This presentation will describe some of the science behind super-recognition, the tests used to identify police super-recognisers, and the results of tests for members of the public, one of which has been taken by over 6 million participants. Other worldwide police forces and businesses have since instituted their own super-recogniser teams to enhance their operations when correct identification is a priority.



**Keynote talk sponsored by Westbourne Group**

**http://www.westbournegroup.com.au**

# Abstracts: Thursday Session 1

## DST's Child Identification R&D Program: Overview and human research

*Dana Michalski, Veneta MacLeod, Gemma Snyder, and Thomas Pearce*
*Defence Science and Technology*

There is a critical need to determine the identity of children such as those that have been trafficked, kidnapped, exploited, or radicalised, or as part of visa and passport processing. Although facial image comparisons may be used in each of these contexts, very little research has been conducted in the face space with children in mind. This presentation will give an overview of the Child Identification program at DST and provide examples of some of the human research being conducted.

## DST's Child Identification R&D Program: Algorithm evaluations and development

*Martyn Hole, Dana Michalski, and Chris Malec*
*Defence Science and Technology*

Due to the considerable amount of facial change that occurs in childhood, commercial facial recognition algorithms may not be effective. Yet, very little research has been conducted with images of children to understand current limitations. This presentation will report on some of the commercial algorithm evaluations that have been conducted within the Child Identification program at DST and potential methods that may enhance performance in an operational setting. Recent algorithm development work to support operational areas will also be discussed.

### With the evolution of video content analytics for safety and security efficiencies, is there real value of combining both smart analytics and face recognition?

*Stephen Meltz*
*Zooti Consulting Pty. Ltd.*

Following the significant migration from analog to IP cameras and the investment in video surveillance management systems, organisations are now looking at how to extract the most value from their surveillance systems. With this dynamic shift, the future of video analytics is now; with next generation technology available to drive exponential value from surveillance camera investments with innovative, powerful and easy to use capabilities. The technology of today detects, tracks, extracts and identifies people, objects, their attributes and behaviour from video. Presenting objects that have appeared at different times within the video simultaneously, enables the review of hours of video in minutes. Embedded BI capabilities utilize extracted and aggregated video metadata such as men, women, children, vehicles, size, color, speed, path, direction, and dwell time, enabling users to quantitatively analyse their video, derive actionable insights, and visualize them within customizable dashboards for data driven safety, security and operational decision making. Near real-time alerting capabilities leverages advanced analytical capabilities to effectively balance sensitivity, accuracy and efficiency. With unique fusion of computer vision and Deep Learning technologies, together with its patented Synopsis® application, BriefCam is driving exponential value from surveillance camera investments with its innovative, powerful and easy to use smart video analytics. Adding face recognition to these capabilities, significantly enhances the solution.

# Abstracts: Thursday Session 2

### When errors breed errors: Incorrect identity attributions increase errors on subsequent face-in-crowd search tasks.

*James Dunn*
*School of Psychology, UNSW Australia*

In some cases, the identification evidence presented in court is from multiple sources that have been linked together by a reviewer who has recognised the same suspect in each instance. However, research has shown that attempting to recognise an unfamiliar face carries a risk for misidentification, which may affect the validity of this evidence. In particular, it is unclear whether misidentifying a person at an earlier stage can increase the chances of making another misidentification at a later stage. In this presentation, I present the findings of an experiment designed to answer this question, by measuring search performance after showing participants two images of the same person that have been misidentified as being different people. We found that participants made more misidentifications after seeing images pairs mislabelled as being different people than when

they were told that they were the same person, showing that earlier identification errors can decrease subsequent face recognition accuracy

## Image variability can improve unfamiliar face matching across changes in viewpoint.

*Simone Favelle*
*School of Psychology, University of Wollongong*

Providing multiple, variable images of unfamiliar faces results in improved matching accuracy compared to one-to-one image matching. Image variability appears to produce a more robust face representation that can lead to better identification of novel images of that face. This effect has been demonstrated using approximately front views of faces in both target and array conditions. In this experiment, we tested whether the advantage of providing multiple images extended to targets presented at different viewpoints, perhaps one of the most common sources of image variation. Participants were asked to match a target identity (shown at front, three-quarter or profile views) to an array of one or three faces (each shown in front view). Results showed that regardless of the target view, there was a multiple image advantage. This suggests that the nature of the information that variability provides to the visual system is invariant to viewpoint change.

## Selfies and face recognition - The challenges

*Bill Perry*
*Department of Home Affairs*

Organisations around the world are considering or actively evaluating the use for selfies. What are the business requirements for selfies; identification or verification ?
We will explore why it is not always as simple and easy as looking at verification and identification.

## Community reactions to biometric compromise: An IDCARE client perspective

*David Lacey[1,2] and Kathy Allen[2]*
*[1]Centre for Human Factors & Sociotechnical Systems, University of the Sunshine Coast*
*[2]IDCARE*

IDCARE operates a national identity and cybercrime community support service that receives in excess of 30,000 engagements a year from community members across the country concerned about the compromise and misuse of their personal information. Amongst these cases are individuals who have experienced what they believe to be the compromise of biometric information. This talk captures the views and attitudes of these individuals and considers frameworks for the assessment of biometric compromise risk and harm. Developing and maturing frameworks for assessing the risk of harm for individuals that experience the compromise of biometric information is becoming increasingly important as governments and businesses expand their capture and use of biometric data.

# Abstracts: Thursday Session 3

## Do priors matter for unfamiliar face identification?

*James Wayman*
*San Jose State University*

Bayesian reasoning has been held up as "a logical framework for every type of scientific evidence" (Evett, 1998), particularly useful for answering questions of source identification in forensic science. Historically, however, the so-called "Bayes Equation" has met with strong resistance: Ronald Fisher (1925) declaring "the theory.... is founded upon error and must be wholly rejected" and Karl Popper (Popper & Miller, 1983) claiming formal proof of its inadequacy.In simplest terms, the Bayes equation claims that our belief in the truth of a hypothesis depends upon both the statistical evidence and our prior estimates of its truth. The UFI community seems to side with Popper in rejecting Bayesian reasoning in toto, believing instead that human examiners can determine whether two facial images are of the same person without reference to any prior probability estimates (with "priors" equating to "prevalence" in the literature). UFI testing is consistently done under 50/50 prevalence conditions with the influence of prevalence on test results finding limited exploration in the literature (Stephens, et al, 2017). In this short talk, I will suggest a simple experiment that could indicate whether the Bayesian framework has applicability to UFI.

## Predictive accuracy of estimating facial appearance from the skull: the Belanglo 'Angel'

*Susan Hayes[1,2]; Hugh McDonald[2]; Sylvia Jastkowiak[2]; Gordon Gay[2]*
*[1]University of Wollongong*
*[2]NEC Australia*

The past decade has produced research findings that allow facial appearance to be estimated using predominantly verified skull-soft tissue relationships (though the invalidated forensic facial reconstruction recommendations continue to be preferred by most practitioners). In 2011, an estimated facial appearance of the Belanglo 'Angel' remains was undertaken for NSW Homicide (Hayes 2014), and her subsequent identification enabled what turned out to be the first formal evaluation of a forensic case, and the first to apply geometric morphometrics (statistical shape analysis) (Hayes 2016). The results of this evaluation were mixed, indicating that although some of the estimated features would probably have disrupted familiar face recognition, the overall predictive accuracy was likely good enough to work fairly well with automated face matching. This hypothesis has recently been tested using the NEC REVEAL facial identification software, and the results are promising.

## Improving rates of identification for long-term unidentified deceased persons

*Xanthe Mallett*
*School of Humanities and Social Science, University of Newcastle*

Across Australia there are a significant number of long-term unidentified deceased persons, some of whom may have been the victim of a crime whilst others simply died in circumstances that have prevented the police from reaching a positive identify: Their DNA, dental, or fingerprints have not been matched to anyone in the identification databases, and their details do not correspond to any missing person's reports. At this stage, without intelligence from the public providing new avenues of inquiry, the police can be left with few additional tools to apply to help identify these individuals. This presentation will discuss the development of DNA phenotyping, and the benefits this advanced DNA technology can bring to long-term unidentified deceased cases – including the creation of a facial likeness for skeletonised, traumatised, and incomplete remains. DNA phenotyping is not a silver bullet in terms of human identification, but under certain circumstances it can be a valuable additional tool for investigators. Case studies will be used to illustrate the application of phenotyping.

## Legal Q&A Panel

*Mehera San Roque and Gary Edmond*
*Faculty of Law, UNSW Australia*

This session will provide some brief comments on recent legal developments, but the main purpose is to encourage participants to ask questions of a legal, especially evidentiary, nature. Participants might also have ideas about improving legal practice. Mehera and Gary welcome questions, and this includes basic questions on issues that you might have always wondered about but never quite understood or had an opportunity to ask. They will attempt to answer them.

# Abstracts: Friday Session 1

## Facial comparison in the Canada Border Services Agency and forensic expertise in Canada

*Carolyn Dutot*
*Canada Border Services Agency*

The CBSA is an integrated border agency within the Public Safety Canada portfolio and conducts identity verifications for screening, border access, intelligence, immigration enforcement and criminal investigations. Although facial comparison has been a component of immigration, border and law enforcement applications for decades, acknowledgment in Canada of the need for facial examiners trained to competency has been limited. This discussion will provide an overview of on-going efforts in the CBSA related to facial comparison, facial biometrics and forensics in Canada and the challenges to the development of a forensic expertise.

## Queensland Police Service - The search to identify Super-Recognisers to strategically improve crime prevention and public safety.

*Chris Tritton*
*Queensland Police*

The Queensland Police Service have commenced research into the use of Super-Recognisers in law enforcement. Impressed by the outstanding examples of suspect identifications completed by members of the London Met they are looking at how they can identify the 2% of the workforce who may be SR's. The presentation will highlight the research conducted in both London and Australia and also the obstacles faced for the effective use in an operational context. The QPS intend to trial the use of SR's over the next 12 months to assist with familiar and unfamiliar identifications from offence CCTV footage as well as in the field at places of mass gathering and live searching from a command centre.

## What happens when super-recognisers do the ENFSI proficiency test?

*Alice Towler*
*School of Psychology, UNSW Australia*

Every year, the European Network of Forensic Science Institutes (ENFSI) run a proficiency test for facial image comparison. Last year, we entered 5 super-recognisers into the test to see how they would stack up against practitioners. Here, I will present the results of the test, and discuss the strengths and weakness of using super-recognisers in organisational settings.

### Super-recognisers: from the lab to the world and back again

*David White*
*School of Psychology, UNSW Australia*

In this talk I will outline three challenges that must be overcome before super-recognisers can be considered a mature solution to the problem of face identification. First, we need more information about the diverse tasks that super-recognisers are expected to perform in the real-world. Second, improved understanding of the perceptual and cognitive processes that underpin these 'real-world' face identification tasks. Third, reliable data on the correlation between lab-based tests and real-world tasks. Addressing these challenges in the years ahead will require intensive and bi-directional knowledge exchange between academics and practitioners.

# Abstracts: Friday Session 2

### Understanding and Improving Forensic Voice Identifications

*Tanya Wayne*
*School of Psychology, UNSW Australia*

Unfamiliar voice identifications made by people with no specific training can be influential in criminal trials. However, the cognitive processes underlying unfamiliar voice identification are poorly understood. Here, I present experiments examining the role of learning in improving voice identification accuracy. First, we examined whether providing feedback on voice matching decisions would improve accuracy. Across three experiments, we found no difference between control and experimental groups on a transfer test using novel voices, suggesting that feedback training does not transfer to novel voices. Next, we asked whether learning specific voice identities could improve subsequent matching accuracy with those voices. Participants received varying levels of pre-exposure to the first voice of a pair before making a same/different speaker decision about the pair. We found that increased pre-exposure resulted in a modest improvement in accuracy. Taken together, these findings suggest that training benefits may be specific to the voices used in training.

### An update on face matching in the Australian Passport Office

*Shashi Samprathi[1] and Chris Malec[2]*
*[1]Department of Foreign Affairs and Trade*
*[2]Defence Science and Technology*

### Data analysis on an academic budget

*Andrew Burr*
*The Westbourne Group*

What's better than academic pricing? Undoubtedly no cost! With over 15 years software development experience, Andrew will bring his perspective on a selection of software available in this space; focusing on the entry level. This talk will be of interest to anyone, either in academic or business contexts, wanting to make sense of the multitude of environments, frameworks and tools currently available, which support data analysis. Commentary shall place an emphasis on tools that not only enable data analysis at a low cost but have the potential to enhance the skillset on your CV.

### Strengthening image based identification evidence: A panel model

*Richard Kemp[1] and Gary Edmond[2]*
*[1]School of Psychology, UNSW Australia*
*[2]Faculty of Law, UNSW Australia*

There is now overwhelming empirical evidence that professional facial comparison training does not improve facial identification accuracy. This finding reveals a training paradox. How can facial examiners have superior face identification accuracy is training doesn't work? And, if examiners are good despite training that doesn't work, why aren't facial reviewers just as good? Here, I outline ongoing research investigating explanations for this training paradox.

# Friday Session 3

### Panel Discussion: Perspectives on super-recognition

*Chair:* David White (UNSW Science)

*Panel members:*
Mehera San Roque (UNSW Law)
Chris Tritton (QLD Police)
Carolyn Dutot (Canada Border Services Agency)
Josh Davis (University of Greenwich)
Troy Inwood (Super-recogniser)

### Super-recognisers in organisations: Linkage project proposal

*Richard Kemp*
*UNSW Australia*

# Meeting Organisers

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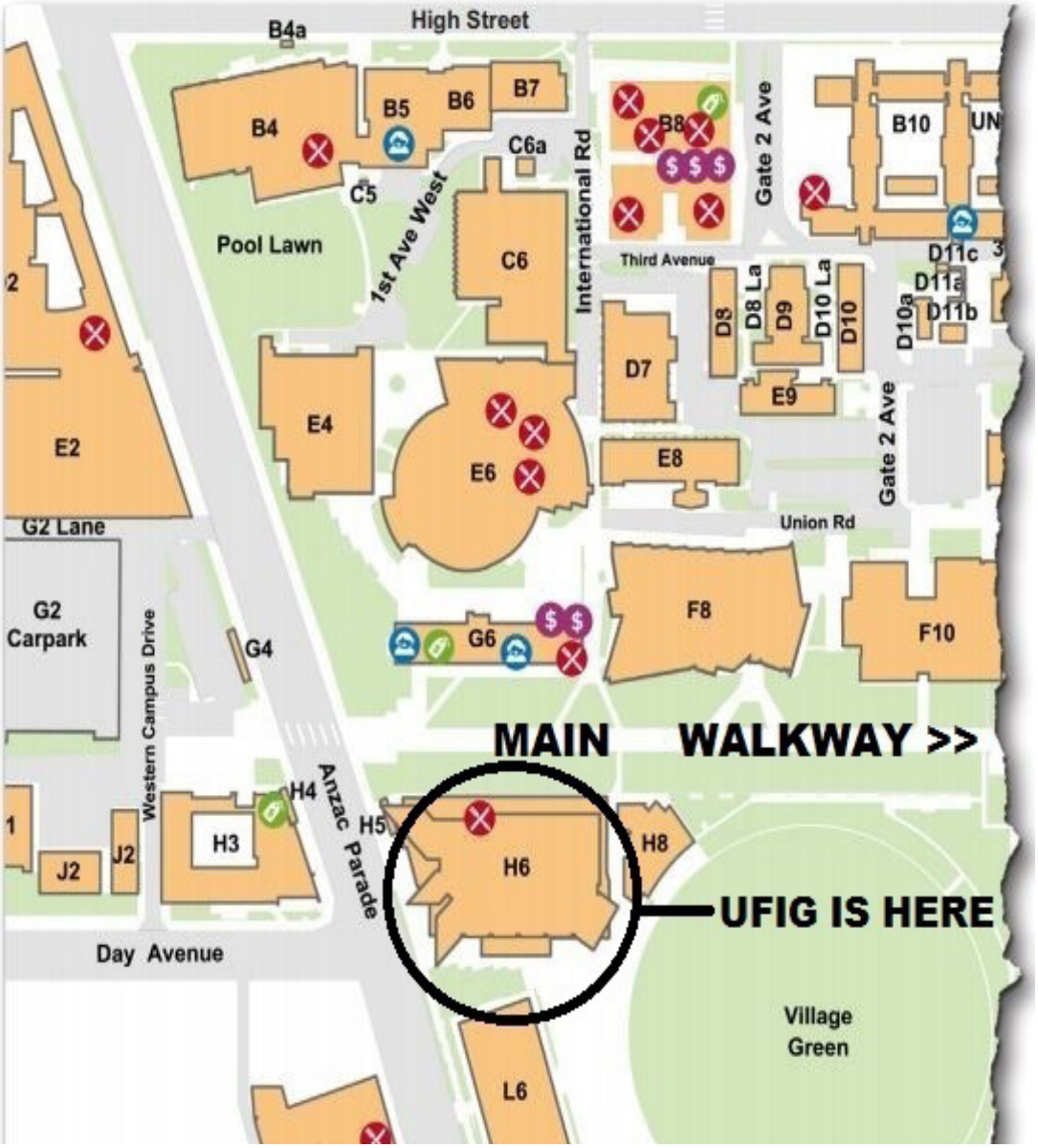
# Good Food on Campus

## Lower Campus

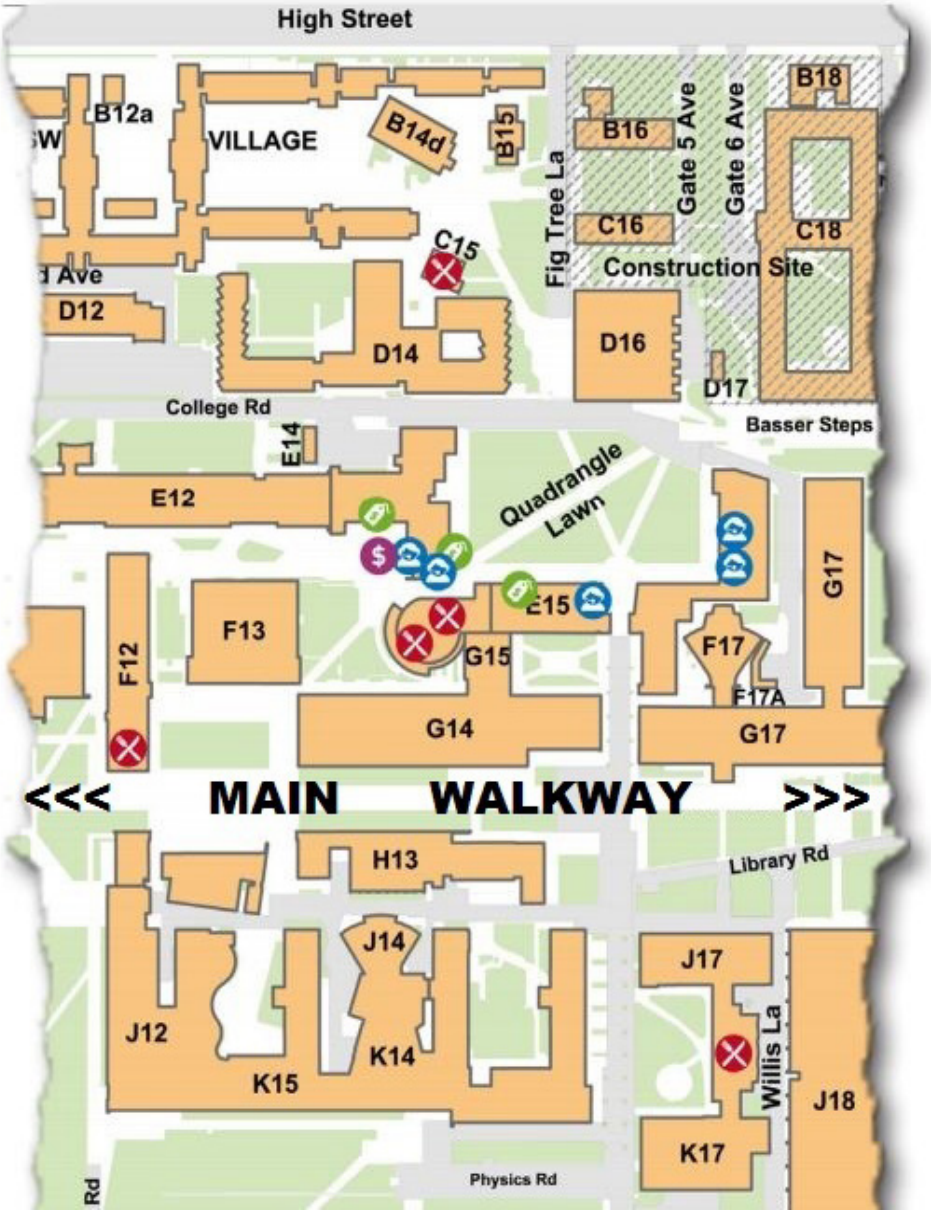
- Coco Cubano (B8) - Cuban-inspired tapas, drinks and coffee
- Guzman Y Gomez (B8) - Mexican burritos, tacos and salads
- Stellini Pasta Bar (B8) - Made-to-order fresh pasta dishes and drinks
- Thirsty Burger at The Roundhouse (E6) - Burgers, fries and wings



# Good Food on Campus

## Middle Campus

- Coffee on Campus (J17) - Coffee, drinks and hearty cafe fare
- JG's Cafe (F12) - Coffee, cakes, salads and sandwiches
- The Whitehouse (C15) - Boutique licensed bar. Coffee, pizzas and gourmet pub food



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# UFIG2019 presented by:

UNSW
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# Attending organisations include:

## Government and Industry

- Aervision Technologies Pty Ltd.
- Australian Federal Police
- Australian Passport Office
- Biometix Pty Ltd
- Canada Border Services Agency
- Cognitec Systems Pty Ltd
- Defence Science and Technology Group
- Department of Foreign Affairs and Trade
- Department of Home Affairs
- Department of Human Services
- Department of Immigration and Border Protection
- Department of Transport and Main Roads
- Immigration New Zealand
- NEC Australia Pty Ltd
- NSW Police Force
- Queensland Police Service
- The Westbourne Group
- Victoria Police

## Academic Institutions

- Bournemouth University
- San Jose State University
- University of Adelaide
- University of Newcastle
- University of New South Wales
- University of Queensland
- University of Sydney
- University of the Sunshine Coast
- University of Wollongong

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