

UFIG PROGRAM

11TH & 12TH FEBRUARY 2025
Room 132 - Sir Llew Edwards Building
The University of Queensland, St Lucia Campus

Welcome!

Welcome to the 11th Unfamiliar Face Identification Group Meeting - our first at The University of Queensland.

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

The first UFIG in 2013 was attended by around 30 delegates from 7 organisations. Over the years, we have seen these numbers grow substantially. Our delegates now come from a wide range of institutes, industries, and nations.

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

As always, we have allocated 10 minutes to each presentation, with 10 minutes after each talk for discussion. We hope that you will contribute your perspective to these discussions, as they are an essential part of UFIG.

This year, we are also hosting a cocktail dinner on the first night of the conference. We hope this gives delegates a chance to mingle, network, and make new connections. We sincerely thank AerVision Technologies Pty Ltd. for their generous contribution to this event.

Australia continues to lead the way in implementing research-informed policies and practice, and we believe UFIG has played a key role in developing and maintaining the relationships that enable this.

We are therefore grateful that you have chosen to attend and contribute to UFIG this year, to continue this important work.

Alice Towler, David White, Richard Kemp, & James Dunn



Meet the keynotes!



Aniela Pieterse

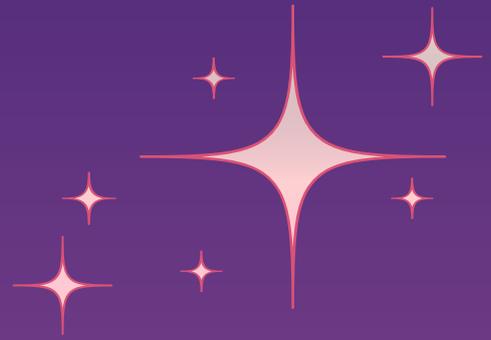
*Assistant Director | Forensic Examination Unit/Identity Resolution Unit |
Passport Fraud and Integrity | Passport Integrity and Support Branch*
Department of Foreign Affairs and Trade

Aniela Pieterse is the principal facial examiner for the Department of Foreign Affairs and Trade. She has a career in forensic science that spans 20 years across both state and federal government and law enforcement. She has filled numerous leadership positions in facial comparison working groups and is the current Vice Chair for FISWG. She is passionate about all things 'face' and strengthening the community both here and internationally. When not at the office, she enjoys time with her family and chihuahuas.

Facial identification, how far have we come?

Tuesday 11th February 9:45am

Facial Identification has become increasingly embedded across industry, government and law enforcement, but how far have we really come as a discipline? From experience across government, law enforcement and the education sector, the presentation will discuss the current landscape in face, where we have come from, and where we should look to be.



A/Prof Jessica Taubert

Cognitive Neuroscientist | Director of the BrisBrain Laboratory
University of Queensland

Jessica completed her Bachelor of Science with Honours at Macquarie University in 2005 and her PhD in Psychology at the University of Sydney in 2009. Her postdoctoral training took place in the United States and Belgium, including positions at Emory University, KU Leuven, and the National Institute of Mental Health. Jessica is currently an ARC Future Fellow and director of the BrisBrain Laboratory which combines experimental psychology with neuroimaging to probe the biological basis of face perception and the abnormalities associated with poor mental health.

The Social Brain: How we detect faces and form impressions of people

Wednesday 12th February 9:30am

Our visual system is optimised for quickly detecting faces, but a side effect of this hypersensitivity to faces is that we sometimes see faces where there are none. Face pareidolia describes the perception of illusory facial features in otherwise ordinary objects. Visual illusions are informative about how our brain works, because they can reveal its biases and assumptions. So in addition to being an interesting phenomenon in itself, face pareidolia offers a unique experimental lens into the brain's computational strategies. In this talk, I will describe recent empirical work that used examples of face pareidolia to investigate how the human brain rapidly distinguishes faces from objects, promoting the detection and recognition of potential social agents. By identifying and understanding these mechanisms, this research bridges neuroscience, psychology, and computational modelling, providing profound insights into how the brain constructs our visual reality.

Tuesday 11th Feb

9:00-9:30 **Registration**
Sir Llew Edwards Building, Room 132

9:30-9:45 **Welcome**

KEYNOTE

9:45-10:45 **Aniela Pieterse** | Department of Foreign Affairs & Trade
Facial identification, how far have we come?

Morning break
20mins

11:05-11:30 **James Dunn** | University of New South Wales
Understanding superior face recognition: Insights from Super-Recognisers and Facial Examiners

11:30-11:55 **Haneen Abu-Obeid** | University of Queensland
Measuring fast & featural comparison ability in Facial Examiners and Super-Recognisers

11:55-12:20 **Alice Towler** | University of Queensland
The Skill Distillery©: Tailored evidence-based training for facial comparison

Lunch
1hr 30mins
SEE PAGE 2 FOR SUGGESTIONS

1:50-2:15 **Jess Vaughan** | New Zealand Police
Facing Justice with the New Zealand Police

2:15-2:40 **Jakob Glynstrup** | Danish National ID-Centre
Transforming the roles: From forensic facial examiner to facial reviewer

2:40-3:05 **Stine Nordbjærg** | Danish National ID-Centre
Forensic Facial Identification – A statistic overview of uniformity

3:05-3:30 **David White** | University of New South Wales
Developing a system for objective estimates of face-match likelihood using human perceptual judgments

Afternoon break
30mins

4:00-4:25 **Mehera San Roque** | University of New South Wales
Legal Update and Current Issues

4:25-4:50 **Robyn Blewer** | Griffith University
An introduction to - and update on - the Griffith University Innocence Project

4:50-5:15 **Isabella Crebert & Xanthé Mallett** | University of Newcastle
Virtual skeletal analysis: A comparison of scanning methods for estimating the biological sex of the human mandible (lower jaw) for use in forensic human identification

Dinner at Patina | 5:30pm - 7:30pm

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Wednesday 12th Feb

KEYNOTE

9:30-10:30 **A/Prof Jessica Taubert** | The University of Queensland
The Social Brain: How we detect faces and form impressions of people.

Morning break
30mins

11:00-11:25 **Ryan Fitzgerald** | Simon Fraser University
Eyewitness Lineup Identity (ELI): A new face database with crime videos and mugshots

11:25-11:50 **Camryn Yuen** | Simon Fraser University
Face Matching Lineups: A Method to Control the Error Rate in Video ID Evidence

11:50-12:15 **Emma Kruisselbrink** | Simon Fraser University
The Contaminating Effect of Social Media on Eyewitness Memory

Lunch
1hr 30mins
SEE PAGE 2 FOR SUGGESTIONS

1:45-2:10 **Abbas Bigdeli** | AerVision Technologies Pty Ltd.
The two faces of FR: Bridging technical truth and public perception

2:10-2:35 **Andrew Park** | IDEMIA
The impact of AI based facial recognition in Justice & Public Security

2:35-3:00 **Jason Zhou** | NEC
Biometric authentication in multi-factor systems - Enhancing security and citizen convenience, focusing on face & Iris recognition

Afternoon break
30mins

3:30-3:55 **Daniel Carragher** | University of Adelaide
Time pressure increases reliance on simulated decision aids in one-to-one face matching tasks

3:55-4:20 **Kateryna Marchenko** | University of New South Wales
The role of 3D shape in matching and recognising familiar faces

4:20-4:45 **Daniel Chu** | University of New South Wales
Are facial comparison decisions biased by the other comparisons performed in a workflow?

Wrap up & end of meeting

Summaries

Haneen Abu-Obeid | University of Queensland

Measuring fast & featural comparison ability in Facial Examiners and Super-Recognisers

This talk explores the unique skills of super-recognisers and facial examiners, focusing on how their different approaches - quick, instinctive recognition versus detailed, methodical featural analysis - can be measured and tested. Drawing on findings from my honours research, I'll discuss practical applications for recruitment, training, and operations in law enforcement and security. This presentation is designed to connect research with real-world needs, providing insights that professionals can apply directly to their work.

Abbas Bigdeli | AerVision Technologies Pty Ltd.

The Two Faces of FR: Bridging Technical Truth and Public Perception

Facial recognition technology often faces deployment challenges due to widespread misconceptions about how it processes and stores personal information. A key confusion point is understanding what constitutes personal data in this context. While a facial image is clearly personal data, the derived mathematical template—a unique numerical representation of facial features—raises complex questions. This presentation clarifies how face templates work: they're one-way mathematical conversions that can't be reversed to recreate the original image, similar to password hashing. We'll explore how this technical reality affects privacy considerations, data protection requirements, and public perception of facial recognition systems.

Robyn Blewer | Griffith University

An introduction to - and update on - the Griffith University Innocence Project

This presentation will introduce attendees to the Griffith University Innocence Project, discussing our history and highlighting current issues and challenges we're dealing with in working on claims of wrongful conviction; our research agenda, and outreach activities. I will set out our plans for 2025 and beyond and welcome attendees to share their thoughts on what projects like this one can/should be doing (if there is time!).

Daniel Carragher | University of Adelaide

Time pressure increases reliance on simulated decision aids in one-to-one face matching tasks

Identity verification tasks can include Automated Facial Recognition (AFR) systems as decision aids for a human operator. While AFR aids can improve human performance in face matching tasks, aided human performance often fails to exceed that of the AFR system alone (Carragher & Hancock, 2023). Here we tested how novice participants rely on decisions from a simulated AFR aid when completing a one-to-one face matching task under time constraints of 2, 5, and 10 seconds. Human accuracy improved significantly with AFR assistance in each condition, with the largest improvements under greater time pressure. However, exploratory analyses also suggest that participants were more likely to endorse rare system errors as time pressure increased. Implications for human-algorithm teaming will be discussed.

Summaries

Daniel Chu | University of New South Wales

Are facial comparison decisions biased by the other comparisons performed in a workflow?

When deciding if two face images belong to the same identity, people use an internal threshold known as response criterion to discriminate between levels of similarity that signal matching and mismatching pairs. This threshold can shift based on a range of contextual factors, which can induce a source of 'bias' in face matching decisions. In a face matching workflow composed of a sequence of matching and mismatching image pairs, we found that ordering mismatching pairs from dissimilar to similar biased people's decisions for matching pairs. Our study implies that the sequencing of facial comparison decisions in a workflow can influence the outcomes of identification decisions.

Isabella Crebert & Xanthé Mallett | University of Newcastle

Virtual skeletal analysis: A comparison of scanning methods for estimating the biological sex of the human mandible (lower jaw) for use in forensic human identification

The use of 3D technologies presents significant advantages in documenting and analysing skeletal human remains for forensic identification and evidence-gathering purposes. This research compares outputs from three 3D technologies used to create virtual models of the human lower jawbone (mandible); one of the most useful skeletal elements when estimating biological sex, a core factor in identifying unknown deceased persons. The aim is to determine which method is best (creates the closest replica of the bone), given various constraints – including cost, ease of use, and operability. The results will help practitioners determine which technology should be employed in various forensic scenarios.

James Dunn | University of New South Wales

Understanding Superior Face Recognition: Insights from Super-Recognisers and Facial Examiners

This study explores why some people are exceptionally good at unfamiliar face matching using eye tracking. We compared three groups: super-recognisers, who naturally excel at face identification, and facial examiners, who are trained experts, and control participants, all while recording their eye movements. Both expert groups showed similar high accuracy in recognising faces compared to controls, but also showed differences in where and how they looked at the faces. These findings suggest that how you examine facial features is key to superior face matching, regardless of whether the skill is natural or trained.

Ryan Fitzgerald | Simon Fraser University

Eyewitness Lineup Identity (ELI): A new face database with crime videos and mugshots

We created the Eyewitness Lineup Identity (ELI) stimulus database and have made it available for research use. ELI consists of crime videos and mugshots of 231 identities, who were recorded in Portsmouth, England. The database was designed to be used in eyewitness lineup studies, and it has now been tested in several eyewitness identification experiments with promising results. Other potential applications will be reviewed. The database is available for research approved by a research ethics board and can be requested at <https://osf.io/vrj3u>.

Summaries

Jakob Glynstrup | Danish National ID-Centre

Transforming the roles: From forensic facial examiner to facial reviewer

With the introduction of an automated biometric matching system (ABIS), the Danish National ID Centre has expanded its focus in the facial identification field. From working almost solely with a morphological method in manual face comparison cases to now also being able to support the immigration authorities in their day-to-day verification of the results coming from the ABIS. This means that the forensic examiners now also will have to be able to perform in the reviewer role. This presentation describes the methodical challenges involved in this transformation of the team, highlighting practical strategies like tailored training and refined resource allocation.

Emma Kruisselbrink | Simon Fraser University

The Contaminating Effect of Social Media on Eyewitness Memory

Viewing potential suspects on social media can contaminate an eyewitness's memory for the crime and increase the risk of identification errors. In two experiments, participants viewed a mock crime and completed a 6-member lineup. Before the lineup, participants viewed images of innocent people as either social media profiles or mugshots. Relative to a control group, with no image viewings, participants in both the social media and the mugbook groups were less reliable in their lineup identifications. Participants in the social media group were also more likely to identify an innocent person singled out as the only one with mutual friends.

Kateryna Marchenko | University of New South Wales

The role of 3D shape in matching and recognising familiar faces

Three-dimensional (3D) shape has long been considered a potential component of stored face representations. However, familiar face recognition, despite its robustness to challenging viewing conditions, is surprisingly difficult when 3D shape alone is visible. Here, we present two experiments investigating the role of 3D shape in our perception of highly familiar faces. We examined whether it is possible to match uniformly coloured 3D scans of celebrity faces with ambient photographs (Experiment 1) and whether super-recognisers, individuals with superior face recognition abilities, can better cope with the loss of surface reflectance cues in a free-response recognition task (Experiment 2).

Stine Nordbjærg | Danish National ID-Centre

Forensic Facial Identification – A statistic overview of uniformity

Following the implementation of a data model supporting decision making and uniformity in our case work, we asked ourselves: "Do we actually observe an increase in uniformity?" Analyzing data from more than 200 forensic facial comparisons, we seek to answer this question as well many others including: Which patterns hide beneath the surface of casework? Was there a decrease in conflict of opinions following the implementation of the data model? Are disagreements always tied to poor image quality? With an open and honest approach highlighting strengths and weaknesses, we present a "behind the scenes" view on our decision making as experts in a field riddled with subjectivity.

Summaries

Andrew Park | IDEMIA

The impact of AI based facial recognition in Justice & Public Security

With the high volume of available unstructured data especially images and videos, Justice & Public Security industry can achieve the following benefit(s);

- Operational efficiency & timely decision-making: With all/any information gathered e.g. face, tattoo, scar-mark & objects, the officers can timely narrow-down the suspect(s) &/or person of interest and make the effective decision.
 - OH&S improvement: Officers can be exposed to the harmful material in a limited capacity and will improve the job satisfaction by leveraging the AI based Face Recognition technology
 - Citizen trust: As more criminal/cold cases would be resolved in a timely manner, it will build the trust on Justice & Law Enforcement by the public
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Mehera San Roque | University of New South Wales

Legal Update and Current Issues

This presentation will touch on some recent cases and current legal issues for the courts when considering identification evidence, including those involving comparisons made by witnesses and fact-finders.

Alice Towler | University of Queensland

The Skill Distillery©: Tailored evidence-based training for facial comparison

Effective training is an important way to mitigate the risk of errors in facial comparison. However, traditional professional training courses often fail to improve practitioners' accuracy. In this talk, I introduce The Skill Distillery—a new evidence-based training approach that is tailored to an organisation's specific needs, imagery, and in-house expertise. I will present data demonstrating that The Skill Distillery method outperforms existing training courses. Finally, I will outline how organisations can adopt this model to enhance their own staff's accuracy in facial comparison.

Jess Vaughan | New Zealand Police

Facing Justice with the New Zealand Police

The Image Management Unit sits within the National Biometrics Information Office in the NZ Police. We are made up of four Forensic Face and Image Examiners who are currently engaged in the Diploma of Forensic Identification (facial) and one Image Management Officer. In June 2024, we begun using FRT. Since then, we have received upwards of 150 FR submissions for a variety of offences with a wide range of results. A comprehensive, peer reviewed report of the results is prepared by examiners and provided to the investigators as intelligence only. As the guardians of this newly established capability within NZ Police, our current challenges are:

- Learning to work with poor quality images.
- Raising our profile to increase FR submissions, improving our skill in facial comparison.

Summaries

David White | University of New South Wales

Developing a system for objective estimates of face-match likelihood using human perceptual judgments

Facial forensic evidence relies on subjective judgments by trained examiners, but prominent expert panels have called for objective measures to enhance the reliability of pattern-matching disciplines. In response, researchers are adapting likelihood estimation methods from other forensic sciences for facial recognition. In this study we derive likelihood ratios from behavioural tests of forensic examiners, laboratory teams, super-recognizers, and novices. We find that objective likelihood ratios point to weaker evidence strength than is implied by 'subjective likelihood ratios' that accompany some forensic decision scales. However, combining responses – either through team decision-making in forensic laboratories or response averaging – strengthens evidence. These findings support developing systematic, objective frameworks for quantifying evidence strength based on human performance testing.

Camryn Yuen | Simon Fraser University

Face Matching Lineups: A Method to Control the Error Rate in Video ID Evidence

When a crime is caught on camera, investigators can use face matching to identify the perpetrator. The identification is often made with a 1-to-1 comparison between the video evidence and an image of the suspect. We tested face matching in lineups, comprising 6 individuals to compare with the video evidence. If all lineup members were suspects, suspect identification accuracy was higher for 1-to-1 than for lineups. However, if the lineup was fair and included only one suspect, suspect identification accuracy was higher for lineups than for 1-to-1. Further research is needed on how to make fair lineups for face matching.

Jason Zhou | NEC

Biometric Authentication in Multi-Factor Systems - Enhancing Security and citizen convenience. Focusing on Face & Iris recognition

My presentation highlights the role of biometric authentication, particularly focusing on face and iris recognition, in multi-factor authentication (MFA) systems. With advancements in accuracy, speed, and usability, these technologies are transforming secure access in areas such as smartphones, airports, and government services. Face recognition offers convenience and broad applicability, while iris recognition ensures exceptional accuracy for high-security environments. My presentation also explores real-world applications and emerging trends, emphasising how biometrics are enhancing security and convenience in modern authentication systems.

Organisations

Government/Industry

Advent Security

AerVision Technologies Pty Ltd.

Australia Post

Australian Criminal Intelligence Commission

Australian Federal Police

Biometix

Biometrics Institute

Danish National ID-Centre

Defence Science & Technology Group

Department of Home Affairs

Department of Foreign Affairs and Trade

Department of Transport and Main Roads

IDEMIA

NCIS Norway

NEC Australia

New Zealand Police

New South Wales Police Force

Queensland Police Service

South Australia Police

U.S. Department of Homeland Security

Victoria Police

Universities

Griffith University

Simon Fraser University

UniQuest

University of Adelaide

University of New South Wales

University of Newcastle

University of Queensland

University of Wollongong