Applied Cognitive Psychology in Forensic Settings

A joint SIPR/ Abertay University Networking Event

Abertay University

Old College Building, Bell Street, Dundee

Tuesday 16th May 2023
09:30 – 15:30

#ACPFS2023

Welcome to the Applied Cognitive Psychology in Forensic Settings Networking Event 2023!

Dear Delegates,

It is with great pleasure that we welcome you to the 3rd Scottish Institute for Policing Research Evidence and Investigation Networking Event on Applied Cognitive Psychology in Forensic Settings. This event has been carefully crafted to provide a platform for discussions on two themes of current and significant importance. The first relates to challenges that Police, Social workers, and related forensic services face when investigating crimes against vulnerable people, such as children, refugees, asylum seekers, and survivors of sexual and domestic abuse. The second theme explores innovative technologies in policing, including human-computer interaction in face matching, using avatars in training and investigative interviewing, and the use of AI by police forces.

Our event will bring together delegates from both practice and academic settings with the aim of networking, collaboration and sharing knowledge. We have experts from specialist areas including the role of the police in the recovery, interpretation, and effective use of intelligence, and also evidence in the investigation of crime and major incidents. Through knowledge transfer and discussions, we hope to foster a better understanding of the unique needs of vulnerable groups, and how police and related support services might embrace emerging technology to effectively address them. Moreover, we hope that this program will facilitate meaningful conversations that can lead to positive changes in the ways we protect and serve our communities.

Recognising the importance of applied cognitive psychology in forensic settings we held a first networking event in June 2018, which was followed by another successful event online in 2021. We are so pleased that the present networking event is in person again, this time at Abertay University in the heart of Dundee, the sunniest city in Scotland!

We are excited to have seen this event extend its capacity and reach over the years. This year, the international perspective in our presentations welcomes speakers from the United Kingdom, The Netherlands, Germany, and Switzerland.

Once again, welcome to our networking event. We look forward to your active participation and hope that you find this event informative, engaging, and rewarding.

Warm regards,

Your co-convenors - Julie, Penny, and Susan

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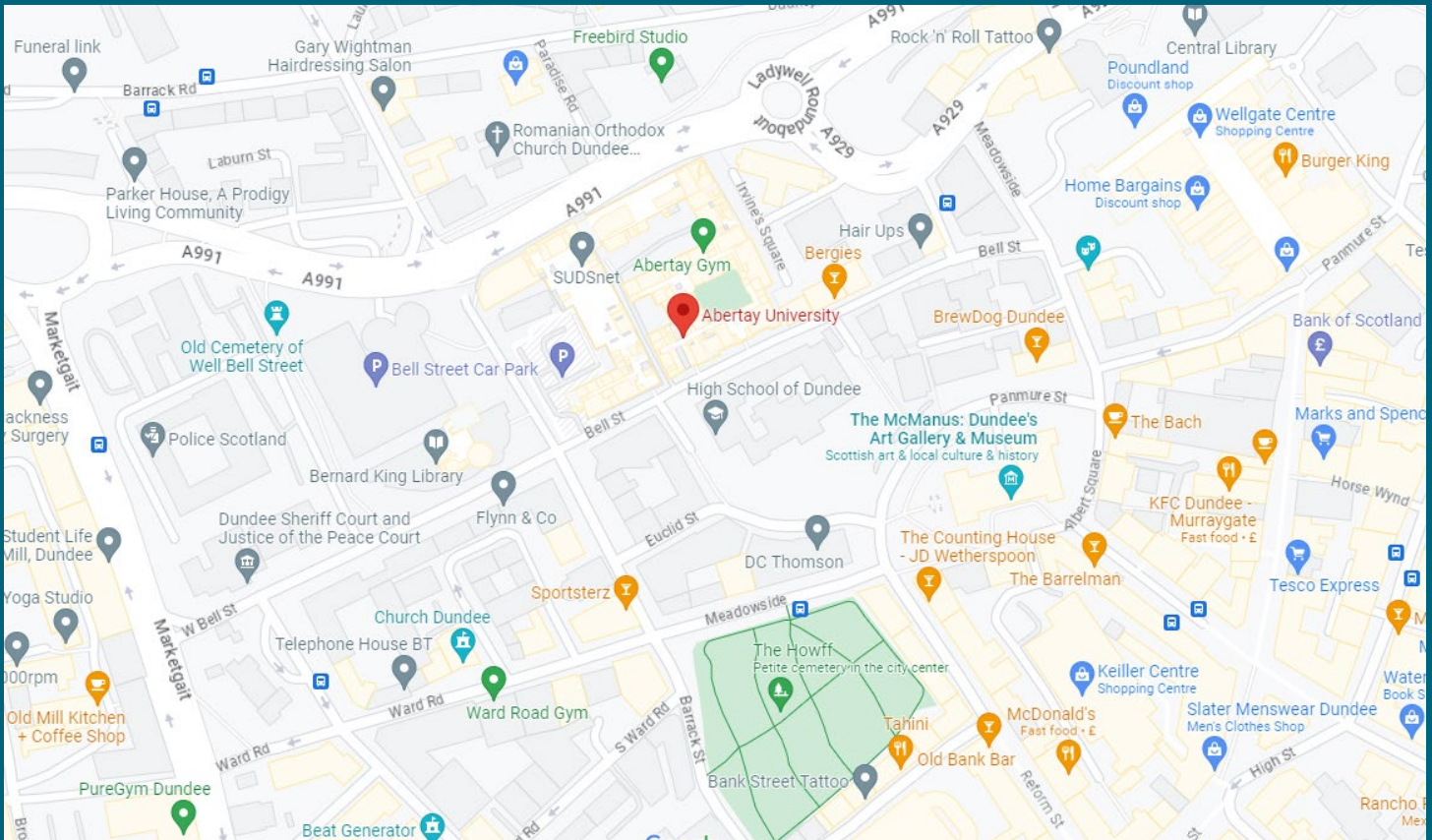
Dr Susan Griffiths
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Directions

The event will take place in the Old College Building, located on Bell Street. Abertay University is located a short distance from the city centre and only a 10-minute walk from the train station.

Please note there is no parking available at the university and anyone traveling by car will need to park at one of the many car parks located near the university. The nearest is Bell Street Car Park behind the Abertay Library.

Programme

0930	1000	**Registration & Refreshments**
1000	1015	**Welcome from Dr Penny Woolnough and Dr Julie Gawrylowicz**
1015	1030	**DI Norman Stevenson – Police Scotland**
1030	1045	**Dr Victoria Morton - SPA Forensic Services**
1045	1200	**Invited Presentations – Emerging Technologies** **Chair: Dr Julie Gawrylowicz** *Dr Meike Ramon* *Professor Peter Hancock* *Dr Anett Tamm* *Yasmine Ezzedine* *Jean-Piere Roux*
1200	1230	**Networking / Discussion Session 1**
1230	1330	**Lunch & Poster Session**
1330	1445	**Invited Presentations – Vulnerable Groups** **Chair: Dr Susan Griffiths** *Professor Amina Memon* *Dr Tanja Van Veldhuizen* *Professor Heather Flowe* *Dr Eva Rubinova* *Sam Conway*
1445	1515	**Networking / Discussion Session 2**
1515	1530	**Close**

Convenors

Dr Julie Gawrylowicz - Lecturer in Psychology, Abertay University

I am a lecturer in Psychology at Abertay University interested in memory in applied settings. My research examines factors that might impact the accuracy and completeness of eyewitness memory reports. I am particularly interested in developing innovative methods to obtain accurate testimony from vulnerable groups, such as individuals with an intellectual disability, individuals under the influence of alcohol, children, and older adults. Before I joined Abertay in 2018, I worked as a lecturer at Glasgow Caledonian University, and senior lecturer at London South Bank University. I completed my PhD in 2010 at Abertay University. The research was funded by the Scottish Institute for Policing Research and examined facial composite construction by individuals with intellectual disabilities. I am an academic member of SIPR's Evidence and Investigation Network and provide expert advice to police officers and social workers on age-related differences in memory and suggestibility.

Dr Susan Griffiths - Lecturer in Psychology, Robert Gordon University

Dr Griffiths has applied experience of working with the police and clinical populations. She is interested in research exploring factors which impact upon eyewitness testimony and decision-making. She is also keen to apply her expertise of child and adult mental health to eyewitness research. Her Ph.D. (University of Aberdeen) explored the effects of post-event information on eyewitness recall, confidence and decision-making during line-ups. She worked with Grampian Police (now Police Scotland) before undertaking a Doctorate in Clinical Psychology. Dr Griffiths worked as a Clinical Psychologist for the NHS, providing assessment and therapy for children before commencing her lecturer post. She is an academic member on the Evidence and Investigation Network Steering Group for SIPR.

Dr Penny Woolnough – Senior Lecturer Forensic Psychology Abertay University / SIPR Associate Director - Evidence and Investigation Network

Dr Woolnough is a HCPC Registered Forensic Psychologist and acts as Expert Advisor to the police. She has provided operational support to over 100 high profile missing person cases around the world. Her pioneering work in the development of behavioural profiling of missing persons are used by all UK police forces, the RAF, Maritime Coastguard Agency, and international agencies. Dr Woolnough was previously a Senior Research Officer and Head of the Grampian Police Research Unit (now Police Scotland) and now trains Senior Investigating Officers. She has worked with the Scottish Government to develop the first National Framework in Scotland for Missing Persons. Her research interests lie within forensic and investigative psychology, specifically the investigation of crime, missing persons, the policing of vulnerable people, and stress and policing. Dr Woolnough is particularly passionate about translating research into practice and has received numerous awards – including the ESRC Award for Outstanding Impact in Society.

Speakers

Detective Inspector Norman Stevenson, Police Scotland

Norman has an extensive career in policing across a variety of roles across the North-East of Scotland having originally joined Grampian Police. Of particular note, he is a very experienced and well-respected Senior Investigating Officer. Taking a break from CID he was Area Commander for Moray until January 2022 when he returned to the investigation side of policing as part of the Police Scotland Cyber Investigations Unit.

More Info here on SIPR People Profile

Dr Victoria Morton – Chief Operating Officer, Scottish Police Authority Forensic Services

Dr Victoria (Vicki) Morton was appointed the Chief Operating Officer at Forensic Services SPA in 2022 and has worked in the field of forensic science in Scotland since 1997. Over the past twenty-five years, Vicki has held a series of strategic posts at Forensic Services, including Head of Strategic Change, Scientific Head of Function and Head of Scene Examination, as well as operational roles in DNA analysis, Forensic Biology and Quality Management during her earlier career.

Committed to delivering effective and cultural change alongside continuous improvement and partner engagement, Vicki has a passion for equality, diversity and inclusion and is an Executive Member of the Scottish Women's Development Forum. Vicki's strong compliance background is another key strength, and she has served on the European Network of Forensic Science Institutes (ENFSI) Quality and Competence Committee as well as the Association of Forensic Providers (AFSP) Quality and Health and Safety Groups. Past experience as a UKAS Technical Assessor has involved assisting in the assessment of compliance of UK and overseas forensic providers against international standards (ISO17025).

A Member of the Royal Society of Biology, Vicki has a PhD (Virology) and BSc (Hons) (Microbiology) from the University of Glasgow as well as an MBA from Heriot-Watt University's Edinburgh Business School.

More Info here on SIPR People Profile

Dr Meike Ramon, Assistant Professor at the University of Lausanne, Switzerland - *Title: "Improving forensic perpetrator identification with Super-Recognizers"*

Forensic perpetrator identification is a crucial process depending on accurate processing of the available evidence. In many cases where perpetrators are captured via CCTV footage of a crime, this material is challenging to process - typically due to low quality and limited information available. Over the past decade, the media has suggested that so-called Super-Recognizers (SRs), individuals with superior ability for processing facial identity, could improve perpetrator identification for law enforcement. In reality, such reports are anecdotal success stories - a formal Test of SRs' ability has never been conducted. Using authentic forensic case material, we performed the first-ever comparison between SRs and control participants to answer the question: Can SRs improve perpetrator identification accuracy?

More Info here on SIPR People Profile

Professor Peter Hancock, Professor of Psychology, University of Stirling, Scotland - *Title: "Artificial Intelligence and face recognition"*

I'll present work on the state of the art in automated face recognition (AFR); what works and some perhaps surprising examples of what does not. I'll consider how we can best make use of AFR and present a cautionary tale about the use of "AI" based face enhancement.

More Info here on SIPR People Profile

Dr Anett Tamm, Research Associate at the Psychologische Hochschule Berlin, Germany - *Title: "ViContact: A feed-back driven virtual reality training for initial interviews in cases of suspected sexual abuse"*

Introducing ViContact - a newly developed multi-method program to train teachers and other first responders how to talk to children about suspected sexual abuse. The ViContact VR training is a virtual training environment where participants can practice this in an action-oriented way of talking to children to find out what happened. For the ViContact VR training, virtual children aged about 10 years have been developed with general knowledge about their own life situation and about a stressful event programmed into them. This could be sexual abuse, some other event requiring intervention, or some other stressful event where no intervention is required. The interviewers' task is to find out what happened by asking the children. The virtual children answer according to a complex probabilistic scheme derived from research and practice. The basic idea is that children are more likely to reveal their knowledge if the questioning is open and socio-emotionally supportive than if the questioning is closed or suggestive. The presentation will focus on the virtual children and their response algorithm in relation to the learning objectives (open-ended questioning, use of appropriate questions and socio-emotionally supportive techniques) pursued with the training.

More Info here on SIPR People Profile

Yasmine Ezzedine, PhD candidate and Lecturer at Staffordshire University, England - _Title: "Under AI Watch: Evaluating citizens' perspectives around AI use by police forces in ethnically diverse communities."_

Over the last decade, smart and mobile technologies have proliferated massively, and proportionally, research around novel technologies introduced in ethnically diverse communities which often focused on ethics and privacy aspects of implementation, especially after massive controversial debates around facial recognition tools and aspects of prejudice and bias. This in turn triggers moral dilemmas that users often experience when interacting with online social networks and sharing personal data which aligns with the utilitarian approach to understanding Ethics as a triumph of "benefits over harm". And the minimal research bridging between human-computer interactions and ethics, warrants the need for investigating users' stances, behaviors, and ethical concerns especially around AI use in online social networks. Following initial research addressing citizens' perspectives around AI use for safeguarding efforts, this study focuses on users' interactions on mobile social networks when primed about Artificial Intelligence (AI) use and potential police surveillance through smart technologies. The novelty of this research lies in its aim to bridge an important gap between attitudes/perspectives and applied behavior online in the light of privacy concerns and ethical considerations governing AI implementation in all aspects of modern life. Our study reveals valuable insights into 30 UK users' thought processes when performing specific tasks, using their own personal account on an online social network that they believe to monitored by AI. Not only their real-time online engagements are captured, but also the verbalization of their thoughts and decision-making rationale when it comes to ethical and privacy considerations related to performing the tasks. This enables a correlation between attitudes and behaviors, while also shedding the light on moral dilemmas in decision-making in ethnically diverse communities, with respect to information sharing online, the factors that trigger uncertainties and the privacy and ethical uncertainties that shape users' interactions.

More Info here on SIPR People Profile

Jean-Pierre Roux, PhD candidate and Teaching Assistant at the University of Glasgow, Scotland - _Title: "Body-worn video: Arbitrating truth or depicting perspective?"_

To help understand the relationship between humans and technology and their inherent limitations, the presentation will present and question the various public-facing roles and underlying assumptions of body-worn video (BWV) footage. Specifically, its role as arbitrator of the truth by providing video evidence of what occurred during an incident and its role as capturer of perspective by providing a depiction of an officer's perspective. These roles and associated assumptions as well as their implications will be problematized, within the context of policy and technological developments, using ideas and findings from cognitive science, sensor ecology, legal studies, and criminology. The presentation will argue that BWV footage is fundamentally imperfect at both roles; that BWV development contends with difficult and contradictory design choices; and that the assessment of footage faces significant challenges.

More Info here on SIPR People Profile

Professor Amina Memon, Royal Holloway University of London - _**Title: "Challenges of Interpreting in emotionally charged Investigative interviews"**_

Interviews that require an interpreter to translate between the interviewer and interviewee present unique challenges and particularly so where the interviewee is discussing an emotionally charged experience or trauma. Using the asylum context as an example, I will present some initial research we have conducted to look at how emotion impacts interpreting and interpreter and invite a discussion on how we can better support interpreters.

More Info here on SIPR People Profile

Dr Tanja van Veldhuizen, Assistant Professor at the Vrije Universiteit Amsterdam, The Netherlands - _**Title: Eliciting information in asylum cases"**_

Interviewing and decision-making in asylum cases is surrounded by uncertainty. I will discuss to what extent current practices are in line with best practice in investigative interviewing and credibility assessments. In doing so, I will identify challenges and opportunities to improve refugee status determination procedures. Special consideration is given to minors in asylum procedures and to challenges imposed by the intercultural nature of the procedure.

More Info here on SIPR People Profile

Professor Heather Flowe, Professor at the University of Birmingham, England - _**Title: "Effects of acute alcohol intoxication on women's memory for consensual and non-consensual sexual activity"**_

This presentation discusses how accurately women remember consensual and non-consensual sexual activities when they are acutely intoxicated with alcohol. The accuracy of this information is important for forensic medical examinations and police investigations following an allegation of sexual assault. memory accuracy for the perpetrator's behaviours during the rape indicated no effect of alcohol intoxication. The implications of these results for theory and practice will be discussed.

More Info here on SIPR People Profile

Dr Eva Rubinova, Lecturer at University of Aberdeen, Scotland - _Title: Interviewing in Cases of Repeated Events: Accuracy, Consistency, and Methods Facilitating Particularization."_

During investigations of crimes that are repeated in nature, such as domestic violence, victims and witnesses may be asked to report on sequences of similar experiences. Importantly, remembering an instance of a repeated event is different than remembering a single/unique event. Children and adults typically recall more details from a single event compared to an instance of a repeated event (e.g., Deck & Paterson, 2021; Roberts & Powell, 2001), and these differences are reflected in perceived witness credibility (Weinsheimer et al., 2017). But what if individuals need to report on multiple instances of a repeated event? I will introduce my research that focuses on the following questions related to memory reports of repeated events: are there differences in accuracy and consistency across instances, are these differences reflected in perceived credibility, and can we facilitate particularization? When individuals attempt to recall what happened at a target instance, they frequently recall information from other instances (i.e., they confuse what happened when), and they may report new confusions when interviewed repeatedly (Rubínová et al., 2022). However, there are differences across instances. In case of four instances, we found that individuals remembered the first instance more accurately and consistently than other instances (Rubínová et al., 2022), and these differences were reflected in perceived credibility (Rubínová et al., in preparation). Our findings suggest that investigators could maximize the chances of accurate reporting by targeting first instances during interviewing whenever possible. But can we generally facilitate reporting in repeated events? We found that using an interviewing format involving a simple visual timeline and asking participants to generate instance-specific cues helped participants report more accurate details compared to free recall (Kontogianni et al., 2021). In my future work, I would like to target research to problems faced by practitioners who work with memory reports of repeated events and facilitate bringing evidence-based methods into practice.

More Info here on SIPR People Profile

Sam Conway – SIPR Postgraduate Coordinator/ PhD candidate, Abertay University, Scotland - _Title: "Investigating the effects of avatar interviewers on young people's forensic disclosure and eyewitness memory"._

My presentation will outline the preliminary results of mock eyewitness interview studies conducted with young people aged between 11 and 18. Participants were shown a video of theft and were also asked to disclose some of their personal experiences. Participants were interviewed by either a live human or an avatar interviewer. In my presentation, I will discuss whether male or female avatar interviewers elicited more personal disclosure, more episodic recall, and fewer false memories, compared with human interviewers.

More Info here on SIPR People Profile

Poster Presentations

Brooke Duncan

Poster Title: "The non-ideal victim: the impact of victim's occupation and intoxication status on mock-juror decision making."

My research is looking into attitudes toward "non-ideal" victims of assault and how people perceive individuals who have been subjected to non-consensual sexual advances. I am specifically investigating factors such as victim intoxication and the concept of "cyberflashing."

Sophie Morgan

Poster Title: "An investigation into the damage created by corrosive and flammable solvents on eco-friendly textiles".

This study was an investigation into the residual trace evidence left by eco-friendly textiles following immersion in accessible corrosive solvents used as a means to destroy evidence. This study also investigated superficial thermal damage on these eco-friendly textiles produced by the flash fronts of common solvents to determine if these solvents created unique damage characteristics.

Thuva Gyllenfjell

Poster Title: "An investigation into the effects of household corrosive chemicals on everyday apparel"

My honours project focuses on the effects of household corrosive agents on fabric through macro and microscopic analysis. This due to the global increase of incidents involving corrosive chemicals as weapons, specifically targeting women rejecting romantic or marital advances from men. Research has shown that one of the most challenging aspects to solving these crimes involves the ability to connect the perpetrator to the chain of events. Therefore, investigating the appearance and extent of damage seen across different household corrosives can provide useful intelligence in narrowing down the reagent responsible for the damage to a victim or a suspects clothing.

My Lewis

Poster Title: "The impact of alcohol on false confessions"

My name is My Lewis, and I am a Swedish psychology student who is just finishing up her fourth year at Abertay University. I have always had a great interest in forensic psychology and was therefore so pleased I was able to conduct my honours project examining the impact of alcohol intoxication on false confessions.

Simon-Lewis Menȝies

Poster Title: "Balancing the Scales of Justice: The Communication of Scientific Evidence and the Impact on Case Progression and Prosecution - A Novel Approach"

I am the full time SIPR Administrator, and I am also coming to the end of my PhD in forensic science communication and decision making in the Scottish Criminal Justice System, with focus towards sexual and non-sexual violent crime case progression, investigation, and prosecution. I was one of the inaugural SIPR Postgraduate Co-Ordinators from 2020 to 2022. I hold an MSc in Applied Criminology and Forensic Psychology from Edinburgh Napier University and a BSc First Class Honours Degree in Applied Criminology: Offender Management from the University of Derby. On my undergraduate degree I worked alongside Professor Dave Walsh, the Gangmasters' Licencing Authority, and others to examine interviewer performance in relation to the retrieval of eye-witness testimony. I also completed international comparative work examining perceptions of capital punishment between the UK and the USA. On my MSc I investigated the UK trade in arms to UK Foreign Office countries of concern for human rights violations focusing on Colombia and conducted a comparative analysis on sentencing trends for drug offences in England and Wales and Scotland.

Special Thanks

Dear Delegates,

Your attendance, contribution, and engagement will help make this networking event a huge success.

We are sure that the exchange of ideas and knowledge will be enriching and inspiring, so we would like to thank you in advance for making this possible.

Established in 2007, the Scottish Institute for Policing Research (SIPR) is a strategic collaboration between 15 of Scotland's universities, Police Scotland, and The Scottish Police Authority. Their mission is to support internationally excellent, multi-disciplinary policing research to enable evidence-informed policy and practice. We are proud to be part of SIPR and would like to take this opportunity to thank them for supporting this event. To learn more about SIPR, please visit our website at sipr.ac.uk, join our mailing list, and follow us on Twitter, Facebook, LinkedIn, or YouTube.

Thank you also to staff at Abertay University, for help with planning and organising this event behind the scenes, it is very much appreciated.

Once again, thank you for being a part of this networking event hosted by Abertay University in sunny Dundee. We hope that you will take away insights that you can apply in your work and life.

If you have any follow-up questions and feedback after the event, we would welcome this – please use the contact details below.

Warm regards,

Your co-convenors - Julie, Penny, and Susan

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