Scottish Institute for Policing Research
Evidence & Investigation Network

Applied Cognitive Psychology in Forensic Settings Networking Event

Tuesday 25th May 2021
9:30-3:15

Hosted by:

Please access the event via Microsoft Teams:
https://tinyurl.com/QMU-SIPR-ACP

#SIPR_ACP2021
Dr Penny Woolnough  
SIPR Associate Director (Evidence and Investigation Network)  
Abertay University

Effective investigation of crimes and incidents is central to all police organisations. An investigation will seek to find all available evidence and intelligence that enable its objectives to be met. Today's investigator operates in an increasingly complex social and legal arena and is likely to lead a team of police and police staff with a wide range of skills and knowledge.

The Evidence & Investigation Network provides a focus for research in a range of specialist areas related to the role of the police in the recovery, interpretation and effective use of intelligence and evidence in the investigation of crime and major incidents. This includes the development and evaluation of policy and good practice in the strategic and tactical use of forensic sciences.

Recognising the importance of applied cognitive psychology to forensic settings we held a first networking meeting in June 2018 to discuss current interests and expertise across Scotland, (re)establish key connections and identify potential new collaborations and avenues for funding.

In this follow-up meeting, we aim to keep some momentum going in this area. This is a challenging time and like many, we have moved our networking event online. However, the online format has the added benefit of allowing us to incorporate a more international perspective in our presentations. We are very pleased to welcome speakers from not just the United Kingdom but also Germany, Switzerland, The Netherlands, and the United States.

We hope you find the event stimulating and that you make some useful connections.
# Programme

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<td>Welcome</td>
<td>Dr Jamal K. Mansour &amp; Dr Penny Woolnough</td>
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<td>9:45</td>
<td><strong>Session 1: Challenges for Policing Personnel</strong></td>
<td><strong>Shots Fired! Was that you or me?</strong> Richard Hough (University of West Florida)</td>
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<td><strong>Contesting images: questioning camera images in police practice</strong></td>
<td>Gabry Vanderveen (Erasmus University Rotterdam)</td>
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<td><strong>A Bias-Neutralising Framework for Internal Digital Forensics Investigations</strong></td>
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<td><strong>The influence of bias on line-up decisions: Is face recognition ability a protective factor?</strong></td>
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<td><strong>Super-Recognizers – where science meets policing</strong></td>
<td>Meike Ramon (University of Firbourgh) &amp; Simon Rjosk (Berlin Police)</td>
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<td>11:00</td>
<td><strong>Break</strong></td>
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<td>11:15</td>
<td><strong>Breakout sessions – one per presentation above</strong></td>
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<td>12:00</td>
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<td>1:00</td>
<td><strong>Session 2: Investigative Challenges</strong></td>
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<td><strong>The impact of rapport on intelligence yield: police source handler telephone interactions with covert human intelligence sources</strong></td>
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<td><strong>Alcohol in investigative settings: The impact of alcohol on eyewitness memory recall</strong></td>
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<td><strong>Aligning expressions and interpretations of eyewitness confidence</strong></td>
<td>Jamal K. Mansour (Queen Margaret University)</td>
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<td><strong>Deaf gains in visual cognition: a new opportunity for expert witnesses?</strong></td>
<td>Michael Craig (Northumbria University) &amp; Graham Turner (Heriot Watt University)</td>
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<td><strong>Breakout sessions – one per presentation above</strong></td>
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<td>3:00</td>
<td><strong>Closing Remarks</strong></td>
<td>Dr Jamal K. Mansour &amp; Dr Penny Woolnough</td>
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ABSTRACTS

SESSION 1 CHALLENGES FOR POLICING PERSONNEL

Shots Fired! Was that you or me?
Richard Hough (University of West Florida)

Psychological and physiological factors combine to impact the recall of dramatic actions. The outcomes of police shootings have implications for a criminal and potential civil case, as well as the psychological health of the officer. How can police agencies improve training and enhance officer abilities through knowledge of mental chronometry, perceptual distortion, and inattentional blindness? Training recruits and officers may mitigate some perception-dependent task degradation after a shooting or violent encounter. Join BSC American International Ambassador Dr Richard Hough in a discussion of this important area of Applied Cognitive Psychology in police work.

Contesting images: questioning camera images in police practice
Gabry Vanderveen (Erasmus University Rotterdam)

In the criminal justice system many images are produced, shared and presented, for example as evidence. A specific category is so-called evidence verité: real-time footage, CCTV-images and photographs. “Reading” these images, interpreting the meaning of these images is not straightforward, though many people think so. Biases, and for example the effects of framing, context and our own prior knowledge affects how we interpret an image. We study what & how Dutch police learn about the interpretation of images and how this can be improved. In this talk, we will discuss the research project and ask for your input and experiences.

A Bias-Neutralising Framework for Internal Digital Forensics Investigations
Karen Renaud (University of Strathclyde) & Alistair Irons (University of Sunderland)

In the Post Office Horizon IT case, an unquestioning belief in the veracity of software-generated evidence led to a decade of wrongful convictions. We will use this case as a vehicle to demonstrate the way biases can influence investigations, and explain how we developed a framework to guide and inform objective internal digital forensics investigations. This framework, if used, could go some way towards neutralising biases and preventing similar miscarriages of justice in the future.

The influence of bias on line-up decisions: Is face recognition ability a protective factor?
Fay Skelton (Edinburgh Napier University) OR Lee Curley (Open University)

The study investigated the influence of bias (none, positive ID, negative/no ID), evidence strength (high- or low- quality), target presence (present or absent) and face recognition ability (CFMT+) on line-up decision accuracy, confidence, and response time. Individuals were presented with either high- or low- quality videos of target individuals and then asked to make a decision whether the face presented to them was in the video. Accuracy improved when bias was consistent with target presence (i.e. positive + TP; negative + TA) compared with inconsistent. Facial recognition ability seemed not to play a role in the decision accuracy of participants.

Super-Recognizers – Where science meets policing
Meike Ramon (University of Firbourgh) & Simon Rjosk (Berlin Police)

“Super-Recognizers” are receiving increasing interest from the scientific community and security agencies – despite limited knowledge of their skills. There is no consensus on how they should be identified and with no definition of their skills’ limits, Super-Recognizers are neither an accepted profession, nor are they systematically deployed. Security agencies seeking to improve their operations via Super-Recognizers are therefore best advised to adopt procedures to identify and deploy them that reflect their specific needs. We will present the outcome of a >4y collaboration between science and police: a bespoke solution to identify Super-Recognizers among the 24K employees of the Berlin Police.
**SESSION 2 INVESTIGATIVE CHALLENGES**

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Rapport is essential to the establishment and maintenance of effective professional relationships between source handlers and CHIS. Thus, rapport-based interviewing is a fundamental factor to maximising intelligence yield. Unprecedented access to real-life audio recorded telephone interactions between police source handlers and CHIS was achieved. The research explored the impact of rapport on intelligence yield. Overall rapport, attention and coordination significantly correlated with intelligence yield, while positivity did not. Attention was the most frequently used component of rapport, followed by positivity, and then coordination. An evidenced-based approach shall advance source handler and CHIS intelligence interactions, and information gathering approaches more broadly.

Intoxicated witnesses and victims are overrepresented in the Criminal Justice System, however, negative attitudes towards them might prevent access to a fair investigation and a subsequently fair trial. This talk will provide an overview of recent research, which suggests that intoxicated witnesses might be better than their reputation. The following variables and their impact on the reliability of intoxicated witnesses will be scrutinised: alcohol dosage, interview timing, and co-witness discussion. Finally, some applied recommendations and future research suggestions will be provided.

An eyewitness’ confidence in their identification of a suspect provides critical information for investigators and triers of fact. Indeed, judgements of eyewitness reliability are almost exclusively based on the eyewitness’ confidence. Encouragingly, research indicates a reasonably strong relationship between confidence and accuracy, when confidence is collected under certain, achievable, conditions. However, confidence is typically expressed verbally, therefore the intended level of confidence may differ from the interpreted level of confidence. In this talk, I will present evidence demonstrating the variability in expressions and interpretations of confidence, as well as discuss our efforts towards improving the match between expressions and interpretation.

Growing evidence indicates that deaf people experience superior visual cognition, including attention, discrimination, and the short-term retention of visual information. In a recent study, we found that these ‘deaf gains’ extend to the retention of high-quality visual memories over the longer term. In our talk, we will discuss deaf gains in visual cognition, report the outcomes of our recent study, and pitch a concept for a project investigating the translation of deaf gains into policing and criminal prosecution settings. The potential impact of this work will be discussed, including the possibility of deaf people to act as expert witnesses.
SPEAKERS

Richard Hough, University of West Florida
Dr. Richard Hough is dual appointed to the Departments of Criminology & Criminal Justice, and Administration & Law, at the University of West Florida, in Pensacola, Florida. A career-long police and corrections practitioner, administrator, and trainer, he consults in criminal justice management, policy, and use-of-force. A police officer beginning in 1979, he has taught at regional law enforcement and correctional academies for more than thirty years. He is an active expert witness in the U.S. federal court system, focusing mainly on the use of force, including lethal. Richard is the author of The Use of Force in Criminal Justice.

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Gabry Vanderveen, Erasmus University Rotterdam
Dr Gabry Vanderveen is a psychologist and criminologist and works at the Criminology department of the Erasmus School of Law, the Netherlands. Her research concerns visuals in the (Dutch) criminal justice system: their production, role, use and effects on understanding, memory and judgments. Visuals include for example crime scene photographs, mug shots, court drawings, medical imagery, 3D-simulations, and infographics, like a timeline. In her research projects, she often cooperates with others, ranging from legal scholars and crime scene investigators to lawyers and experimental psychologists. She uses a variety of (visual) methods, including interviews, experimental surveys, eye tracking and so on.

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Karen Renaud, University of Strathclyde
Dr Karen Renaud is a Scottish computing Scientist at the University of Strathclyde in Glasgow, working on all aspects of Human-Centred Security and Privacy. She was educated at the Universities of Pretoria, South Africa and Glasgow. Her research been funded by the Association of Commonwealth Universities, the Royal Society, the Royal Academy of Engineers and the Fulbright Commission. She is particularly interested in deploying behavioural science techniques to improve security behaviours, and in encouraging end-user privacy-preserving behaviours. Her research approach is multi-disciplinary, essentially learning from other, more established, fields and harnessing methods and techniques from other disciplines to understand and influence cyber security behaviours.

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Alistair Irons, University of Sunderland
Professor Alastair Irons is Academic Dean for the Faculty of Technology at the University of Sunderland and a Professor of Computer Science. His subject interests focus on digital forensics and cybersecurity. Prior to joining the University in September 2008 he worked at ONE North East, Northumbria University and ICI. Alastair became a National Teaching Fellow in 2010. Alastair is currently Vice President (academic) of the BCS and is chair of the BCS Academy board, he also sits on BCS Council and BCS Trustees and is a member of the BCS Academic Accreditation Committee.

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SPEAKERS

Faye Skelton, Edinburgh Napier University
Dr Faye Skelton is a lecturer in cognitive psychology at Edinburgh Napier and leads the MSc Applied Criminology and Forensic Psychology programme. Her research interests are focused on applied face recognition and miscarriages of justice, and over the last decade or so she has worked on improving the recognition of facial composites using different software systems. She is currently leading a British Academy/Leverhulme funded project exploring victims’ experiences of miscarriages of justice and an SFC funded project on the impact of COVID-19 on third sector criminal justice workers. She enjoys science communication and has performed at UK science festivals and Edinburgh Fringe.

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Lee Curley, Open University
Dr Lee Curley is a lecturer in decision science at the Open University and currently chairs the first-year psychology module. His research interests are mainly focussed on juror decision making, but he also studies the influence that biases and non-rational decision making strategies may have on decision making more generally. He is currently leading a British Academy/Leverhulme funded project that investigates the influence that contextual biases may have on the decision processes involved in facial recognition. He has written several articles for the Conversation and regularly engages with his work though the media.

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Meike Ramon, University of Fribourg
Associate Professor Meike Ramon is a cognitive neuroscientist funded by the Swiss National Science Foundation (SNSF). Internationally trained (Ruhr-University Bochum; Université catholique de Louvain; University of Glasgow; Université de Fribourg), MR heads the Applied Face Cognition Lab, which is funded by a SNSF grant to investigate the Mechanisms of superior face recognition. MR collaborates with international security agencies, and advises governments on issues of face recognition, including the Berlin Police. MR is a founding member of 500 Women Scientists Bern, advisor in Simply Neuroscience’s Action Potential Advising Program, Swiss Reproducibility Network local node Leader, and Editor with Neuropsychologia and Swiss Psychology Open.

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Simon Rjosk, Berlin Police
Simon Rjosk is the Innovation and Science Manager of the State Office of Criminal Investigation in Berlin. Among other things he is responsible for the development of a scientifically valid method to identify so called “super-recognizers” within the Berlin Police and the establishment of a new Centre for Innovation and Science Management. As a detective and (social) scientist with about 10 years of experience SR is convinced that security authorities will only be able to tackle future challenges by collaborating with researchers and experts, to utilize their knowledge and make it an integral part of their identity.

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Jordan Nunan, University of Portsmouth
Dr Jordan Nunan has recently completed his PhD at the University of Portsmouth, funded by the Centre for Research and Evidence on Security Threats (CREST). Jordan is also an Associate Lecturer at Liverpool John Moores University, acting as the module lead for the ‘Forensic Elicitation of Intelligence’. His research concerns the collection of HUMINT by developing an evidence based for Source Handler interactions with Covert Human Intelligence Sources (CHIS). This programme of research explores elements of rapport, interviewing techniques and memory for covert policing and intelligence gathering.

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SPEAKERS

Julie Gawryłowicz, Abertay University
Dr Julie Gawryłowicz is a lecturer in Psychology at Abertay University in Dundee, Scotland. She is a Cognitive Psychologist and examines what factors might negatively or positively impact our memory recall, particularly in forensic settings, such as eyewitness memory scenarios and investigative interviews. Before she joined Abertay in 2018, she worked as a lecturer at Glasgow Caledonian University and as Senior lecturer at London South Bank University. Her most recent research examines how drinking alcohol and alcohol-related expectancies may influence our memory reports and metacognition. Dr Gawryłowicz is a visiting fellow of the Centre for Addictive Behaviours Research at London South Bank University.

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Jamal K. Mansour, Queen Margaret University
Dr Jamal K. Mansour is a Senior Lecturer in Psychology within the Psychology, Sociology, and Education division of Queen Margaret University. At Queen Margaret University, she is the head of the Memory Research Group and a member of the Centre for Applied Social Sciences. Her research concerns memory and decision making about faces, particularly with respect to eyewitness identifications. She uses experimental and survey methods and her research has been funded by the American Psychology-Law Society. She has two key lines of research at the moment: understanding the decision processes that underly eyewitness identifications and developing ways to use eyewitness confidence effectively.

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Michael Craig, Northumbria University
Dr Michael Craig is a Senior Lecturer in the Psychology Department at Northumbria University. His research investigates memory and related functions in human health and disease. Michael has recently led projects investigating how new memories are processed, the development of memory quality over time, and possible differences in memory functions between deaf and hearing people. The aims of his work are to provide new insights into memory to develop pathways for impact including employment opportunities, new diagnostic tools (e.g., for Alzheimer’s Disease), and non-invasive interventions to support those with and without memory problems to live healthily and independently.

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Graham H. Turner, Heriot Watt University
Professor Graham H. Turner was appointed Chair of Translation & Interpreting Studies at Heriot-Watt University in 2005, the first British Professor in the field to specialize in Sign Language Studies. He has focused on social and applied sign linguistics since his initial position in 1988 as a researcher for the British Deaf Association’s Dictionary of British Sign Language/English and subsequently instigated research on deaf people’s experiences in the criminal courts. Over the years since, Graham has led a number of innovative teaching and research programmes, including laying the foundations in Edinburgh for the Signs@HWU team at Heriot-Watt University. This academic work, collaborating with a wide range of partners, has primed award-winning social and community impact at national and international levels.

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The Scottish Institute for Policing Research (SIPR)

The SIPR Mission

Established in 2007, the Scottish Institute for Policing Research (SIPR) is a strategic collaboration between 14 of Scotland’s universities, Police Scotland and the Scottish Police Authority, offering a range of opportunities for conducting relevant, applicable research to help the police meet the challenges of the 21st century and for achieving international excellence for policing research in Scotland.

SIPR’s mission is to support internationally excellent, multi-disciplinary policing research to enable evidence informed policy & practice. In 2019 the mission statement, aims and core values for SIPR (see Appendix) were developed by the Leadership Team and approved by the Executive Committee.

SIPR aims:

1. Facilitating internationally excellent, independent research of relevance to policing (RESEARCH);
2. Engaging in a range of knowledge exchange activities to strengthen the evidence base on which policy and practice are improved & developed nationally and internationally (KNOWLEDGE EXCHANGE);
3. Nurturing a culture of learning & innovation (LEARNING AND INNOVATION); and
4. Promoting the development of national & international partnerships with researcher, practitioner and policing communities (PARTNERSHIPS).

5 year plan objectives

Within these four aims we will strive to achieve the following:

**RESEARCH** - Supporting internationally excellent policing research under three strategic research themes in order to shape strategic focus and respond to external drivers. - Enhance excellence of SIPR policing research through improvements to quality assurance processes.

**KNOWLEDGE EXCHANGE** - Facilitate events and enhance knowledge exchange tools with international reach. - Support evidence to practice routes and develop pathways to enable and document impact.

**LEARNING AND INNOVATION** - Nurture learning and innovation in policing organisations and universities, supporting the postgraduate community and the next generation of researchers and practitioners. - Foster links between higher education and policing organisations and partners to support training, education, leadership, and innovation.

**PARTNERSHIPS** - Facilitate networking and collaboration between academics, practitioners, and policy makers, nationally and internationally. - Develop strategic links with new and existing partners.

To learn more about SIPR, please visit our website at [sipr.ac.uk](http://sipr.ac.uk), Join our mailing list, and
Knowledge Exchange and Business Manager ● Monica Boyle ● m.boyle@napier.ac.uk

Supported by investment from Police Scotland and the Scottish Police Authority, SIPR is a consortium of Abertay, Dundee, Edinburgh, Edinburgh Napier, Glasgow, Glasgow Caledonian, Heriot-Watt, Queen Margaret, Robert Gordon, St Andrews, Stirling, Strathclyde and the West of Scotland Universities, and the Open University in Scotland

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