

**2016/17 Recipient
of the
Daniel Rahn Memorial Research Grant**



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Investigating the preponderance of impact spatter on an assailant's clothing cause by different impact mechanisms

Paris Jones is a 3rd year student studying a Bachelor of Forensic Science (Crime Scene Examination) at the Canberra Institute of Technology (CIT) based in Canberra, Australia. CIT is a member of The National Centre for Forensic Studies (NCFS), which is a partnership between the University of Canberra, Canberra Institute of Technology and the Australian Federal Police. The NCFS develops and delivers enhanced education, training and research opportunities for the benefit of the partner agencies and the wider Australian forensic science community. Paris' research is supervised and sponsored by Ted Silenieks from Forensic Science South Australia.

Statement of problem

The amount of impact spatter deposited on an assailant's clothing can be influenced by a number of factors. The degree of force, strike angle of impacting weapon, the type and shape of weapon used, the number of blows and the amount of blood being impacted can influence the number of spatter stains produced, the direction in which the blood droplets travel and how far they can travel. Petricevic and Elliot discussed the amount of potential spatter produced by a hammer attack, (Can. Soc. Forensic Sci, J. Vol. 38. No 1 (2005) pp. 9-19), but there is little further research published that underpins knowledge about why spatter will travel in certain directions after impact and subsequent deposition on clothing.

Through controlled experimentation, the project aims to assess the influence the strike angle has on the direction and amount of spatter produced by an implement impacting a blood source. Mock case scenarios using different weapons (grouped into categories based on shape and length) to create spatter at different strike angles and deposition will be assessed.