**Interoperability in Extreme Environments: Insights from the Emergency Services**

When a disaster strikes, resilient emergency management processes are essential to mitigate its impact. The different teams involved in the emergency response must operate within an interoperable team network, who can efficiently combine their expertise in pursuit of collective goals. In security contexts, the challenge of interoperability is further compounded by the high-risk and pressure created by the extreme team environment. We will present findings derived from four research studies using diverse methodologies to explore the psychology of interoperability, collecting data within the context of the UK Emergency Services. We found, via a systematic literature review, that interoperability was underpinned by structural (communication, flexibility) and psychological (trust, identities, goals) components. Interviews with commanders revealed a principle-implementation gap, whereby team members expressed support for interoperability, but described individual, organisational, and systemic issues that limited its implementation. Third, we analysed video data to develop a behavioural codebook of interoperability behaviours. Finally, we evaluated the current training provision of interoperability to identify best practice, laying the groundwork for future research putting psychological interoperability training to the test. This research provides valuable insights for both academia and practice, providing understanding into how extreme teams coordinate behaviours, and informing the development of future training.