

## Research project and supervisory team

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<b>Short introduction &amp; description of research project</b>	<p>The global screen and performance industries are currently experiencing a period of considerable change wrought through the adoption of Virtual Production (VP) and AI technologies. While VP builds upon a long history of experimentation with real-time technologies and early uses of game engines in film production, recent advancements have dramatically accelerated its capabilities and industry-wide integration.</p> <p>Catalysed by the global pandemic, contemporary VP is often credited with revolutionising film and performance production processes, expanding creative possibilities, and reshaping industry structures. This project seeks to interrogate the evolving role of VP and AI in filmmaking and related creative fields, while also considering its historical context and evolution.</p> <p>VP techniques—integrating real-time game engines, LED walls, motion capture, and most recently AI technologies—are disrupting and transforming traditional production workflows. These innovations enhanced creative control, reduced logistical challenges, and have potential environmental benefits. However, they also present significant hurdles, including technical complexity, steep learning curves, and substantial infrastructural investments, as well as rising questions regarding attribution, ownership, bias, and privacy. This is particularly challenging for artists and creatives keen to experiment with and potentially adapt these technologies and for those seeking to deliver education and skills opportunities to support the sector.</p> <p>As VP matures, the popularization of AI technology raises crucial questions about aesthetics, labor practices, sustainability, and equity in the creative industries. This project aims to critically examine these developments, their implications, and potential future trajectories by answering the following research questions:</p> <ol style="list-style-type: none"> <li>1- What is the impact of AI integration on film industry structures, roles, and workflows?</li> <li>2- What are the ethical considerations surrounding AI and real-time rendering in VP, and how they could be addressed?</li> </ol>
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