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Is Automated Lighting the Future of Surgical Lighting?**Nikhil Sharma***School of computer science and engineering, VIT Vellore*

High quality surgical lighting is central to successful performance in the operating room and therefore to both patient care and treatment.

This article discusses the origins of surgical lighting from the 1800s to today, with a focus on the four main forms. Their uses, advantages, and disadvantages are evaluated in an effort to identify the improvements required to improve today's current state of surgical lighting. Additionally, we consider the general economic¹, ergonomic² and infection³ downside to allow a broader insight into surgical lighting.

Whilst these four mainstream types have served well for the past thirty years, the literature exposes opportunities for improvement and can be used to guide the pathway to transition from manual conventional methods to a more automated lighting (AL) approach.

The concept of AL has been proposed using established and known technical approaches such as artificial intelligence (AI)⁴, 3D sensor tracking algorithms⁵ and thermal imaging⁶.

Whilst AL seems incredibly promising, further focused research must be undertaken to maximise its' effectiveness and allow for successful integration of this new technology into operating rooms today.

Biography

Dr Nikhil Sharma studied at Barts and the London (Queen Mary University of London Medical School) and will be graduating next month after passing his final examinations. In his past 2 years, he has entered the world of academia and has published as a first author and presented posters at conferences. His interests lie in Ophthalmology and hope to produce original research in this field.