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(57) Abstract :

Embodiments of the present disclosure relates to a system (100) and method (300) for 3D depth mapping of objects in real-time by applying dynamic structured light and adaptive image processing techniques. The system (102) comprises a processor (202) coupled to a memory (204). The memory (204) stores processor-executable instructions. The processor (202) is configured to project a series of dynamic structured light patterns onto a scene. Next, the processor (202) is configured to capture an image of a reflection of the structured light patterns. Thereafter, the processor (202) is configured to process the captured image. In the end, the processor (202) is configured to generate a 3D depth map of the image in real-time.

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