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(57) Abstract :

Embodiments of the present disclosure relates to a system (100) and method (300) for applying event-based computational pixel imagers capable of capturing and processing visual information in real time for various high-speed imaging applications. 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 detect a light intensity by applying an array of event-based computational pixel imagers. Next, the processor (202) is configured to generate events in a pixel imager based on the detected light intensity. Thereafter, the processor (202) is configured to process the generated events within the pixel imager. In the end, the processor (202) is configured to analyse the processed events to generate high-speed imaging results with enhanced temporal resolution and dynamic range.

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