

Executive Summary



SUBHANANDA CHAKRABARTI,

PROFESSOR, INDIAN INSTITUTE OF TECHNOLOGY BOMBAY, MUMBAI

1. Title of the Project: : “Development of high resolution and large format (640x512 and 1Kx1K) prototype Thermal Imagers for night vision and surveillance applications”
2. Date of Start of the Project: 5 Feb 2020
3. Aims and Objectives:
 - a. Demonstration of single-pixel devices with high responsivity and detectivity, which ultimately ensures device quality material development.
 - b. Demonstration of proof-of-concept prototype of 640 x 512 FPA.
 - c. Development and demonstration of readout and image processing electronics with the 640 x 512 FPA
 - d. Extended objective to develop a prototype of infrared thermal camera based of 640 x 512 and 1K x 1K formats
4. Significant achievements (not more than 500 words to include List of patents, publications, prototype, deployment etc)

Achieved improved detector array fabrication of various formats from wafer level. Also, in the attempt to make the readout electronics, the designed circuit showed satisfactory simulation results which will shortly lead to successful realization of a working prototype of a uncooled thermal camera

5. Concluding remarks

The proposed activities are completed with positive results in the first year in spite of the lockdown.