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(71)**Name of Applicant :**
**1)S.VIJAYAKUMAR**
Address of Applicant :ASSOCIATE PROFESSOR, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU. -------- --------
**2)M.SUDHA**
**Name of Applicant : NA**
**Address of Applicant : NA**
(72)**Name of Inventor :**
**1)S.VIJAYAKUMAR**
Address of Applicant :ASSOCIATE PROFESSOR, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU. -------- --------
**2)M.SUDHA**
Address of Applicant :PROFESSOR AND HEAD, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU. -------- --------
**3)S.SATHISH**
Address of Applicant :ASSISTANT PROFESSOR, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU. -------- --------
**4)G.NANDHAKUMAR**
Address of Applicant :ASSISTANT PROFESSOR, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU. -------- --------
**5)R.BHUVANESHWARI**
Address of Applicant :ASSISTANT PROFESSOR, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU. -------- --------
**6)KANISHKAR.D**
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU. -------- --------
**7)MUKILAN.R**
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU. -------- --------
**8)NAGAMANI.D**
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU. -------- --------
**9)PARTHIBAN.P**
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU. -------- --------
**10)PRASATH.S**
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU. -------- --------
**11)SUNDARESAN.E**
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU. -------- --------
**12)PRASANTH.R**
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU. -------- --------
**13)RAGUL.B**
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU. -------- --------
**14)SIVASAKTHI.S**
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU. -------- --------
**15)PARTHASARATHI.S**
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU. -------- --------

(57) Abstract :
The appearance and development of cracks in the concrete bridge will seriously affect the safe use of bridge buildings. In orderto better satisfy the crack detection requirement, this paper comes up with an image preprocessing scher.ne combining multiple adaptive filtering and contrast enhancement based on the image processing technology of concrete crack, which can improve the removal effect of background noise and obtain the characteristic vein information of tiny cracks. Then we designed a local adaptive algorithm of Otsu threshold ' segmentation and integrated with modified Sobel operator for removing isolated noise spots, ' so as to extract the crack edge information and improve the positioning accuracy of the crack boundary. Furthermore, according to the image feature ofthe bridge crack edge, the target crack is identified as well as classified and the feature data is calculated. The results of case analysis show that the data processing precision of the detection algorithm can reach 0.02mm, which can satisfy the actual 'engineering detection requirements of concrete bridge crack.

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