(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/04/2022

(21) Application No.202241024156 A
(43) Publication Date : 06/05/2022

(54) Title of the invention : Monitoring Soil Deformation & Temperature Using Flexible Wireless Sensor

(51) International classification :G01P0015080000, G01N0033000000, G01V0001000000, G01B0021320000, G10H0001340000
(86) International Application No :PCT// Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA Filing Date :NA
(62) Divisional to Application Number :NA Filing Date :NA

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(57) Abstract :
The proposed ideas approach reported in this invention is a significant step forward in developing a low-cost real-time monitoring system for active ground soil. A ShapeAccelArray sensor is currently being developed, which will use exciting new improvements in fiber optic and micro-machined electromechanical sensor (MEMS) technology, among other things. This sensor array is capable of sensing both acceleration and permanent ground deformation simultaneously, down to a depth of tens of meters in the ground. It is anticipated that the sensor array will be capable of sensing 3D ground deformation in situ (in the field) and 2D soil acceleration at