



Office of the Controller General of Patents, Designs & Trade Marks  
Department of Industrial Policy & Promotion,  
Ministry of Commerce & Industry,  
Government of India

(<http://ipindia.nic.in/index.htm>)



(<http://ipindia.nic.in/index.htm>)

### Application Details

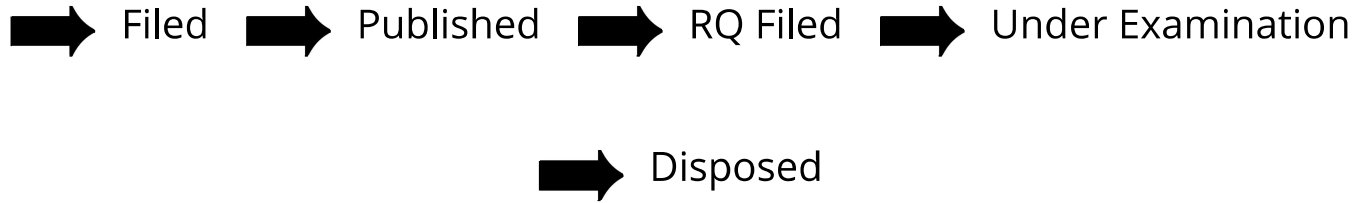
APPLICATION NUMBER	202241028401
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	17/05/2022
APPLICANT NAME	1 . Dr. Enagandula Prasad 2 . Dr. P. Sarada Devi 3 . Dr. V. Annapoorani 4 . Mr. Tausif Ahmad 5 . Dr. S. Bamini 6 . Dr. K.R. Salini 7 . Ms. G. Katheeja Mary 8 . Dr. Naveen Kumar 9 . Dr. B. Srinivasa Kumar 10 . Dr. Md Azhar
TITLE OF INVENTION	Mathematical modeling and Internet of things based Patient health monitoring system
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	03mrmanoj@gmail.com
ADDITIONAL-EMAIL (As Per Record)	03mrmanoj@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	27/05/2022

Application Status

APPLICATION STATUS

**Awaiting Request for Examination**

[View Documents](#)



In case of any discrepancy in status, kindly contact ipo-helpdesk@nic.in

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241028401 A

(19) INDIA

(22) Date of filing of Application :17/05/2022

(43) Publication Date : 27/05/2022

(54) Title of the invention : Mathematical modeling and Internet of things based Patient health monitoring system

(51) International classification :G06T0007136000, G06T0007110000, G06T0007000000, G06N0003040000, G16H0050200000

(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

(71)Name of Applicant :

**1)Dr. Enagandula Prasad**  
Address of Applicant :Associate Professor, Department of Humanities and Science-Mathematics, Vallurupalli Nageswara Rao Vignana Jyothi Institute of Engineering and Technology, Vignana Jyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad, Telangana, India, Pincode: 500090 Hyderabad -----

**2)Dr. P. Sarada Devi**

**3)Dr. V. Annapoorani**

**4)Mr. Tausif Ahmad**

**5)Dr. S. Bamini**

**6)Dr. K.R. Salini**

**7)Ms. G. Katheeja Mary**

**8)Dr. Naveen Kumar**

**9)Dr. B. Srinivasa Kumar**

**10)Dr. Md Azhar**

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

**1)Dr. Enagandula Prasad**  
Address of Applicant :Associate Professor, Department of Humanities and Science-Mathematics, Vallurupalli Nageswara Rao Vignana Jyothi Institute of Engineering and Technology, Vignana Jyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad, Telangana, India, Pincode: 500090 Hyderabad -----

**2)Dr. P. Sarada Devi**  
Address of Applicant :Assistant Professor, Department of H&S (Mathematics), Malla Reddy Engineering College (A), Hyderabad, Telangana, India, Pincode: 500100 Hyderabad -----

**3)Dr. V. Annapoorani**  
Address of Applicant :Assistant Professor & Head, Department of Mathematics, Sasurie College of Arts and Science, Tirupur, Tamil Nadu, India, Pincode: 638056 Tirupur -----

**4)Mr. Tausif Ahmad**  
Address of Applicant :Lecturer, Department of Mechanical Engineering, Al-Kabir Polytechnic, Jamshedpur, Jharkhand, India, Pincode: 831012 Jamshedpur -----

**5)Dr. S. Bamini**  
Address of Applicant :Research Coordinator, PG & Research Department of Mathematics, Marudhar Kesari Jain College for Women, Vaniyambadi, Tamil Nadu, India, Pincode: 635751 Vellore -----

**6)Dr. K.R. Salini**  
Address of Applicant :Guest Lecturer, PG Department of Mathematics, Government Arts & Science College, Kariyampatti, Tirupattur, Tamil Nadu, India, Pincode: 635901 Vellore -----

**7)Ms. G. Katheeja Mary**  
Address of Applicant :Assistant Professor, PG & Research Department of Mathematics, Marudhar Kesari Jain College for Women, Vaniyambadi, Tamil Nadu, India, Pincode: 635751 Vellore -----

**8)Dr. Naveen Kumar**  
Address of Applicant :Associate Professor, Department of Mathematics, Chandigarh University, Gharuan, Mohali, Punjab, India, Pincode: 140413 Mohali -----

**9)Dr. B. Srinivasa Kumar**  
Address of Applicant :Associate Professor, Department of Mathematics, Koneru Lakshmaiah Education Foundation, Vaddeswaram, Vijayawada, Andhra Pradesh, India, Pincode: 522302 Vijayawada -----

**10)Dr. Md Azhar**  
Address of Applicant :Associate Professor, Mechanical Engineering Department, Maulana Mukhtar Ahmad Nadvi Technical Campus, Malegaon, Nashik, Maharashtra, India, Pincode: 423203 Nashik -----

(57) Abstract :

This invention aimed to investigate the application impact of thoracic computed tomography (CT) under a single threshold segmentation algorithm in the diagnostic process of heart failure (HF) complicated by sleep apnea conditions. The study included thirty individuals who had been diagnosed with heart failure that was aggravated by sleep apnea syndrome. The control group consisted of another thirty patients who did not have sleep apnea syndrome. These patients' ages, heights, and weights were comparable to those in the experimental group. Then, a model for thoracic CT image segmentation was developed inside the single threshold segmentation technique framework, and the faster region convolutional neural network (Faster RCNN) was used to identify the thoracic respiratory lesions. The thoracic CT examination was performed on each patient, and the resulting pictures were analyzed using the algorithm model described earlier. After that, observations were made on the patient's respiratory tract morphology after therapy. According to the findings, the enhanced single threshold segmentation algorithm was successful in the image segmentation of patient lesions, and the Faster RCNN was able to complete the labeling of the lesion area in the CT image. Both of these accomplishments were suggested by the findings.

No. of Pages : 23 No. of Claims : 5