



Australian Government

IP Australia

CERTIFICATE OF GRANT INNOVATION PATENT

Patent number: 2021102801

The Commissioner of Patents has granted the above patent on 7 July 2021, and certifies that the below particulars have been registered in the Register of Patents.

Name and address of patentee(s):

R P Patel of Associate Professor, Department of Pure and Applied Physics, Guru Ghasidas Vishwavidyala Bilaspur-495009 India

Tulika Chakrabarti of Assistant Professor (Grade-A), Dept.of Chemistry, Sir Padampat Singhania University Udaipur , Rajasthan- 313601 India

Ananda Shankar Hati of Assistant Professor, (Electrical Engineering), Dept. of Mining Machinery Engineering Indian Institute of Technology (Indian School of Mines), Dhanbad, Jharkhand- 826004 India

M. Mahalingam of Associate professor (CAS), Department of Mechanical Engineering, Government College of Engineering Bodinayakkanur, Thevaram Road Theni District, Tamil Nadu- 625582 India

K G Saravanan of Associate Professor, Department of Mechanical Engineering, Sona College of Technology TPT Road, Salem, Tamil Nadu - 636 005 India

Ibrahim Patel of Associate Professor, Department of ECE, B. V. Raju Institute of Technology Vishnupur, Narsapur, Medak District, Telangana, 502313. India

Patteti Krishna of Assistant Professor, Department of ECE Netaji Subhash University of Technology East Campus, Geeta Colony, New Delhi-110031, India

Yogendra Kumar of Assistant Professor, Department of Physics, VSP Government PG College Kairana, District -Shamli Uttar Pradesh - 247774 India

K. Gowrishankar of Associate Professor, Department of Biomedical Engineering Rajiv Gandhi College of Engineering and Technology, Kirumampakkam, Puducherry - 607403, India

Varuna Kumara of Assistant Professor, Department of ECE, Moodlakatte Institute of Technology (Affiliated to VTU, Belagavi), Kundapura 576217 India

Prasun Chakrabarti of Provost & Institute Endowed Distinguished, Senior Chair Professor, Techno India NJR Institute of Technology Udaipur, Rajasthan - 313003 India

S. Sophia of Professor and Head, Department of ECE, Sri Krishna College of Engineering and Technology, Coimbatore, Tamil Nadu- 641008, India

Title of invention:

VELOCITY ESTIMATION FROM CYCLE PEDALING BY USING EXTENDED KALMAN FILTER ALGORITHM

Name of inventor(s):

Patel, R. P.; Chakrabarti, Tulika; Hati, Ananda Shankar; Mahalingam, M.; Saravanan, K. G.; Patel, Ibrahim; Krishna, Patteti; Kumar, Yogendra; Gowrishankar, K.; Kumara, Varuna; Chakrabarti, Prasun and Sophia, S.

Term of Patent:



Dated this 7th day of July 2021

Commissioner of Patents

PATENTS ACT 1990

The Australian Patents Register is the official record and should be referred to for the full details pertaining to this IP Right.



Australian Government

IP Australia

CERTIFICATE OF GRANT INNOVATION PATENT

Patent number: 2021102801

Eight years from 24 May 2021

NOTE: This Innovation Patent cannot be enforced unless and until it has been examined by the Commissioner of Patents and a Certificate of Examination has been issued. See sections 120(1A) and 129A of the Patents Act 1990, set out on the reverse of this document.



Dated this 7th day of July 2021

Commissioner of Patents

PATENTS ACT 1990

The Australian Patents Register is the official record and should be referred to for the full details pertaining to this IP Right.

Extracts from the Patents Act, 1990

Sect 120(1A) Infringement proceedings in respect of an innovation patent cannot be started unless the patent has been certified.

Sec 128 **Application for relief from unjustified threats**

- (1) Where a person, by means of circulars, advertisements or otherwise, threatens a person with infringement proceedings or other similar proceedings a person aggrieved may apply to a prescribed court, or to another court having jurisdiction to hear and determine the application, for:
- (a) a declaration that the threats are unjustifiable; and
 - (b) an injunction against the continuance of the threats; and
 - (c) the recovery of any damages sustained by the applicant as a result of the threats.
- (2) Subsection (1) applies whether or not the person who made the threats is entitled to, or interested in, the patent or a patent application.

Sec 129A **Threats related to an innovation patent application or innovation patent and courts power to grant relief.**

Certain threats of infringement proceedings are always unjustifiable.

- (1) If:
- (a) a person:
 - (i) has applied for an innovation patent, but the application has not been determined; or
 - (ii) has an innovation patent that has not been certified; and
 - (b) the person, by means of circulars, advertisements or otherwise, threatens a person with infringement proceedings or other similar proceedings in respect of the patent applied for, or the patent, as the case may be; then, for the purposes of an application for relief under section 128 by the person threatened, the threats are unjustifiable.

Courts power to grant relief in respect of threats made by the applicant for an innovation patent or the patentee of an uncertified innovation patent

- (2) If an application under section 128 for relief relates to threats made in respect of an innovation patent that has not been certified or an application for an innovation patent, the court may grant the application the relief applied for.

Courts power to grant relief in respect of threats made by the patentee of certified innovation patent

- (3) If an application under section 128 for relief relates to threats made in respect of a certified innovation patent, the court may grant the applicant the relief applied for unless the respondent satisfies the court that the acts about which the threats were made infringed, or would infringe, a claim that is not shown by the applicant to be invalid.

Schedule 1 **Dictionary**

certified, in respect of an innovation patent other than in section 19, means a certificate of examination issued by the Commissioner under paragraph 101E(e) in respect of the patent