



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

सत्यमेव जयते

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



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

Application Details

APPLICATION NUMBER	202141046111
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	09/10/2021
APPLICANT NAME	1 . Dr.BJ.D.Kalyani 2 . Mr.P.Dayaker 3 . Dr.Kavuri KSWA Satheesh 4 . Prof.Bibhuti Bhusan Dash 5 . Dr.Rabinarayan Satpathy 6 . Dr.Smita Rani Parija 7 . Er.Yogendra Kumar 8 . Dr.Ranjan Kumar Mohapatra 9 . Dr.Sushma Jaiswal 10 . Mrs.Maduri Madhavi
TITLE OF INVENTION	A CRYPTOGRAPHIC SYSTEM BASED ON CONVOLUTION NEURAL NETWORK AND NESTED SECURITY LEVELS AND METHOD THEREOF
FIELD OF INVENTION	ELECTRONICS
E-MAIL (As Per Record)	tumula.githam@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	22/10/2021

Application Status

APPLICATION STATUS	Awaiting Request for Examination
--------------------	---

[View Documents](#)

➡ Filed ➡ Published ➡ RQ Filed ➡ Under Examination ➡ Disposed

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

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202141046111 A

(19) INDIA

(22) Date of filing of Application :09/10/2021

(43) Publication Date : 22/10/2021

(54) Title of the invention : A CRYPTOGRAPHIC SYSTEM BASED ON CONVOLUTION NEURAL NETWORK AND NESTED SECURITY LEVELS AND METHOD THEREOF

<p>(51) International classification :G06N 3/04 (86) International Application No :NA Filing Date :NA (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</p>	<p>(71)Name of Applicant : 1)Dr.B.J.D.Kalyani Address of Applicant :Associate Professor, Department of Computer Science and Engineering, Institute of Aeronautical Engineering, Hyderabad, Telangana, India. Pin Code:500043 ----- 2)Mr.P.Dayaker 3)Dr.Kavuri KSVA Satheesh 4)Prof.Bibhuti Bhusan Dash 5)Dr.Rabinarayan Satpathy 6)Dr.Smita Rani Parija 7)Er.Yogendra Kumar 8)Dr.Ranjan Kumar Mohapatra 9)Dr.Sushma Jaiswal 10)Mrs.Maduri Madhavi Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr.B.J.D.Kalyani Address of Applicant :Associate Professor, Department of Computer Science and Engineering, Institute of Aeronautical Engineering, Hyderabad, Telangana, India. Pin Code:500043 ----- 2)Mr.P.Dayaker Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Sree Vidyanikethan Engineering College, Sree Sainath Nagar, A. Rangampet, Chittoor, Andhra Pradesh, India. Pin Code:517102 ----- 3)Dr.Kavuri KSVA Satheesh Address of Applicant :Assistant Professor, School of Computer Science and Artificial Intelligence, SR University, Anantha Sagar, Hasanparthy, Hanamkonda, Warangal, Telangana, India. Pin Code:506371 ----- 4)Prof.Bibhuti Bhusan Dash Address of Applicant :Assistant Professor, School of Computer Applications, KIIT Deemed to be University, KOEL Campus, Patia, Bhubaneswar, Odisha, India. Pin Code: 751024 ----- 5)Dr.Rabinarayan Satpathy Address of Applicant :Professor in CSE (FMS) and Director VC Office, Sri Sri University, Cuttack, Odisha, India. Pin Code: 754006 ----- 6)Dr.Smita Rani Parija Address of Applicant :Department of ECE, C.V. Raman Global University, BBSR, Odisha, India. Pin Code:752054 ----- 7)Er.Yogendra Kumar Address of Applicant :Assistant Professor, Department of Physics, VSP Government PG College Kairana, Shamli, Uttar Pradesh, India. Pin Code:247774 ----- 8)Dr.Ranjan Kumar Mohapatra Address of Applicant :Department of Chemistry, Government College of Engineering, Keonjhar, Odisha, India. Pin Code: 758002 ----- 9)Dr.Sushma Jaiswal Address of Applicant :Assistant Professor, Department of Computer Science & Information Technology (CSIT), Guru Ghasidas Vishwavidyalaya (A Central University), Koni, Bilaspur, Chhattisgarh, India. Pin Code: 495009 ----- 10)Mrs.Maduri Madhavi Address of Applicant :Assistant Professor, Department of CSE, Anurag University, Hyderabad, Telangana, India. Pin Code:500088 -----</p>
---	---

(57) Abstract :
[035] The present invention discloses a cryptographic system based on convolution neural network and nested security levels and method thereof. The system includes, but not limited to, a memory unit configured to store data and program instructions; and a processing unit with one or more processors configured to read and execute the program instructions from the memory, wherein in response to execution of the program instructions, the processor is operable to: receive compressed input encrypted data. In addition, the compressed input encrypted data is a compressed encrypted representation of a block of samples of a first data source and receive a data block of samples of a second data source. Further, the processing unit is configured to apply an asymmetric Slepian-Wolf decoder to the compressed input encrypted data using the block of samples of the second data source. Accompanied Drawing [FIG. 1]

No. of Pages : 23 No. of Claims : 9

FORM 1 THE PATENTS ACT 1970 (39 of 1970) and THE PATENTS RULES, 2003 APPLICATION FOR GRANT OF PATENT (See section 7, 54 and 135 and sub-rule (1) of rule 20)				(FOR OFFICE USE ONLY)	
				Application No.	
				Filing date:	
				Amount of Fee paid:	
				CBR No:	
				Signature:	
1. APPLICANT'S REFERENCE / IDENTIFICATION NO. (AS ALLOTTED BY OFFICE)					
2. TYPE OF APPLICATION [Please tick (✓) at the appropriate category]					
Ordinary (✓)		Convention ()		PCT-NP ()	
Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()
3A. APPLICANT(S)					
Name in Full		Nationality	Country of Residence	Address of the Applicant	
1. Dr.B.J.D.Kalyani		INDIAN	India	Associate Professor, Department of Computer Science and Engineering, Institute of Aeronautical Engineering, Hyderabad, Telangana, India. Pin Code:500043	
2. Mr.P.Dayaker		INDIAN	India	Assistant Professor, Department of Computer Science and Engineering, Sree Vidyanikethan Engineering College, Sree Sainath Nagar, A. Rangampet, Chittoor, Andhra Pradesh, India. Pin Code:517102	
3. Dr.Kavuri KSVA Satheesh		INDIAN	India	Assistant Professor, School of Computer Science and Artificial Intelligence, SR University, Anantha Sagar, Hasanparthy, Hanamkonda, Warangal, Telangana, India. Pin Code:506371	

4. Prof.Bibhuti Bhusan Dash	INDIAN	India	Assistant Professor, School of Computer Applications, KIIT Deemed to be University, KOEL Campus, Patia, Bhubaneswar, Odisha, India. Pin Code: 751024
5. Dr.Rabinarayan Satpathy	INDIAN	India	Professor in CSE (FMS) and Director VC Office, Sri Sri University, Cuttack, Odisha, India. Pin Code: 754006
6. Dr.Smita Rani Parija	INDIAN	India	Department of ECE, C.V. Raman Global University, BBSR, Odisha, India. Pin Code:752054
7. Er.Yogendra Kumar	INDIAN	India	Assistant Professor, Department of Physics, VSP Government PG College Kairana, Shamli, Uttar Pradesh, India. Pin Code:247774
8. Dr.Ranjan Kumar Mohapatra	INDIAN	India	Department of Chemistry, Government College of Engineering, Keonjhar, Odisha, India. Pin Code: 758002
9. Dr.Sushma Jaiswal	INDIAN	India	Assistant Professor, Department of Computer Science & Information Technology (CSIT), Guru Ghasidas Vishwavidyalaya (A Central University), Koni, Bilaspur, Chhattisgarh, India. Pin Code: 495009
10. Mrs.Maduri Madhavi	INDIAN	India	Assistant Professor, Department of CSE, Anurag University, Hyderabad, Telangana, India. Pin Code:500088
3B. CATEGORY OF APPLICANT [Please tick (✓) at the appropriate category]			
Natural Person (✓)	Other than Natural Person		
	Small Entity ()	Startup ()	Others ()
4. INVENTOR(S) [Please tick (✓) at the appropriate category]			
Are all the inventor(s) same as the applicant(s) named above?	Yes (✓)		No ()
If "No", furnish the details of the inventor(s)			
Name in Full	Nationality	Country of Residence	Address of the Inventor

Same as Applicant					
5. TITLE OF THE INVENTION					
A CRYPTOGRAPHIC SYSTEM BASED ON CONVOLUTION NEURAL NETWORK AND NESTED SECURITY LEVELS AND METHOD THEREOF					
6. AUTHORISED REGISTERED PATENT AGENT(S)			IN/PA No.		
			Name		
			Mobile No.		
7. ADDRESS FOR SERVICE OF APPLICANT IN INDIA			Name	Dr.B.J.D.Kalyani	
			Postal Address	Associate Professor, Department of Computer Science and Engineering, Institute of Aeronautical Engineering, Hyderabad, Telangana, India. Pin Code:500043	
			Telephone No.		
			Mobile No.	9542354100	
			Fax No.		
			E-mail ID	tumula.githam@gmail.com	
8. IN CASE OF APPLICATION CLAIMING PRIORITY OF APPLICATION FILED IN-CONVENTION COUNTRY, PARTICULARS OF CONVENTION APPLICATION					
Country	Application Number	Filing date	Name of the applicant	Title of the invention	IPC (as classified in the convention country)
9. IN CASE OF PCT NATIONAL PHASE APPLICATION, PARTICULARS OF INTERNATIONAL APPLICATION FILED UNDER PATENT CO-OPERATION TREATY (PCT)					
International application number			International filing date		
10. IN CASE OF DIVISIONAL APPLICATION FILED UNDER SECTION 16, PARTICULARS OF ORIGINAL (FIRST) APPLICATION					
Original (first) application No.			Date of filing of original (first) application		
11. IN CASE OF PATENT OF ADDITION FILED UNDER SECTION 54, PARTICULARS OF MAIN APPLICATION OR PATENT					
Main application/patent No.			Date of filing of main application		
12. DECLARATIONS					

(i) Declaration by the inventor(s)

(In case the applicant is an assignee: the inventor(s) may sign herein below or the applicant may upload the assignment or enclose the assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period).

I/We, the above named inventor(s) is/are the true & first inventor(s) for this Invention and declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date 09/10/2021

(b) Name	(c) Signature
1. Dr.B.J.D.Kalyani	B.J.D. Kalyani
2. Mr.P.Dayaker	P. Dayaker
3. Dr.Kavuri KSVA Satheesh	K. Satheesh
4. Prof.Bibhuti Bhusan Dash	Bibhuti Bhusan Dash
5. Dr.Rabinarayan Satpathy	R. Satpathy
6. Dr.Smita Rani Parija	Smita Rani Parija
7. Er.Yogendra Kumar	Yogendra Kumar
8. Dr.Ranjan Kumar Mohapatra	R. Mohapatra
9. Dr.Sushma Jaiswal	Sushma
10. Mrs.Maduri Madhavi	M. Madhavi

~~(ii) Declaration by the applicant(s) in the convention country~~

~~**(In case the applicant in India is different than the applicant in the convention country:** the applicant in the convention country may sign herein below or applicant in India may upload the assignment from the applicant in the convention country or enclose the said assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period)~~

~~I/We, the applicant(s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative.~~

~~(a) Date~~

~~(b) Signature(s)~~

~~(c) Name(s) of the signatory~~

(iii) Declaration by the applicant(s)

I/We the applicant(s) hereby declare(s) that: -

- I am/ We are in possession of the above-mentioned invention.
- The provisional/complete specification relating to the invention is filed with this application.
- ~~The invention as disclosed in the specification uses the biological material from India and the necessary permission from the competent authority shall be submitted by me/us before the grant of patent to me/us.~~
- There is no lawful ground of objection(s) to the grant of the Patent to me/us.
- I am/we are the true & first inventor(s).
- ~~I am/we are the assignee or legal representative of true & first inventor(s).~~
- ~~The application or each of the applications, particulars of which are given in Paragraph 8, was the first application in convention country/countries in respect of my/our invention(s).~~
- ~~I/We claim the priority from the above mentioned application(s) filed in convention country/countries and state that no application for protection in respect of the invention had been made in a convention country before that date by me/us or by any person from which I/We derive the title.~~
- ~~My/our application in India is based on international application under Patent Cooperation Treaty (PCT) as mentioned in Paragraph-9.~~
- ~~The application is divided out of my /our application particulars of which is given in Paragraph-10 and pray that this application may be treated as deemed to have been filed on DD/MM/YYYY under section 16 of the Act.~~
- ~~The said invention is an improvement in or modification of the invention particulars of which are given in Paragraph-11.~~

13. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION

(a) Form 2

Item	Details	Fee	Remarks
Complete/ Provisional specification)#	No. of pages : 18		
No. of Claim(s)	No. of claims : 09 No. of pages: 03		
Abstract	No. of pages: 01		
No. of Drawing(s)	No. of drawings: 02 No. of pages: 01		

In case of a complete specification, if the applicant desires to adopt the drawings filed with his provisional specification as the drawings or part of the drawings for the complete specification under rule 13(4), the number of such pages filed with the provisional specification are

required to be mentioned here.

- (b) Complete specification (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).
- (c) Sequence listing in electronic form
- (d) Drawings (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).
- (e) Priority document(s) or a request to retrieve the priority document(s) from DAS (Digital Access Service) if the applicant had already requested the office of first filing to make the priority document(s) available to DAS.
- (f) Translation of priority document/Specification/International Search Report/International Preliminary Report on Patentability.
- (g) Statement and Undertaking on Form 3
- (h) Declaration of Inventorship on Form 5
- (i) Power of Authority
- (j) **Total fee ₹.....in Cash/ Banker's Cheque /Bank Draft bearing No.....
Date on Bank.**

I/We hereby declare that to the best of my/our knowledge, information and belief the fact and matters slated herein are correct and I/We request that a patent may be granted to me/us for the said invention.

Dated this 09th day of October, 2021

Signature:

Name: Dr.B.J.D.Kalyani et. al.

To,
The Controller of Patents
The Patent Office, at Chennai

Note: -

- * Repeat boxes in case of more than one entry.
- * To be signed by the applicant(s) or by authorized registered patent agent otherwise where mentioned.
- * Tick ()/cross (x) whichever is applicable/not applicable in declaration in paragraph-12.
- * Name of the inventor and applicant should be given in full, family name in the beginning.
- * Strike out the portion which is/are not applicable.
- * For fee: See First Schedule";

