## Summary

Year	Applied	Published	Granted
Jan 2020 – Dec 2020	3	6	5

Sr. No.	Faculty / Students	Department	Title	Application No. & Date	Date of Publication	Status
1	Mr. Yogesh Kamble, Dr. B. Rajeev, Dr. P.D. Pantawane, Prof. B.B. Ahuja	Manufacturing Engineering & Industrail Management	Design and Development of Slotted Center Drilling Tool for Friction Drilling Process	202021040960 Dated: Sept 22, 2020		Applied
2	Mr. Swapnil A. Bukshete, Dr. Sandeep Anasane, Prof. B.B. Ahuja, Dr. Nikhil Panse,	Manufacturing engineering And Industrial management	Hand Rehabilitation Device	Application No.20201038770, Date: September 8, 2020		Applied
3	Mr. Pratik Waghmare, Dr. B Rajiv and Prof. B.B. Ahuja	Manufacturing Engineering & Industrial Management	Method and Device for Proceeding Based Asset Safety and Actuation with Device Smartphone- Unique pairing.	Application No. 202021055455, Date:Dec.21, 2020		Applied

## List of Patents Filed in Jan-Dec 2020



## List of Patents Published in Jan-Dec 2020

Sr. No.	Faculty / Students	Department	Title	Application No. & Date	Date of Publication	Status
1	Dr. C. Y. Patil, Mr. Y. G. Adhav	Instrumentatio n & Control Engineering	MEMS Sensor for Real Time Measurement of Specific Gravity and State of Charge of Lead Acid Battery	Application No: 201821037211 Date: October 2, 2018	10/04/2020	Published
2	Prof. N.B. Dhokey, Jay Runwal, Revati Ambekar	Metallurgy & material Science	A Mechanical Grinding System And Process Of Surface Modification Of Irregular Shaped Powders	201921003487 Dated: January 29, 2019	31/07/2020	Published
3.	Dr. Sandeep Anasane, Dr. B. B. Ahuja, Juilee Deshpande, Gandali Kelkar, Aaman Nadaf, Mayur Sanas, Dr. Arati V. Mulay, Dr.Prakash Bhave	Manufacturing Engineering & Industrail Management	X-Ray Diagnostic Device	Application No: 201821011503 Date : March 28, 2018	19/06/2020	Published
4	M.R.Nandgaonkar Apte A A ,Shaikh Hamdaan Asif Kadam V G , Shinde G G Kothawade PP,Pawar GR	Mechanical Engineering	An Intake System For A Turbocharged Engine	Application No. 201921010780 A Date: March 20, 2019	25/09/2020	Published
5	Mrs.S.H. Deshpande, Dr. Jayant A. Kher, Shirish N. Phadtare, M. H. Tadpatrikar, Mrs.Nandini V. Iyer, Dr. M.Y. Khaladkar, Dr. Ganesh L. Agawane,	Applied Science	Process for synthesis of diesel oil by catalytic pyrolysis of thermo softening plastic waste	Application No. 202021023096 A Date: June 04, 2020	03/07/2020	Published
6	Dr. M. P. Khond, Mr. Milind Vasekar, Vivekanand Naikwadi	Mechanical Engineering	Design & Development of Compact Temp Indicator devicing dise pads in Modern vehicles	Application No. 202021039875 Date: September 15, 2020	06/11/2020	Published



## List of Patent Granted in Jan-Dec 2020

Sr. No.	Faculty / Students	Department	Title	Application No. & Date	Date of Publication	Status
1	Dr. B.B.Ahuja Mr. S.M. Patil Mr. A. P.Patil	Production Engineering	Variable Loading Wear and Friction Monitor (VLWAFM) Pin-on-disc Sliding Tribometer	No.: 1521/MUM/2012 Date: May 18, 2012	30/11/2012	Granted Patent No :331165 Date: February 4, 2020
2	Prof.G.V. Parishwad and H.U. Tiwari	Mechanical Engineering	An Instant Potable and Compact Cooling System working on Multiple Heat Sources	No.: 768/MUM/2012 Date: March 22, 2012	27/12/2013	Granted Patent No. 335788 Date: April 22, 2020
3	Dayaram Sonawane , Seattle , WA ( US ) ; Manan Pathak , Seattle , WA (US) ; Venkat Subramanian , Seattle , WA (US) ; Matthew Lawder , St. Louis , MO (US	Instrumentation	Battery Models , Systems , And Methods Using Robust Fail - Safe Iteration Free Approach For Solving Differential Algebraic Equations	Jul . 20 , 2016 ( 86 ) PCT No .: PCT /	26/1/2017	Granted Patent US 10,769,236 B2 Date: September 9, 2020
4	Dr. B.B.Ahuja , Mr. Sudhir Madhav Patil Mr. Sachin Hiraji Mhatre	Production Engineering	Variable Loading Pin- On-Plate Reciprocating Sliding Tribometer [VLPOPRST]	No.: 84/MUM/2013 Date: January 10, 2013	17/10/2014	Granted Patent No :347732 Date: September 25, 2020
5	Charthal Jayesh Suresh, Chandarana Saurabha, Munot Hema Kishore	Civil Engineering	Process for Preparation of Geopolymer- Composite Articles	Application No: 1957/MUM/2014, Date: June 17, 2014	18/12/2015	Granted Patent No. :352755 Date: December 1, 2020



## Proof for Patent Applied-3

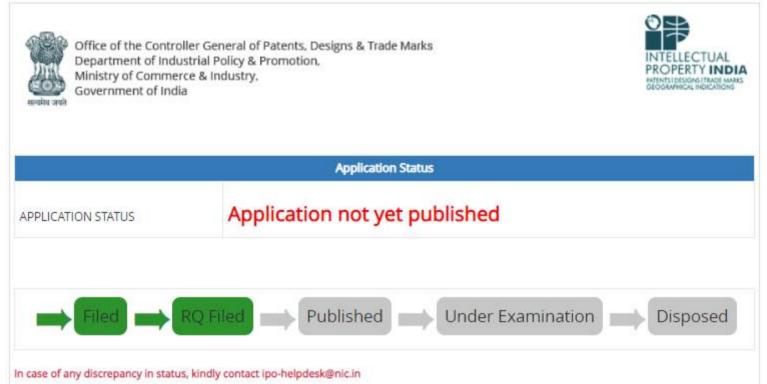
	Application Status
APPLICATION STATUS	Awaiting Complete Specification
Filed =>	Published RQ Filed Under Examination Disposed





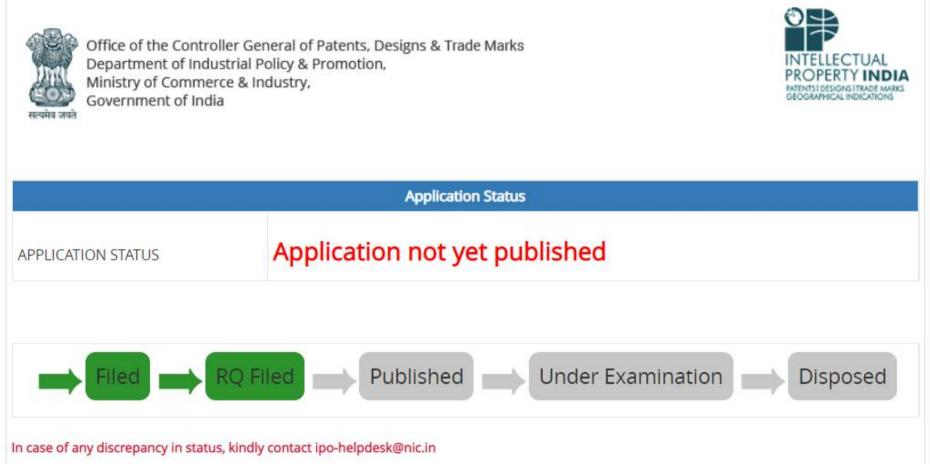
APPLICATION STATUS	Awaiting Complete Specification
Filed	Published RQ Filed Under Examination Disposed







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



	Application Details
APPLICATION NUMBER	201821037211
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	02/10/2018
APPLICANT NAME	COLLEGE OF ENGINEERING, PUNE
TITLE OF INVENTION	A LEAD ACID BATTERY CHARGE MONITORING SYSTEM
FIELD OF INVENTION	ELECTRICAL
E-MAIL (As Per Record)	chirag@inkidee.com
ADDITIONAL-EMAIL (As Per Record)	chirag@inkidee.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	
PUBLICATION DATE (U/S 11A)	10/04/2020





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



	Application Details
APPLICATION NUMBER	201921003487
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	29/01/2019
APPLICANT NAME	1 . N.B.DHOKEY 2 . JAY RUNWAL 3 . REVATI AMBEKAR
TITLE OF INVENTION	A MECHANICAL GRINDING SYSTEM AND PROCESS OF SURFACE MODIFICATION OF IRREGULAR SHAPED POWDERS
FIELD OF INVENTION	TEXTILE
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	nbdhokey@yahoo.co.in
E-MAIL (UPDATED Online)	chirag@inkidee.com
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	25/12/2020
PUBLICATION DATE (U/S 11A)	31/07/2020





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



	Application Details
APPLICATION NUMBER	201821011503
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	28/03/2018
APPLICANT NAME	COLLEGE OF ENGINEERING, PUNE
TITLE OF INVENTION	AN ASSISTIVE MECHANISM FOR X-RAY IMAGE ENHANCEMENT
FIELD OF INVENTION	PHYSICS
E-MAIL (As Per Record)	chirag@inkiee.com
ADDITIONAL-EMAIL (As Per Record)	chirag@inkidee.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	20/05/2019
PUBLICATION DATE (U/S 11A)	19/06/2020

PPLICATION NUMBER	201921045241
PPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	07/11/2019
PPLICANT NAME	COLLEGE OF ENGINEERING
ITLE OF INVENTION	ANGULAR MATING SPUR GEAR
IELD OF INVENTION	MECHANICAL ENGINEERING
-MAIL (As Per Record)	chirag@inkidee.com
DDITIONAL-EMAIL (As Per Record)	chirag@inkidee.com
-MAIL (UPDATED Online)	
RIORITY DATE	
EQUEST FOR EXAMINATION DATE	19/01/2021
UBLICATION DATE (U/S 11A)	14/05/2021
EPLY TO FER DATE	21/12/2021
	Application Status
PPLICATION STATUS	Reply Filed. Application in amended examination

	Application Details
APPLICATION NUMBER	202021023096
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	02/06/2020
APPLICANT NAME	1 . Sangeeta Hanumant Deshpande     2 . Jayant Ambadas Kher     3 . Shirish Alias Ratnakar Nilkanth Phadatare     4 . Medha Hari Tadpatrikar     5 . Nandini Venkat Iyer     6 . Manisha Yogesh Khaladkar     7 . Ganesh Labhas Agawane     8 . Kaustubh Vyankatesh Ghamande
TITLE OF INVENTION	PROCESS FOR SYNTHESIS OF DIESEL OIL BY CATALYTIC PYROLYSIS OF THERMO SOFTENING PLASTIC WASTES
FIELD OF INVENTION	MECHANICAL ENGINEERING
E-MAIL (As Per Record)	infobli100@gmail.com
ADDITIONAL-EMAIL (As Per Record)	sjgawande@gmail.com
E-MAIL (UPDATED Online)	ashutosh@bliconsultancy.co.in
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	11/06/2020
PUBLICATION DATE (U/S 11A)	03/07/2020
REPLY TO FER DATE	11/11/2021
E-MAIL (As Per Record) ADDITIONAL-EMAIL (As Per Record) E-MAIL (UPDATED Online) PRIORITY DATE REQUEST FOR EXAMINATION DATE PUBLICATION DATE (U/S 11A) REPLY TO FER DATE	sjgawande@gmail.com ashutosh@bliconsultancy.co.in 11/06/2020 03/07/2020
	Application Status

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Estd-1854
College of Engineering Pune
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Office of the Controller General of Patents, Designs & Trade Marks Department of Industrial Policy & Promotion, Ministry of Commerce & Industry, Government of India

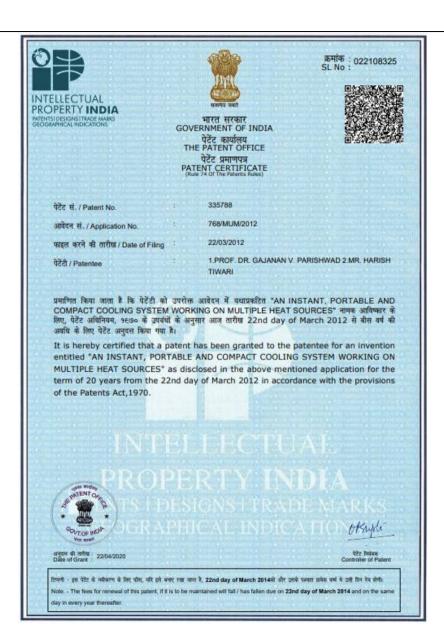
Filed RQ Filed Published

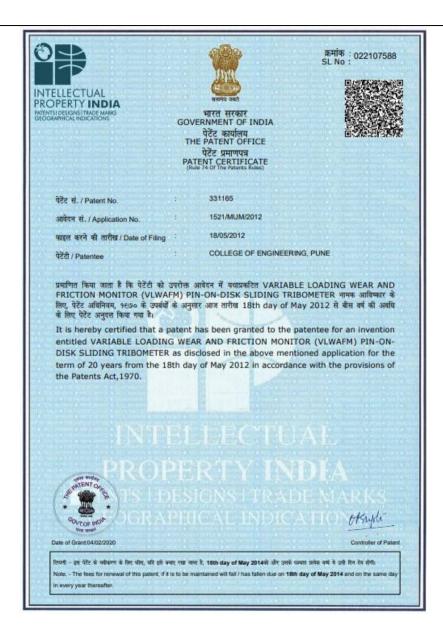


Disposed

	Application Details
APPLICATION NUMBER	202021039875
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	15/09/2020
APPLICANT NAME	1 . MILIND KAWADU WASEKAR 2 . Dr.Mohan Pandurang Khond 3 . Vivekanand Arun naikwadi
TITLE OF INVENTION	DESIGN AND DEVELOPMENT COMPACT TEMPERATURE INDICATOR DEVICE IN DISK PADS IN MODERN VEHICLES.
FIELD OF INVENTION	MECHANICAL ENGINEERING
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ADDITIONAL-EMAIL (As Per Record)	naikwadivivek@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	15/09/2020
PUBLICATION DATE (U/S 11A)	06/11/2020

Under Examination







# 

US010769236B2

### (12) United States Patent Sonawane et al.

# (10) Patent No.: US 10,769,236 B2 (45) Date of Patent: Sep. 8, 2020

- (54) BATTERY MODELS, SYSTEMS, AND METHODS USING ROBUST FAIL-SAFE ITERATION FREE APPROACH FOR SOLVING DIFFERENTIAL ALGEBRAIC EQUATIONS
- (71) Applicants: University of Washington, Seattle, WA (US); Washington University, St. Louis, MO (US)
- (72) Inventors: Dayaram Sonawane, Seattle, WA (US); Manan Pathak, Seattle, WA (US); Venkat Subramanian, Seattle, WA (US); Matthew Lawder, St. Louis, MO (US)
- (73) Assignees: University of Washington, Seattle, WA (US); Washington University, St. Louis, MO (US)
- (\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 309 days.
- (21) Appl. No.: 15/745,984
- (22) PCT Filed: Jul. 20, 2016
- (86) PCT No.: PCT/US2016/043188 § 371 (c)(1), (2) Date: Jan. 18, 2018
- (87) PCT Pub. No.: WO2017/015396PCT Pub. Date: Jan. 26, 2017
- 1 C1 1 ub. Date. **341. 20, 201**7
- (65) **Prior Publication Data** US 2018/0210861 A1 Jul. 26, 2018

### Related U.S. Application Data

(60) Provisional application No. 62/194,678, filed on Jul. 20, 2015.

- - CPC ...... H02J 7/0021; H02J 7/0048 (Continued)
- (56) References Cited

### U.S. PATENT DOCUMENTS

#### (Continued)

### FOREIGN PATENT DOCUMENTS

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### OTHER PUBLICATIONS

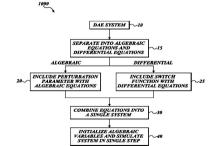
9th IFAC Symposium on Advanced Control of Chemical Processes ADCHEM 2015 Proceedings (B. Huang et al., Ed.) Jun. 7-10, 2015, pp. i-v, Retrieved Oct. 5, 2016 from Google Web at http://www. sciencedirect.com/science?\_ob=ArticleListURL&\_method=list &ArticleListID=-10625673300&\_sort=r&=t=13&view=c&md5= 39effb558e82e87c5822eb670c15fc8&searchtype=a. ISSN 2405-8963.

#### (Continued)

Primary Examiner — Jerry D Robbins (74) Attorney, Agent, or Firm — Christensen O'Connor Johnson Kindness PLLC

### (57) ABSTRACT

Battery models using robust fail-safe iteration free approach for solving Differential Algebraic Equations, and associated systems and methods are disclosed. In one embodiment, a (Continued)



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