



List of Patents Obtained/Published/Applied

Name of the Department: Instrumentation and Control

Sr. No.	Academic Year (1 st July to next 30 th June)	Name of the Faculty/Students	Title of the Patent	Application No. and Date of filing Patent	Date of Publication/ Award of Patent	Status	Remarks
1.	2004-2005	Dr S D Agashe	Flow control system for solar water heating	No.: 331/MUM/2003 Date: April 3, 2003	Awarded on: 24/12/2008	Granted	National (Indian) Patent
2.	2016-2017	Dr D N Sonawane Manan Pathak, (USA) Matthew Lawder (USA) Venkat Subramanian (USA)	Battery Models, Systems and Methods Using Robust fail-safe iteration free Approach for solving DAE Equations	No: 15/745,984 Date: July 20, 2016	Awarded on: 08/09/2020	Granted	International (USA) Patent
3.	2018-2019	Sanjeev Kumar Pandey, Dr. S.L.Patil, Dr. U. M. Chaskar S. B.Phadke	A Unified Sensorless Control System And Method of Dc-Dc Converters	No. 201821012547 Date April 3, 2018	11/10/2019	Published	Under Process
4.	2018-2019	Dr. C. Y. Patil, Mr. Yashwant Adhav	MEMS Sensor for Real Time Measurement of Specific Gravity and State of Charge of Lead Acid Battery	No. 201821037211 A Date: Oct.02, 2018	10/04/2020	Published	Under Process
5.	2020-2021	Dr D N Sonawane Dr Jayant Pawar Dr Kiran Diwate Dr Geeta Karande Mr. Swapnil Awachkar Dr D K Agrawal	Disinfecting and Sterilizing Chamber	No: 336097-001 Date: 10/12/2020	Awarded on: 22/11/2021	Granted	National (Indian) Patent
6.	2020-2021	Dr D N Sonawane Dr Jayant Pawar Dr Kiran Diwate Dr Geeta Karande Mr. Swapnil Awachkar Dr D K Agrawal	Disinfecting and Sterilizing Tray	No: 336098-001 Date: 10/12/2020	Awarded on: 10/11/2021	Granted	National (Indian) Patent



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7.	2020-2021	Dr Girish Lakhekar Dr L M waghmare Dr Dipali Shende	Adaptive Spatial Trajectory Tracking Control For Autonomous Underwater Vehicle	No: 2021100238 Date:14/01/2021	Awarded on: 14/01/2021	Granted	International (Australian) Patent
8.	2021-22	Lakhekar Girish Vithalrao & (Jogdand, Vishakha Vishwanath, , Malwatkar, Gajanan)Madhavrao, Shende, Dipali Rohit,	An analog emulator system for temperature control of heat exchanger	No. : 20 2022 100 696.2 Germany Patent	Gazette: 31/03/2022	Granted	Germany Patent
9.	2021-22	Lakhekar Girish Vithalrao & (Rupam Gupta Roy, Anurupa Gupta Roy Lodh, Rajakumar B. R, Binu Dennis)	Shank Foot Orthosis System Using Second- Order Sliding Mode Controller	Application No. 202231012984 Date of Filing 10/03/2022	Publication Date 15/04/2022	Published	Indian