

# Sanket Subhash Tambe

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## RESEARCH AREA

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- Renewable Energy Integration into Grid
- Multilevel Inverters
- Wide Band Gap Devices
- Pulse Width Modulation

## EDUCATION

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<b>Indian Institute of Technology Roorkee</b> <i>Ongoing Direct PhD, Electrical Engineering Department, Overall pointer: 9.533/10</i>	Roorkee, Uttarakhand 2022
<b>Sardar Patel College of Engineering</b> <i>B Tech, Electrical Engineering, Overall pointer: 9.46/10</i>	Mumbai, Maharashtra 2016-2020
<b>Wamanrao Muranjan Jr College</b> <i>HSC, Science, Percentage: 92.15%</i>	Mulund, Maharashtra 2014-2016
<b>St Xavier's High School</b> <i>SSC, Percentage: 92%</i>	Airoli, Maharashtra 2014

## WORK EXPERIENCE

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<b>L&amp;T Technology Services Ltd</b> <i>Associate Engineer</i>	Bengaluru, Karnataka March 2021 – April 2022
<ul style="list-style-type: none"><li>- Executed and documented market research on “High Power Density PMSM/BLDC Motor &amp; Inverter Trade Study for Electric Aircraft”.</li><li>- Worked on proof of concept “Hybrid Electric Propulsion System for Electric Aircraft”.</li></ul>	

## RESEARCH PROJECT

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<b>Indian Institute of Technology Bombay</b> <i>Project Intern</i>	Powai, Maharashtra July 2019 – Feb 2020
<ul style="list-style-type: none"><li>- BTech Project: “Design and Development of BLDC motor for DC operated mixers and grinders” Power Electronics lab - EE Department</li><li>- Implemented BLDC motor control, sensor-based using hysteresis current control method and sensor-less based using Back EMF method in MATLAB/Simulink environment. Further generated PWM switching pulses for a three-phase two-level inverter using a 16-bit dsPIC microcontroller (by microchip).</li></ul>	

## INTERNSHIPS

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<b>L&amp;T Technology Services Ltd</b> <i>Associate Engineer</i>	Mysore, Karnataka Nov 2020 – March 2021
<ul style="list-style-type: none"><li>- Undergone rigorous training on courses such as C++, Java, Python and its libraries (e.g. Conda) for data analytics, software testing and all for a duration of three months.</li></ul>	
<b>Bhabha Atomic Research Centre (BARC)</b> <i>Project Trainee</i>	Trombay, Maharashtra Dec 2018 – Jan 2019
<ul style="list-style-type: none"><li>- Project: “Feasibility study of solar power (PV) driven DC distribution system for major office appliances”.</li><li>- Executed comparative study of DC distribution system v/s conventional AC distribution system for office lighting, PC, and air circulation requirements. Estimated that shifting from conventional AC to centralized DC systems can bring down electricity consumption by 28% annually for TSD building.</li><li>- Performed break-even analysis of the DC &amp; AC system which depicts that the total investment for DC system can be recuperated within a span of 8 years.</li></ul>	

## **Brihanmumbai Electric Supply and Transport (BEST)**

*Inplant Trainee*

Mumbai, Maharashtra

June 2018 – July 2018

## **SPCE Robocon**

*Team member*

Mumbai, Maharashtra

June 2017 – June 2019

- Part of SPCE Robocon team which represents our college in International ABU Robocon events. Worked on prototypes designing, manufacturing parts, assembling the robots and much more.

## **ACHIEVEMENTS & AWARDS**

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- Received prestigious PMRF scholarship in cycle – 11.
- Received “Star of the Month” Award for the month of Feb 2022 at Larsen & Toubro Technology Services Ltd.
- Secured AIR 9<sup>th</sup> rank in Door Darshan ROBOCON 2019 and AIR 13<sup>th</sup> in ABU ROBOCON 2018.
- Stood 2<sup>nd</sup> in the National level Robotics Challenge held at VJTI, Mumbai.
- Stood 2<sup>nd</sup> in the Sardar Patel Robotics Challenge held at SPCE, Mumbai.

## **SKILLS**

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| - MATLAB/ SIMULINK                       | - LTspice – Analog circuit designing    |
| - PLECS RTBox 1- Hardware in Loop        | - PLECS – Thermal & efficiency analysis |
| - KiCad – PCB fabrication                | - C++                                   |
| - Embedded C programming (TMS320F28379D) | - Python                                |

## **PATENT & PUBLICATIONS**

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### *Patent*

- Filed an Indian patent (**application no. 202411034406**) titled “a single-phase five-level transformerless solar photovoltaic grid-connected inverter”.

### *Conference*

- Rupam Chaki, **Sanket Tambe** and Anubrata Dey, “A Reduced Switching Two-Vector MMPC Scheme for MMCs in Medium Voltage Applications,” accepted and presented in ICEPE2023, Shillong.