

# Dr. Jaywant B. Sankpal

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Principal | Researcher | Mechanical Engineering | Academic Leader

Ph.D. (Mechanical Engineering) | Chartered Engineer (India)

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## Research & Academic Profile

Mechanical Engineering researcher with 35+ years of teaching, leadership, and research experience. Currently serving as Principal at Suman Ramesh Tulsiani Technical Campus, Pune. Major contributions include wind energy research, patents in renewable energy & automation, Scopus-indexed publications, and academic institution building. Guided numerous students at UG, PG, and Ph.D. level. Strong experience in NBA/NAAC accreditation, curriculum development, and industry-academia collaboration.

## Research Interests

- Wind Energy & Turbine Blade Design
- Renewable & Sustainable Energy Systems
- Manufacturing Automation & Measurability
- Composite Materials & Advanced Manufacturing
- Engineering Education, Quality & Accreditation Systems

## Patents (9 Granted/Filed)

- Work Bench with USB microscope for micro-art on rice (Patent No. 201621002053)
- Animal Wool for Manufacturing Wind Turbine Blades (Patent No. 201721007668)
- De-icing of Wind Turbine Blades using Resistive Heating & Super Capacitor (Patent No. 201621034274)
- Horizontal Axis Wind Turbine with Multiple Rotors (Patent No. 201621034370)
- Auxiliary Generator Wind Turbine (Patent No. 201621034298)
- Wind Turbine Blade De-icing (Hot Water, Hot Air, Induction Heating)
- Wind Energy Generation from Exhaust Fans

## Research Publications

50+ Research Publications, including 25+ Scopus Indexed/IEEE/Elsevier papers. Major publications in wind energy, renewable systems, composites, rapid prototyping, simulation & modeling.

- Study of Output Parameters of Horizontal Axis Wind Turbines – IEEE ICPEICES 2016

- Impact of Vertical Wind Shear on Wind Turbine Performance – IEEE ICCPCT 2017
- Fabrication of Wind Turbine from Sheep Wool – ICECDS 2017
- Numerical Investigation of Thermal Efficiency of Photovoltaic Solar Cell – ERCAM 2023

## Academic & Institutional Leadership

- Principal, Suman Ramesh Tulsiani Technical Campus, Pune (2018–Present)
- Director, G.H. Raisoni College of Engg. & Mgmt. (Autonomous), Pune (2017–2018)
- Principal & Professor, Trinity COER, Pune (2008–2012); G.H. Raisoni COEM, Pune (2005–2008)
- Professor & HoD (Mechanical), Army Institute of Technology, Pune (2013–2017)
- Founding contributor to six engineering colleges and two management institutes, with expertise in academic setup, NBA/NAAC accreditation, MIS systems, and faculty development.

## Professional Service & Memberships

- Chartered Engineer (India) – Institution of Engineers (India)
- Life Member – ISTE, Institution of Engineers (India), QCFI
- Served as Honorary Secretary, IE(I), Aurangabad Centre
- Board of Studies Member – Mechanical Engineering, BAMU
- Approved PG & Ph.D. Guide (SPPU, Pune)

## Workshops, Conferences & Academic Events Organized

Organized state-level technical events, faculty workshops, and national/international conferences. Actively worked with IE(I), QCFI, NBA, and ISO quality frameworks.

## Teaching Portfolio

- UG/PG Courses: Machine Design, Theory of Machines, Dynamics, Control Systems, Metallurgy, Research Methodology.
- Guided several Ph.D., PG dissertations, and UG projects in Mechanical Engineering.

## Achievements & Contributions

- Played a cardinal role in establishing six new engineering colleges and academic systems.
- Developed robust MIS for accreditation (NBA/NAAC).
- Successfully promoted research culture among faculty and students.
- Strong contributor to industry-institute partnerships and student technical events.