

**DR. PADMAKUMAR ANNASAB BAJAKKE**

House No. 1160 Near Janata Bank

Sadalga-591239, Chikodi, Belagavi, Karnataka.

Email ID: [bajakkeempire@sitcoe.org](mailto:bajakkeempire@sitcoe.org) / [bajakkeempire@gmail.com](mailto:bajakkeempire@gmail.com)

Mobile: +91-8296841008

**CAREER OBJECTIVES**

Secure a responsible career opportunity to fully utilize my training and skills, while making a significant contribution to the success of the organization.

**EDUCATIONAL QUALIFICATIONS**

Degree	Specialization	Year of Award	University/Board
Ph.D. Full-Time	Material Science	2023	Visvesvaraya Technological University Belagavi.
M.Tech.	Production Management	2016	
B.E.	Mechanical Engineering	2014	
PUC	PCMB	2010	Department of Pre-University Education.
SSLC	--	2008	Karnataka Secondary Education Examination Board.

**TEACHING/RESEARCH EXPERIENCE:**

Type	Designation	From	To	Institution
Teaching	HOD	23/04/2025	Present	Sharad Institute of Technology College of Engineering Yadrav.
Teaching	Assistant Professor	07/10/2024	22/04/2025	Sharad Institute of Technology College of Engineering Yadrav.
Teaching	Assistant Professor	01/11/2022	30/09/2024	Genba Sopanrao Moze College of Engineering, Balewadi, Pune.
Research	Full-Time Research Scholar	01/01/2018	28/10/2022	Gogte Institute of Technology Belagavi.
Teaching	Lecturer	20/06/2016	30/12/2017	Jain Polytechnic Belgaum.

## RESEARCH EXPERIENCE

Designation: Full-Time Research Scholar.

Research Centre: Department of Mechanical Engineering, KLS Gogte Institute of Technology, Belagavi, Karnataka, India.

Area of expertise: Friction stir welding/processing, aluminium metal matrix composites, powder metallurgy, and microwave sintering.

Total years of experience: 4 years 10 months (From 01/01/2018 to 28/10/2022).

### ➤ **RESEARCH ACCOUNTS**

1. Google Scholar <https://scholar.google.com/citations?user=mA1LTuoAAAAJ&hl=en>
2. Scopus <https://www.scopus.com/authid/detail.uri?authorId=57208800320>
3. ORCID <https://orcid.org/0000-0003-4190-8843>
4. Vidwan ID <https://sitcoe.irins.org/profile/439808>

### ➤ **AWARD OF PH.D. FELLOWSHIP**

1. Received JRF model Fellowship from Minority Welfare Department, Directorate of Minorities, Government of Karnataka, India.

Award letter number: DOM/FELLOWSHIP/CR-15/2018-19 and Date: 07/07/2018. Fellowship w.e.f: 01/06/2018 to 30/05/2021.

### ➤ **PH.D. DETAILS**

**THESIS TITLED: MANUFACTURING AND CHARACTERIZATION OF ALUMINIUM METAL MATRIX NANOCOMPOSITES BY MICROWAVE SINTERING AND FRICTION STIR PROCESSING.**

Status: Awarded Doctor of Philosophy on 07/03/2024 in VTU 23<sup>rd</sup> Part-2 Annual Convocation.

Ph.D. Final Viva-Voce completed on 25/08/2023.

**Research Supervisor: Dr. Anand Sharad Deshpande** (B.E., M.Tech.-IIT Kanpur, and Ph.D.-NIT Surathkal)

Designation: Vice Chancellor, Bagalkot University (A State Public University of Government of Karnataka), Mudhol Road, Jamkhandi -587301, Karnataka, India.

Former Registrar, Visvesvaraya Technological University (A State Public University of Government of Karnataka), Belagavi-590018, Karnataka, India.

Former Principal, KLS Gogte Institute of Technology, Belagavi-590008, Karnataka, India. Email:

[a.s.deshpande@git.edu](mailto:a.s.deshpande@git.edu) & Mobile: +91-9449065500

**Research Co-Supervisor: Dr. Vinayak R. Malik** (B.E., M.Tech. and Ph.D.-IISc Bengaluru)

Designation: Associate Professor, Department of Mechanical Engineering, KLS Gogte Institute of Technology, Belagavi-590008, Karnataka, India.

Email: [vrm@git.edu](mailto:vrm@git.edu) & Mobile: +91-9886406375

### **Doctoral Committee Member**

#### **1. Dr. Vinayak N. Gaitonde**

Affiliation: Professor, Department of Mechanical Engineering, KLE Technological University Hubballi Campus.

Email: [vngaitonde@kletech.ac.in](mailto:vngaitonde@kletech.ac.in) & Mobile: +91-9480556558

### **Thesis evaluated by and assigned external examiner for Ph.D. Final Viva-Voce**

#### **1. Dr. Vipin**

Affiliation: Professor, Department of Mechanical Engineering, Delhi Technological University, Bawana Road, Shahbad Daultpur Village, Rohini, New Delhi, Delhi-110042.

Email: [vipin@dce.ac.in](mailto:vipin@dce.ac.in) & Mobile: +91-9968161916

### **➤ PATENTS**

#### **1. The patent titled *Synthesis of Metal Matrix Composites* granted from Indian Patent Office.**

Status: **Granted.**

Patent No: **484471.**

Application No: **201941003340.**

Inventors: **Padmakumar A. Bajakke**, Vinayak R. Malik, A. S. Deshpande, Prakash Mugali, and Vivekanand Hiremath.

Assignees: KLS Gogte Institute of Technology Belagavi and Enerzi Microwave Systems Pvt. Ltd Belagavi.

Keynote: The idea discusses fabricating the composites by un-usual techniques and possessing unique properties.

#### **2. The patent titled *AI-Enabled Portable Emergency Ventilator* granted from Indian Patent Office.**

Status: **Granted**

Application Number: **455285-001**

Inventors: Er. Viraj Vijay Jadhav, **Dr. Padmakumar Annasab Bajakke**, Rashmi Sanjeevkumar Ankle, and Er. Harshwardhan Chandrakant Pandit.

Keynote: The novelty resides in the shape and configuration of the proposed model.

3. The patent titled **Set of Punch and Die** filed in Indian Patent Office.

Status: **Published**

Application Number: **479762-001**

Inventors: **Dr. Padmakumar Annasab Bajakke**, Rashmi Sanjeevkumar Ankle, Dr. Arjun Sunil Rao, Dr. Harshwardhan Chandrakant Pandit, Tejas Yashwant Dudharkar, Ajay Dattatray Narute, Akshay Dayanand Khandekar, Aniket Shivaji Chopade, Atharv Sanjay Sambhushete, Nikhil Manoj Chougale.

Keynote: The novelty resides in the shape and configuration of the proposed model.

➤ **PUBLICATIONS**

1. **Padmakumar A. Bajakke**, Vinayak R. Malik, Sudhakar C. Jambagi, Vishwanath Bhajantri, and Anand S. Deshpande; Unidirectional Flipped Multiple-Pass Friction Stir Process an Innovative Step in the Fabrication of In-Situ Al-Cu Composites; The International Journal of Advanced Manufacturing Technology; volume 134, pages 1767–1787, year 2024.

<https://doi.org/10.1007/s00170-024-14248-6>

Article Type: Research Article

Publisher: Springer Nature

Journal: JAMT

Impact Factor: 3.1 (2024)

Index: SCIE

Quartile: Q1

2. **Padmakumar A. Bajakke**, Vinayak R. Malik and Anand S. Deshpande; Particulate metal matrix composites and their fabrication via friction stir processing – a review; Materials and Manufacturing Processes; volume 34, issue 8, pages 833–881, year 2019.

<https://doi.org/10.1080/10426914.2019.1605181>

Article Type: Review Article

Publisher: Taylor & Francis

Journal: Materials and Manufacturing Processes

Impact Factor: 4.7 (2024)

Index: SCIE

Quartile: Q1

3. **Padmakumar A. Bajakke**, Vinayak R. Malik, Sudhakar C. Jambagi, and Anand S. Deshpande; Corrosion behavior of novel AA1050/ZnO surface composite: A potential material for ship hull; Materials Letters; volume 281, pages 128602, year 2020.

<https://doi.org/10.1016/j.matlet.2020.128602>

Article Type: Research Article

Publisher: Elsevier

Journal: Materials Letters

Impact Factor: 2.7 (2024)

Index: SCIE

Quartile: Q2

4. Vinayak R. Malik, **Padmakumar A. Bajakke**, Sudhakar C. Jambagi, Chavana Nagarjuna, and Anand S. Deshpande; Investigating Mechanical and Corrosion Behavior of Plain and Reinforced AA1050 Sheets Fabricated by Friction Stir Processing; JOM; volume 72, pages 3582–3593, year 2020.

<https://doi.org/10.1007/s11837-020-04323-0>

Article Type: Research Article

Publisher: Springer Nature

Journal: JOM

Impact Factor: 2.3 (2024)

Index: SCIE

Quartile: Q2

5. Vinayak R. Malik, **Padmakumar A. Bajakke**, Kuldeep K. Saxena, Avinash Lakshmiathan, Anand S. Deshpande, Sipokazi Mabuwa and Velaphi Masomi; Energy-efficient method for developing in-situ Al-Cu metal matrix composites using microwave sintering and friction stir processing; Materials Research Express; Volume 9, Number 6, pages 066507, year 2022.

<https://doi.org/10.1088/2053-1591/ac7638>

Article Type: Research Article

Publisher: IOP Science

Journal: Materials Research Express

Impact Factor: 2.2 (2024)

Index: SCIE

Quartile: Q2

6. Vinayak R. Malik, **Padmakumar A. Bajakke**, Sudhakar C. Jambagi, Vishwanath Bhajantri & Anand S. Deshpande; Comparative analysis of flipped and overlapped microwave sintered plus friction stir processed in-situ Al-Cu composites; Emergent Materials; Volume 7, pages 3091–3107, year 2024.

<https://doi.org/10.1007/s42247-024-00781-3>

Article Type: Research Article

Publisher: Springer Nature

Journal: Emergent Materials

Impact Factor: 4.1 (2024)

Index: ESCI

Quartile: Q2

7. Sanket Shinde, **Padmakumar A. Bajakke** and Vinayak R. Malik; Sustainable fabrication of SS-316 foams from machining waste via microwave sintering: a new route for energy application properties; Advances in Materials and Processing Technologies, year 2025.

<https://doi.org/10.1080/2374068X.2025.2530984>

Article Type: Research Article

Publisher: Taylor & Francis

Journal: AMPT

Impact Factor: 2.1 (2024)

Index: ESCI

Quartile: Q2

8. **Padmakumar A. Bajakke**, Vinayak R. Malik, Avinash Lakshmikanthan, Kuldeep K Saxena, and Anand S. Deshpande; A Novel Ultrahigh Conductive Al-Cu Composite Produced via Microwave Sintering and Post-Treated by Friction Stir Process; *Advances in Materials and Processing Technologies*, volume 8, No. 2, pages 575-584, year 2021.

<https://doi.org/10.1080/2374068X.2021.1945270>

Article Type: Research Article

Publisher: Taylor & Francis

Journal: AMPT

Impact Factor: 2.1 (2024)

Index: ESCI

Quartile: Q2

9. Srinivas Prabhu M, **Padmakumar A. Bajakke**, and Vinayak R. Malik; A Review on In-Situ Aluminum Metal Matrix Composites Manufactured via Friction Stir Processing: Meeting on-ground industrial applications; *World Journal of Engineering*, volume 18, No. 6, pages 956-970, year 2021.

<https://doi.org/10.1108/WJE-01-2021-0001>

Article Type: Review Article

Publisher: Emerald

Journal: World Journal of Engineering

Impact Factor: 1.6 (2024)

Index: ESCI

Quartile: Q3

10. Vinayak Malik, N.K. Sanjeev, and **Padmakumar A. Bajakke**; Review on modelling of friction stir welding using finite element approach and significance of formulations in simulation; *International Journal of Manufacturing Research*; volume 15, issue 2, pages 107-135, year 2020.

<https://doi.org/10.1504/IJMR.2020.106851>

Article Type: Review Article

Publisher: Inder Science

Journal: IJMR

Impact Factor: 1 (2024)

Index: ESCI

Quartile: Q3

11. **Padmakumar A. Bajakke**, Ananthakrishna Somayajia, Vinayak R. Malik, Ajit M. Hebbale, Anand S. Deshpande, Narasimha Marakala; Friction stir processing of commercially pure aluminium in bare and reinforced conditions; *Materials Today: Proceedings*; volume 92, part 1, 2023, pages 388-392, year 2023. <https://doi.org/10.1016/j.matpr.2023.05.304>

Article Type: Research Article

Publisher: Elsevier

Journal: Materials Today Proceedings

Impact Factor: 1.78 (2024)

Index: Scopus

Quartile: Q2

12. Arjun Sunil Rao, Nandini A Pattanashetti, Basapur Guruprasad, Hanumanapura Nanjundaswamy Mahendra, **Padmakumar A. Bajakke**; Fabrication of electrospun PDMS-PVA hybrid zinc silicate incorporated nanofibrous membranes for air filtration; International Journal of Materials Research; volume 117, issue 1, pages 48-58, year 2026.  
<https://doi.org/10.1515/ijmr-2025-0113>

Article Type: Research Article

Publisher: De Gruyter Brill

Journal: International Journal of Materials Research Impact Factor: 0.7 (2024)

Index: Scopus

Quartile: Q3

13. Sanket Shinde, Siddharama Adi, **Padmakumar A. Bajakke**, Vinayak Malik; Transforming Machining Waste into Functional SS316 Foams through Inert-Atmosphere Microwave Sintering intended for Crash Boxes and Improving Crashworthiness of Vehicles; Advanced Manufacturing; volume 3, issue 1, year 2026.

<https://doi.org/10.55092/am20260004>

Article Type: Research Article

Publisher: ELSP

Journal: Advanced Manufacturing

Impact Factor: 1.0 Cite Score (2024)

Index: Scopus

### ➤ **BOOK CHAPTERS**

1. **Padmakumar A. Bajakke**, Sudhakar C. Jambagi, Vinayak R. Malik and Anand S. Deshpande; Friction Stir Processing: An Emerging Surface Engineering Technique; In Gupta K. (eds) Surface Engineering of Modern Materials, Springer Nature 2020.  
[https://doi.org/10.1007/978-3-030-43232-4\\_1](https://doi.org/10.1007/978-3-030-43232-4_1)

Article Type: Book Chapter

Publisher: Springer Nature

Book Title: Surface Engineering of Modern Materials, Engineering Materials

Editor: Kapil Gupta

2. **Padmakumar A. Bajakke**, Vinayak R. Malik, Prakash Mugali and Anand S. Deshpande; Microwave Processing of Engineering Materials; In Kumar K., Babu B.S., Davim J.P. (eds) Coatings; Materials Forming, Machining and Tribology, Springer Nature 2021.  
[https://doi.org/10.1007/978-3-030-62163-6\\_2](https://doi.org/10.1007/978-3-030-62163-6_2)

Article Type: Book Chapter

Publisher: Springer Nature

Book Title: Materials Forming, Machining and Tribology

Editor: Kumar K., Babu B.S., Davim J.P.

## INVITEE AS A RESOURCE PERSON

1. **Session in One-week FDTP on Fueling the Future: Advances in Hydrogen Cell Technology**, approved and sponsored by MSBTE from 06/01/2025 to 10/01/2025, organized by the Electrical Engineering Department, Sharad Institute of Technology Polytechnic, Yadrav.
2. **Session on IPR and Mastering Mendeley**, on 06/02/2025, organized by the Department of MBA in association with IIC Kalpataru Institute of Technology, Tiptur.
3. **Technical and Planetary Sessions on Recent Trends and Innovations in Management in One-Day National Conference on Recent Trends and Innovations in Commerce and Management-2025**, sponsored by Indian Council of Social Science Research, New Delhi, on 22/02/2025, organized by S. M. Bhandari Arts, R. R. Bhandari Commerce, S. K. Rathi Science Pre University College, Guledgudd.
4. **Session on Mastering Mendeley-An Efficient Reference Management Tool for Researchers in a One-Week FDP on Revolutionizing Data Analytics: Tableau, Power BI, AI, and Optimization Techniques** from 12/03/2025 to 16/03/2025, organized by the School of Computer Science and Artificial Intelligence, SR University, Warangal, Telangana, 506371.
5. **Session on Mastering Mendeley-An Efficient Reference Management Tool for Researchers**, on 14/06/2025, organized by the Research and Development Cell, Sharad Institute of Technology College of Engineering, Yadrav.
6. **Sessions in One-Day FDP on Enhancing Research Skills** on 28/06/2025, organized by the Department of Civil Engineering, AGM Rural College of Engineering and Technology, Varur.
7. **Session on How to Write a Research Paper**, on 25/07/2025, organized by Electrical Engineering Department, Sharad Institute of Technology College of Engineering, Yadrav.
8. **Session in One-Week FDP on Research Methodology and Project Proposal Writing**, approved by ISTE from 28/07/2025 to 01/07/2025, organized by the Mechanical Engineering Department, Sharad Institute of Technology Polytechnic, Yadrav.
9. **Session on How to Write a Research Paper**, on 13/08/2025, organized by AIDS Department, Sharad Institute of Technology College of Engineering, Yadrav.
10. **Session in One-week FDP on Hydrogen Energy and Fuel Cell**, approved and sponsored by MSBTE from 01/09/2025 to 06/09/2025, organized by the Electrical Engineering

Department, Dr. Bapuji Salunke Institute of Engineering & Technology, Kolhapur, Maharashtra 416003.

11. **Session on Research Paper Writing and Intellectual Property Rights: A Roadmap for Academics**, on 17/09/2025, organized by Artificial Intelligence Department, St. Vincent Pallotti College of Engineering and Technology, Nagpur, Maharashtra 441108.
12. **Session on Intellectual Property Rights and Insights on Patents**, on 08/10/2025, organized by the Department of Mechanical Engineering, Sharad Institute of Technology Polytechnic, Yadrav.

### TEACHING EXPERIENCE

Institution: Genba Sopanrao Moze College of Engineering, Balewadi, Pune.

Department: Mechanical Engineering.

Designation: Assistant Professor.

Date of Joining: 01/11/2022.

Date of Reliving: 30/09/2024.

Total years of experience: 01 year 11 months.

#### ➤ **SUBJECTS HANDLED**

Theory: Systems in Mechanical Engineering, and Engineering Graphics.

Lab: Workshop Practice, and Project-Based Learning.

#### ➤ **RESPONSIBILITIES UNDERTOOK**

- Institution's Innovation Cell (IIC) committee member.
- Institute Intellectual Property Rights (IPR) Cell Head.
- Institute Internal Quality Assurance Cell (IQAC) coordinator.
- First-year department NAAC coordinator for Criteria 1.
- First-year department Academic Monitoring Committee (AMC) coordinator.
- First-year department In-Sem and End-Sem exam coordinator.

#### ➤ **ADDITIONAL ACTIVITY**

- Organized various sessions for in-house faculty members.
  - Session 1: Introduction to Research, Innovation & IPR.
  - Session 2: Literature Survey & Basic Research Tools.
  - Session 3: Manuscript Drafting.

Session 4: Publishing in a SCI Journal.

Session 5: Patent Filing.

## TEACHING EXPERIENCE

Institution Name: JGI, Jain Polytechnic Belagavi, Peeranwadi 590014.

Department: Mechanical Engineering.

Designation: Lecturer.

Date of Joining: 20/06/2016.

Date of Reliving: 30/12/2017.

Total years of experience: 01 year 06 months 11 days.

### ➤ **SUBJECTS HANDLED**

**Theory:** Mechanics of Machines, Strength of Materials, Computer Integrated Manufacturing, Industrial Management, Mechatronics, and Professional Ethics & Indian Constitution.

**Lab:** Mechanical Testing & Quality Control Lab, Mechatronics Lab, C-Programming Lab, Basic Skills in Computer Lab.

### ➤ **RESPONSIBILITIES UNDERTOOK**

#### **Institute Coordinator for**

- Industrial interactions, industrial visits, and in-plant training.
- Board of Technical Education's practical & theory exams.
- Continuous internal assessment.
- Department association activities.

### ➤ **STUDENT'S ACHIEVEMENTS UNDER MY GUIDANCE**

1. Virendra Kadam & group of Mechanical Engineering, Jain Polytechnic Belagavi, bagged **1<sup>st</sup> Prizes** for the project entitled **Fabrication of 3D Printer by Delta Mechanism**, in the following events:
  - 1.1 **DO IT YOURSELF** State Level Project Competition 2017, organized by the Government of Karnataka, Department of Technical Education in association with Government Polytechnic, Bagalkot on 5<sup>th</sup> and 6<sup>th</sup> March 2017.
  - 1.2 **AVISHKAAR 2017** State Level Diploma Project Expo & Technical Paper Presentation, organized by SAE Foundation's Angadi Institute of Technology and Management Belagavi, on 18<sup>th</sup> March 2017.
  - 1.3 **AVISHKAR 2017** National Level Project Competition, organized by Bharatesh Education Trust's Motichand Lengade Bharatesh Polytechnic Belagavi, on 24<sup>th</sup> March 2017.

1.4 **TECHNOVISION 2K17** 10<sup>th</sup> National Level Technical Paper Presentation & Project Competition, organized by KLE Society's Chidanand B. Kore Polytechnic, Chikodi on 7<sup>th</sup> April 2017.

2. Virendra Kadam & Muralidhar Sutar started their careers as an entrepreneur and registered the firm **Deltasys E-Forming**, Plot No.69, Kapeel Founders Compound, Udyambag, Belagavi, Karnataka 590008.

3. Omkar Haldankar & Chaitanya Kulkarni of Mechanical Engineering, Jain Polytechnic Belagavi, bagged **1<sup>st</sup> Prize in State Level Technical Paper Presentation Competition** on the topic **Friction Stir Welding of Aluminum**, held at Maratha Mandal Polytechnic Belagavi on 17<sup>th</sup> Sept 2016.

#### PERSONAL DETAILS

Name : Padmakumar Annasab Bajakke  
Father's Name : Annasab Appanna Bajakke  
Mother's Name : Lalita Annasab Bajakke  
Email ID : [bajakkeempire@sitcoe.org](mailto:bajakkeempire@sitcoe.org) / [bajakkeempire@gmail.com](mailto:bajakkeempire@gmail.com)  
Mobile No : +91-8296841008  
Date of Birth : 27/07/1992  
Gender : Male  
Marital Status : Married  
Religion : Jain  
Nationality : Indian  
Language Known : English, Hindi, Kannada, and Marathi  
Native Place : Sadalga (Holy Birthplace-Acharya Shri 108 Vidyasagar Ji Maharaj)

#### DECLARATION

I hereby declare that the above-mentioned information is correct up to my knowledge and I bear the responsibility for the correctness of the above-mentioned particulars.

Place: Sadalga

Date: 01/01/2026

(Dr. Padmakumar Annasab Bajakke)