



Dr. J. P. Ekka  
Assistant Professor

**Centre/School/Special Centre: School of studies in Engineering & Technology**

**Department: Mechanical Engineering**

**Phone: 8787338626**

**Email: [ekkajasinta@gmail.com](mailto:ekkajasinta@gmail.com), [ekkajasinta@rediffmail.com](mailto:ekkajasinta@rediffmail.com)**

**Personal Webpage Link Google Scholar [Click here](#)**

**Web of Science [Click here](#)**

### Qualifications:

| Degree | Institute/ College/ School                                 | Subject  |
|--------|--|--|
| PhD    | Indian Institute of Technology, Guwahati, Assam            | <b>PhD Thesis Title:</b> Performance, Techno-Economic and Enviro-Economic Analyses on Forced Convection Mixed Mode Solar Cabinet Dryer.<br><b>Department: Mechanical Engineering</b> |
| M.E    | Pt. Ravishankar Shukla University, Raipur, (C. G)          | Energy System and Pollution Control<br><b>Department: Mechanical Engineering</b>   |
| B. E   | Pt. Ravishankar Shukla University/ G.E.C, Jagdalpur, (C.G) | <b>Department: Mechanical Engineering</b>  |

**Area of Interest/Specialization:** Solar thermal energy conversion, Thermal storage, Solar Photovoltaic, Drying Technology, Heat Transfer.

### Experience

| Sl.No. | Position Held  | Name of the Institute | From      | to       |
|--------|----------------|-----------------------|-----------|----------|
| 1.     | Adhoc Lecturer | G.E.C, Bilaspur, C.G  | July 2005 | Nov 2005 |
| 2.     | Adhoc Lecturer | G.E.C, Jagdalpur, C.G | Nov 2005  | Dec 2006 |

### Awards and Honors

### Research Projects

| S.No | Name of the Principal Investigator / Co-Principal Investigator | Title of the project | Duration | Funding Agency` | Amount Received / Requested | Date of Sanction / Submission |
|------|--|----------------------|----------|-----------------|-----------------------------|-------------------------------|
|------|--|----------------------|----------|-----------------|-----------------------------|-------------------------------|

|    |    |  |          |            |                 |                            |
|----|----|--|----------|------------|-----------------|----------------------------|
| 1. | PI | A Project on Hybrid Solar Photovoltaic-Biomass System for Rural Electrification of Bamhani Kalan Village of Bilaspur   | 6 months | CG COST    | Rs. 4,50,000/-  | Presented (Not Sanctioned) |
| 2. | PI | Enhancing the Socio-Economic Status and Sustainable livelihood of Tribal Community of Bastar, through the use of Modern Technique for Chironji Kernels Processing. | 3 years  | DST (SEED) | Rs. 39,64,527/- | Presented (Under Review)   |
| 3. | PI | Design and Development of Novel Solar Desiccant Coated Energy Exchanger for the Dehydration Process  | 3 years  | SERB       | Rs. 44,12,400/- | Not Sanctioned             |

|    |    |   |        |     |                  |              |
|----|----|---|--------|-----|------------------|--------------|
| 4. | PI | To create awareness on POCSO Act and Child Rights among school students especially rural and backward communities of Bilaspur District, Chhattisgarh. | 1 year | DST | Rs. 52,07,000 /- | Under review |
|----|----|---|--------|-----|------------------|--------------|

#### **International Collaboration/Consultancy**

#### **Best Peer Reviewed Publication (up-to 10)**

#### **International Journal**

1. DVN Lakshmi, P Muthukumar, **Jasinta Poonam Ekka**, P K Nayak, A Layek, Performance comparison of mixed mode and indirect mode parallel flow forced convection solar driers for drying Curcuma zedoaria. Journal of Food Process Engineering 42 (4), 2019. **Impact Factor 2.356**
2. **Jasinta Poonam Ekka**, K Bala, P Muthukumar, DK Kanaujiya, Performance analysis of a forced convection mixed mode horizontal solar cabinet dryer for drying of black ginger (Kaempferia parviflora) using two successive air mass flow rates, Renewable Energy (152), 55-66, 2020. **Impact Factor 8.001**
3. **Jasinta Poonam Ekka**, M Palanisamy, Determination of heat transfer coefficients and drying kinetics of red chilli dried in a forced convection mixed mode solar dryer, Thermal Science and Engineering Progress, 100607, 2020, **Impact Factor 4.946**
4. **Jasinta Poonam Ekka**, M Palanisamy, Performance assessments and techno and environmental analyses on forced convection mixed mode solar dryer, Journal of Food Process Engineering, e13675 **Impact Factor 2.356**
5. **Jasinta Poonam Ekka**, P Muthukumar, K Bala, DK Kanaujiya, K Pakshirajan, Performance studies on mixed-mode forced convection solar cabinet dryer under different air mass flow rates for drying of cluster fig, Solar Energy, Vol 229, 15 November 2021, Pages 39-51, **Impact**

**factor 5.742**

6. Disha Dewangan, **Jasinta Poonam Ekka**, T V Arjunan, Solar Photovoltaic Thermal System: A Comprehensive Review on Recent Design and Development, Applications and Future Prospects in Research, Journal of Ambient Energy **Impact Factor 2.33**
7. **Jasinta Poonam Ekka**, Disha Dewangan, T V Arjunan, A Comprehensive Review on Recent Developments and Future Aspects of a Heat Pipe Assisted Solar Collectors, Environmental Science and Pollution research, (*under review*) **Impact factor 4.223.**

### **International Conferences**

1. **Jasinta Poonam Ekka**, Emerging Trend in soft computing and ICT, Department of Computer science and Information Technology, GGU, Bilaspur, 16-17<sup>th</sup> March, 2011.
2. D Dewangan, S L Sinha, **Jasinta Poonam Ekka**, Biogas Power System: A Step towards Utilization of Clean Renewable Energy Resource for Providing Optimum Energy Needs of Rural Areas in India. Applied Mechanics and Materials 592, 2336-2340, 2014
3. **Jasinta Poonam Ekka**, Lakshmi DVN, Yaswant Kumar, Muthukumar P. Development of Mixed Mode Type Solar Dryer with Thermal Storage for Drying of Ginger, Presented at 24th National and 2nd International ISHMT-ASTFE Heat and Mass Transfer Conference (IHMTTC-2017) BITS Pilani, Hyderabad, December 27-30, 2017.
4. **Jasinta Poonam Ekka**, Disha Dewangan, T V Arjunan (2021), A Comprehensive Review on Recent Developments and Future Aspects of a Heat Pipe Assisted Solar Collectors, International Conference on Thermal Analysis and Energy Systems (ICTAES-2021), 22-24 December, 2021, Heat Pump Research Institute, Pollachi, Coimbatore, India.
5. Disha Dewangan, **Jasinta Poonam Ekka** (2021), Hybrid Power System: A Clean Renewable Energy Resource for the Development of Rural Areas in India. 26th National and 4th International ISHMT-ASTFE Heat and Mass Transfer Conference, December 17-20, 2021, IIT Madras, Chennai-600036, Tamil Nadu, India.
6. Disha Dewangan, **Jasinta Poonam Ekka**, T V Arjunan (2021), Solar Photovoltaic Thermal System: A Comprehensive Review on Recent Design and Development, Applications and Future Prospects in Research, 9-10 April 2021, Thrissur, Kerela, India.

### **Recent Books/Book Chapters/Monographs etc.**

### **Research Supervision:**

**MTech. Students' guidance**

| Sl.No. | Name of student (Roll. No.) | Duration                 | Co-Supervisor | Project Title/research area                                      |
|--------|-----------------------------|--------------------------|---------------|--|
| 1.     | Md. Jishan                  | 2020-2021<br>(Completed) | Nil           | Finite Element Analysis of Thermal Stress in Photovoltaic Module |

#### Ph.D. Students guidance

| Sl.No. | Name of student (Roll.No.) | Duration          | Co-Supervisor | Project Title/research area     |
|--------|----------------------------|-------------------|---------------|---------------------------------|
| 1.     | Mrs. Disha Dewangan        | 2021<br>(ongoing) | Nil           | Solar Thermal Conversion System |

#### Administrative Responsibilities:

1. Member of sports Committee, for Annual sports meet, School of studies, GGU.
2. Member of Disciplinary Committee
3. Member of Anti-Ragging committee
4. Faculty Member accompanying Students for Industrial visit
5. Board of Studies Member In preparing /upgrading syllabus, School of studies
6. End semester exam co-coordinator
7. Research and Development Cell, Coordinator, School of studies, Engineering and Technology, GGU, Bilaspur
8. VRET exam Co-coordinator, Guru Ghasidas Vishwavidyalaya
9. B. Tech admission committee member
10. Web of Science, Coordinator, Guru Ghasidas Vishwavidyalaya, Bilaspur
11. Member of election committee, School of studies, Engineering and Technology, GGU, Bilaspur

#### Additional Information:

#### Workshops/Webinar Organised

1. “Art of Writing Research Paper” Research & Development Cell, School of Studies in Engineering & Technology, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.), 7th November 2020

2. “Intellectual Property Rights” One Day National Workshop, Research & Development Cell, School of Studies in Engineering & Technology, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.), 28th September, 2020.
3. “Emerging Trend in the Research Areas and Opportunities in Science and Technology”, One Day National Workshop on Research and Development Cell, School of Studies, Engineering & Technology, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.) 24th April 2021.
4. “Recommender Systems” One Day National Webinar Research & Development Cell, School of Studies in Engineering & Technology, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.), 18<sup>th</sup> September 2021.
5. Skill Development for Technology Transfer, One-week online workshop, Research & Development Cell, School of Studies in Engineering & Technology, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.), 13<sup>th</sup> September to 18<sup>th</sup> September 2021.
6. Funding Opportunities for Research Innovation and Technology Transfer, Research & Development Cell, School of Studies in Engineering & Technology, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.), 11<sup>th</sup> March 2022.