

CV of Dr. BHUPENDRA M GHODKI

Assistant Professor Grade I

Department of Agricultural & Food Engineering, IIT Kharagpur

Indian | Male | Married |    Scopus
Preview   publons

Languages: English, Hindi (mother tongue)

✉ Department of Agricultural & Food Engineering, IIT Kharagpur, India

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Summary

- 6.5+ years of scientific research experience and 4.5 years of academic research in food engineering and technology platforms; Handled 12 projects & published 25 articles in referred Journal; 1 technology transfer
- Expertise in the domain of discrete element modeling (DEM), CFD modeling, heat transfer modeling, data-driven process modeling, multivariate analysis, cryo-grinding, particle technology, storage & drying of food, environment control, micro-structural analysis, functional food, design of experiments, non-destructive quality evaluation, food properties, application of AI, data science, and robotics in food engineering
- Experience in analytical instrumentation, and published extensively in the area of expertise
- Worked with academic partners, good communication skills and experience in technical writing, grant writing, student supervision, publishing articles, tech transfer, and working in multi-disciplinary and multi-cultural team
- Excellent organization and managerial skills: Organizer, Nodal Officer, and In-Charge of different units/events
- Training (farmers'; student; officials), field-level demo, problem identification, village agri. development plan
- Worked with Food Corporation of India (FCI) for post-harvest loss assessment of wheat and paddy; Worked with Defence Research Development Organization (DRDO), Govt. of India and developed NIR-based device for quality evaluation of wheat flour; Worked with Department of Consumer Affairs (DOCA) for storage study of different pulses; Developed agro-based desiccant/air modification unit for storage of onions and photocatalytic reactor for ethylene degradation/management to enhance shelf-life of perishables.
- Released 99 commercial test reports (~USD 192150 revenue; Rs. 1,59,80,020) & submitted drafts for BIS Test Codes of machines as Test Engineer, Post-Harvest Machinery Testing Centre, Govt of India, ICAR-CIPHET Ludhiana
- Academic Editor(s) for the Journal of Food Processing and Preservation, and Journal of Food Biochemistry

Research Interests

- Modeling: Discrete Element Modeling, Heat Transfer Modeling, CFD Modeling and Data-driven Modeling
- Analysis of Food Properties: Physical, Thermal, Mechanical, Micro-structural; Non-destructive quality estimation
- Application of AI, data science, and robotics in food engineering
- Agricultural Structures and Environment Control; Particle Technology
- Cryogenic Grinding & Drying Technology
- Food Storage Structures & Process Engineering

Skills

- **Laboratory** | Powder characterization (LPA), physical and thermal property test (DMA, TGA, DSC, thermal properties analyzer, UTM, and texture analyzer), extraction (supercritical fluid, ultrasound), temperature control and monitoring equipment (data logger, tachometer, and gas analyzer), spectrometry (GC-MS, NIR spectrometer), cryo-grinder (mills: ball; pin; hammer; attrition), characterization of micro-structure (X-ray μ CT)
- **Statistics** | DoE's, multivariate statistics
- **Modeling** | Discrete element modeling (DEM), CFD, heat transfer, process modeling (RSM), mathematical
- **Software** | EDEM 2.7.2, Ansys 15.0, Design Expert 7.0, AutoCAD, MS Office 15, SPSS Statistics 20.0, SAS, Origin 2015, Adobe Photoshop, Dlogger, Machine vision & RGBD Image analysis, PLC programming
- **Leadership, Organization, and Managerial Skills** | Project Management (12 projects), Institute Management-Laboratory Alt. In-Charge AS & EC Lab, In-charge Estate Management Section, Nodal Officer ASRB (Exam online), Nodal Officer ICAR MIS-FMS (ERP), In-charge AKMU (IT Cell), Alternate In-charge Head of Finance (FAO), Member KRISHI Portal of ICAR (data repository); Organized ICAR-CIPHET IIFA 2021 (Industry Interface

Virtual Fair on Agro-Processing, ~4000 visitors) as Member Secretary; Vice President Agricultural Engineering Society - Organized Prakriti 2013 & 2014 Agri & Food Innovation Fest of IIT Kharagpur

- **Communication + Technical + Teamwork skills** | Good communication skills (English & Hindi); experience in technical writing, grant writing (16+), student supervision - thesis (04), publishing articles (25), tech licensed (04), presentation at conferences (12+), organizing training (09), mentoring students (15+), Institute management, Test Engineer - Post-harvest Machinery Testing Centre; working in multi-disciplinary and multi-cultural team; high sense of responsibility, reliability, personal commitment, and great scientific ambitions; goal-oriented and independent and team working skills

Education

2014 – 2017	Ph.D. (Food Process Engineering) Dissertation: Heat transfer modeling of black pepper (<i>Piper nigrum</i> L.) seeds in cryogenic grinding system.	Agricultural & Food Engineering Department Indian Institute of Technology Kharagpur (IIT Kharagpur), Kharagpur–721302, India
2012 – 2014	M.Tech. (Food Process Engineering) Excellent Grade CGPA: 9.01/10.00 (Eq. 90.1%) Master-thesis: Cryogenic grinding of cassia	Agricultural & Food Engineering Department IIT Kharagpur, Kharagpur–721302, India
2007 – 2011	B.Tech. (Honors) (Agricultural Engineering) First Division OGPA: 8.55/10.00 (Eq. 85.5%)	College of Agricultural Engineering Jawaharlal Nehru Krishi Vishwa Vidyalaya (JNKVV), Jabalpur– 482004, India
2006 – 2007	10+2 (Maths and Science; AISSCE - CBSE) Distinction Grade: 77.6%	Kendriya Vidyalaya Sarni –460447, India
2004 – 2005	10 th (Maths and Science; HSCE – MP Board) Distinction Grade: 80.4%	Little Flower High School Pathakhera –460449, India

Employment History

Indian Institute of Technology Kharagpur, India

Department of Agricultural & Food Engineering, IIT Kharagpur, Kharagpur–721302, India
Assistant Professor Grade-I | Food Process Engineering | Aug 2023-Present

- Teaching & Research

Indian Council of Agricultural Research (ICAR), Ministry of Agriculture & Farmer's Welfare, Government of India

1) Agricultural Structures and Environmental Control Division, ICAR-Central Institute of Post-Harvest Engineering & Technology (ICAR-CIPHET), Ludhiana–141004, India

Scientist | Agricultural Structures & Process Engineering | Apr 2017–Aug 2023

- **Model:** Heat transfer model (CFD) for shrimp in freezing system; DEM model (grain flow) cryogenic precooler
- Photocatalytic **reactor** for ethylene degradation and **shelf-life** extension of perishables
- A **technology** 'Portable Smart Ultraviolet-C Disinfection System' **licensed** to 4 firms (available at amazon.in)
- Projects on the application of **robotics and automation** in food engineering
- **Project** Implementation (details below): Contributed to initiating/completing 05 sponsored research project, 03 consultancy project, and 04 institute funded project as PI/Co-PI.

Project Implementation List (> 35000 USD)	Place	Year/Period	Benefit achieved
a) Design, Development and Evaluation of Equipments/Machines and Storage Structures for Primary Processing and Low Temperature Storage of Onions in Bulk (as <i>Principal Investigator</i> , In-house)	ICAR-CIPHET Abohar Campus	Nov 2017 to March 2019	<ul style="list-style-type: none"> ● Developed an affordable air modification unit from agro-waste, and storage structure for onions in bulk having five months storability (Technology) ● Storage environment management ● Successfully tested onion crop neck folder onion de-topper and root removal unit in onion field
b) Development of real time monitoring system for transportation of perishables (as	ICAR-CIPHET Abohar Campus	Nov 2017 to Sept 2018	<ul style="list-style-type: none"> ● Radiofrequency identification device (RFID device integrated with temperature and

Principal Investigator, In-house)

				relative humidity sensors was used/tested to monitor storage environment of onions
c) Development of rapid quality monitoring system for wheat flour and its primary milled products (as <i>Co-Principal Investigator</i> , Funded by LSRB, DRDO , India)	ICAR-CIPHET Ludhiana	Aug 2019 to Nov 2021		• Handheld device for rapid assessment of qualitative and quantitative changes for wheat product. Study for Defense Research Development Organization (DRDO), India
d) Study on determination of storage losses of wheat and paddy stored CAP system and to recommend norms for storage losses (as <i>Co-Principal Investigator</i> , Funded by FCI)	ICAR-CIPHET Ludhiana	Jan 2020 to Dec 2021		• National Level Benchmark Report/Study - Loss assessment of Wheat and Paddy CAP Storage at Food Corporation of India (FCI) depots / locations in India.
e) Confidential Test Report on Performance of AI-Based Automatic Grain Analyser (AI-AGA; Consultancy Project) (as <i>Co-Principal Investigator</i> , Funded by Intelto Labs Pvt. Ltd , Gurugram)	ICAR-CIPHET Ludhiana	Sept-Nov 2022		• Confidential Test Report on Performance of AI-AGA instrument based on standard norms.
f) Development of photoreactor for ethylene degradation during storage of banana and guava (as <i>Principal Investigator</i> , In-house)	ICAR-CIPHET Ludhiana	Oct 2020 to Aug 2023		• ongoing - For management of ethylene during storage, thereby extending shelf life of perishables (End Sept 2023)
g) Development of image (Visual and X-Ray) based mango sorting and grading system and sensor-based monitoring system with block chain technology for supply chain of banana (as <i>Co-Principal Investigator</i> , Funded by ICAR-NePPA , New Delhi)	ICAR-CIPHET Ludhiana	Sept 2021 to Aug 2023		• ongoing - For assessing post-harvest quality, automated grading and efficient management of storage of agri-produce (End Aug 2026)
h) Vision Guided AI enabled Robotic Apple Harvester (Co-PI; MeitY , India)	ICAR-CIPHET Ludhiana	March 2022 to Mar 2024		• ongoing - For developing robotic apple harvester (End Mar 2024)
i) Development of mushroom mycelium based eco-friendly packaging materials utilizing crop residues (as Co-PI; In-house)	ICAR-CIPHET Ludhiana	July 2022 to Aug 2023		• ongoing - For developing eco-friendly packaging material using crop residue (End June 2024)
j) Performance Evaluation of Agnext Grain Quality Analyzer (SpacX Visio) Device (as <i>Principal Investigator</i> , Consultancy Project Funded by AgNext Tech, Mohali)	ICAR-CIPHET Ludhiana	Feb -Aug 2023		• Confidential Test Report on Performance of Agnext Grain Quality Analyzer (SpacX Visio) Device based on standard norms
k) Performance Evaluation of RGB Camera and AI & Mobile based Grain Analyzer (EASY 360; as <i>Principal Investigator</i> , Consultancy Project Funded by Upjao Agrotech LLP, Ahmedabad)	ICAR-CIPHET Ludhiana	July-Aug 2023		• Ongoing- Confidential Test Report on Performance of EASY360 grain analyzer based on standard norms (End Dec 2023)

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- Worked in collaboration with Institute of Chemical Technology Mumbai on development of functional whole wheat bread with fermentation of green gram flour for a short duration of 3 months: published an article
 - Attended Short Term Course on 'PLC and Microcontrollers' organized by NITTR, Chandigarh, Govt. of India
 - Mentoring/counseling the students of various academic Institutions during short/long-term training
 - Training/entrepreneurship development program for farmers/entrepreneurs: conducted 6 in-house training as Coordinator/Co-coordinator and 2 on-site training as Coordinator
 - Evaluation of advantaged technologies to support farmers/external partners
 - Support farmers via the development of low-cost post-harvest machinery and later pilot trials
 - Institute management - Nodal Officer and In-Charge of different units; Test Engineer; Organized various events

2) ICAR-National Academy of Agricultural Research Management, Hyderabad–500030, India
Scientist | Agricultural Structures & Process Engineering | Jan–Apr 2017

- Associated with 105th Foundation Course for Agricultural Research Services (105th FOCARS) batch
- Responsible to identify and (or) develop a long-term village agriculture development plan for Bhargawan Village (in Satna District) a backward region of India. Lead this task with a team of 5 Scientists
- Learnt about the global agricultural scenario and its implications for Indian agriculture
- Learnt different modern concepts and techniques of information management and personality development

Agricultural & Food Engineering Department, IIT Kharagpur, Kharagpur–721302, India
Joint MTech-PhD Scholar | Food Process Engineering | July 2012–Dec 2016

- Worked in a World Bank-aided National Agricultural Innovation Project in collaboration with ICAR (India)
- Responsible for design and execution of laboratory experiments viz., cryogenic grinding of spices, cold storage, discrete element modeling, food characterization and measurement (DMA/TGA/DSC/GCMS/LPA/X-ray μ CT)
- Model: Heat transfer model for black pepper seeds in cryogenic grinding system, breakage and flow modeling of black pepper in cryogenic mill, granular flow modeling in cryogenic precooler
- Developed optimal cryogenic grinding conditions for different Indian spices
- Documentation and dissemination of results to stakeholders, scientific conferences, and journals.
- Voluntary teaching and training of students, interns, and industry stakeholders
- Acted as a link between DEM Solutions Ltd. (UK) and IIT Kharagpur (a leading academic partner in India). DEM is a global company that provides market-leading Discrete Element Method (DEM) software named EDEM
- Some of my research work was also featured/appreciated in different platforms such as AGRIS: International Information System for the Agricultural Science and Technology (FAO of UN, Italy), the SAO/NASA Astrophysics Data System, National Agricultural Library (United States Department of Agriculture), Harvard Library (USA), Science.gov (US Federal Science), EDEM: Spotlight (DEM Sol. Ltd., UK), and Google News

Post-harvest Process & Food Engineering Department, College of Technology, GBPUAT, Pantnagar–263145, India
ICAR-Junior Research Fellow | Process and Food Engineering | Aug 2011–May 2012

- Worked on drying characterization of spinach.
- Documentation and dissemination of results to scientific conferences and journals

Research Dissertations

Ph.D. (2014–17) | Agricultural & Food Engineering Department, IIT Kharagpur

Supervisor | Prof. T. K. Goswami

Dissertation | Heat transfer modeling of black pepper (*Piper nigrum* L.) seeds in cryogenic grinding system

M.Tech. (2012–14) | Agricultural & Food Engineering Department, IIT Kharagpur

Supervisor | Prof. T. K. Goswami

Dissertation | Cryogenic grinding of cassia

B.Tech. (2007–11) | College of Agricultural Engineering, JNKVV, Jabalpur

Supervisor | Prof. S. Pandey

Investigation | A study of a few agro processing industries in Jabalpur district

Honors and Awards

- **Awarded International Travel Support** for attending an International symposium at Potsdam Germany | SERB, DST India | 2023
- **Young Researcher Award** | Agricultural Structures & Process Engineering | 9th Venus International Research Awards (VIRA 2023) & 9th Annual Research Meet-ARM 2023 | Venus International Foundation Chennai | 2023
- **Best Technology Award** | Team Leader | 32nd Institute Foundation Day, ICAR-CIPHET Ludhiana | 2020
- **Awarded Seligman APV Travel Award** for attending an International conference at Melbourn | SCI, UK | 2019
- **Awarded Partial Travel Support** for attending an International conference at Tezpur | SERB, DST India | 2019
- **Best Research Project Presentation Award** | Team Leader | 105th FOCARS, ICAR-NAARM Hyderabad | 2017
- **Awarded International Travel Support** for attending a conference at Kuala Lumpur | SERB, DST India | 2016

- **Awarded Best Conference Funding** for attending a conference at Chicago | IIT Kharagpur | 2016
- **Best Paper Award** | M.Tech. Thesis Work; Co-author | International Conference on Advances in Chemical, Biological & Environmental Engineering (ACBEE), ISAET at Singapore | Presenter T.K. Goswami (Guide) | 2015
- **Awarded JENESYS Youth Exchange Funding** for attending a program in Japan | JICE, Govt. of Japan | 2014
- **Ministry of Human Resource Development Research Scholarship** for Ph.D. | IIT Kharagpur & MHRD | 2014
- **Research Scholars' Representative** of Agricultural & Food Engineering Department | IIT Kharagpur | 2014–15
- **ASRB-ICAR NET–Agricultural Process Engineering** for Lectureship | 2014
- **Vice President** of Agricultural Engineering Society | IIT Kharagpur | 2013–14
- **Ministry of Human Resource Development GATE Scholarship** for M.Tech. | IIT Kharagpur & MHRD | 2012
- **GATE–Agricultural Engineering** (All India Rank 42) | 2012
- **ICAR-JRF–Agricultural Engineering** (All India Rank 33) | 2011
- **Summer Training** | IIT Guwahati; CIAE Bhopal & MP State Co-op Dairy Fed. Ltd. Jabalpur | 2010; 2011
- **Awarded NCC C Certificate** | 2009

Membership of Professional Organization/Society/Body

- Life Member: Indian Society of Agricultural Engineers (ISAE; New Delhi, India)
- Society of Chemical Industry (SCI; London, UK) | Dec 2019 - Dec 2020
- Student Member: Institute of Food Technologists (IFT; Chicago, USA) | June 2016 - June 2018

Professional Services

- **Academic Editor** for Journal of Food Processing and Preservation (IF 2.5) | 2022 onwards
- **Academic Editor** for Journal of Food Biochemistry (IF 4.0) | 2022 onwards
- Regular **Reviewer** for scientific journals viz., Compr Rev Food Sci F | Energ Convers Manage LWT-Food Sci Technol | Food Res Int | Powder Technol | Biosyst Eng | J Sci Food Agr | J of Food Process Eng | Particul Sci Technol | J of Food Meas & Charact | J Food Process Preserv | T ASABE | J Agr Eng | Eur Food Res Technol
- **Keynote Speaker** for “International Conference on Key Enabling Technologies for Sustainable Agri-Food Chain”- KETSAC-2022 | NIT Rourkela | 29-11 Dec 2022
- Member for Poster **Evaluation Committee** | International Conference on Key Enabling Technologies for Sustainable Agri-Food Chain”- KETSAC-2022 | NIT Rourkela | 29-11 Dec 2022
- **Keynote Speaker** for a SERB Sponsored Five Day High-End Workshop on “Sustainable Disruptive Technology in Agri-Food Sector for Processing and Preservation” | NIT Rourkela | 11-15 July 2022
- **Expert Member**, Board of Study for PG Department of Food Technology, Mata Gujri College, Fatehgarh Sahib, Punjab (Autonomous Institute, Estd. 1957) | 2020-2021, 2021-2022, and 2022-2023
- **External Examiner/Referee** | M.Tech. Thesis titled Design and Fabrication of a Batch Ohmic Heater for Processing of Beverages | Department of Food Engineering & Technology, ICT Mumbai | 2021-2022.
- **External Examiner/Referee** | M.Tech. Thesis titled Shelf-life enhancement of Kinnow through Active Packaging | Department of Processing and Food Engineering, PAU Ludhiana | 2021
- **External Examiner** | Question paper Setting- Food Packaging & Marketing | Post Graduate students | PG Department of Food Technology, Mata Gujri College, Fatehgarh Sahib, Punjab | 2022; 2023.
- **External Examiner** | Question paper Setting- Engineering Properties of Biomaterial | Post Graduate Entrance Test | Banda University of Agriculture and Technology, Banda, Uttar Pradesh | 2022.
- **External Examiner** | Question paper Setting- Food Production Trends & Programs, and Food Storage Engg | Graduate students | College of Food Technology, Central Agricultural University, Imphal | 2018.

Teaching and Mentoring (Voluntary)

Indian Council of Agricultural Research (ICAR), Ministry of Agriculture & Farmer's Welfare, Government of India

ICAR-Central Institute of Post-Harvest Engineering & Technology, India

- **Visiting Faculty** for Food Engineering Course | Graduate students (B.Tech. 3rd Year) | Department of Food Engineering & Technology, Institute of Chemical Technology, Mumbai | 2022-23
- **Mentored** 15+ graduate students and scholars of various academic Institutions during short/long-term training on various aspects of post-harvest engineering and technology | April 2017– till date

Agricultural & Food Engineering Department, IIT Kharagpur, India

Laboratory Demonstrator | July 2012–Dec 2016

- Food properties, processing, and advanced instrumental analyses to graduate students and industry interns
- Assisted graduate students and scholars with process modeling, statistical data analyses, and interpretations

Agricultural & Food Engineering Department, IIT Kharagpur, India

Supporting Mentorship | July 2012–Dec 2016 | Master of Technology (Food Process Engineering)

- Cryogenic grinding of king chilli / bhut jolokia (*Capsicum chinense* L.) | Singh S. S. | 2016–17 | Published in J of Food Meas & Charact.
- Cryogenic grinding of green tea shoots | Yadav B. K. | 2015–16
- Design of a laboratory model of cold storage | Bhaskar R. R. | 2015–16 | Presented in ETAE 2016 IIT Kharagpur
- Design of feeder for different spices | Chhetri K. B. | 2014–15 | Presented in IFT 16 Chicago USA | Published in J of Food Process Eng.

Workshops and Seminars (Attended)

- Workshop | Northern Region Farm Machinery Testing Centers | SKUAST-K Srinagar, India | 2022
- Sensitization Session Cum Workshop | Accessible Websites | DEPwD, MoSJE, MeitY, NIC Govt. of India | 2022
- Workshop | Computational tools for drug discovery (online) | SCI Fine Chem Group & RSC, UK | 2020
- Seminar | Basics of rheology for food applications (online) | Anton Paar, GmbH | 2020
- Workshop | Challenges posed by COVID-19 pandemic on post-harvest food handling systems and way forward during- and post-COVID-19 periods (online) | ICAR-CIPHET Ludhiana, India | 2020
- National seminar | Gram swalamban me krishi siksha ki prasangikta (in Hindi) | DRI Chitrakoot, India | 2017
- Author Workshop | Springer & IIT Kharagpur, India | 2015
- International conference cum Workshop | Innovations in food processing, value chain management & food safety | NIFTEM Kundli, India | 2013
- Workshop cum awareness programme | Emerging career and business opportunities in food processing | NIFTEM Tanjavur, India | 2010

Institute Services and Extracurricular Activities (Academic Session Year-Year)

- Test Engineer | Post-Harvest Machinery & Equipment Testing Center, Govt of India Authorized | ICAR-CIPHET Ludhiana | May 2022–Aug 2023
- In-charge | Estate Management Section | ICAR-CIPHET Ludhiana | Nov 22– Aug 2023
- In-charge | Agricultural Knowledge Management Unit | ICAR-CIPHET Ludhiana | June 2021–Nov 22
- Nodal Officer | Online ASRB Exam & Video Conferencing System | ICAR-CIPHET Ludhiana | June 2021–Nov 22
- Nodal Officer | Management Information System- Financial Management System (MIS-FMS; an ERP-Enterprise Resource Planning Solution) | ICAR-CIPHET Ludhiana | June 2021–Nov 22
- Alternate In-charge | Head of Finance (Finance and Account Officer) | June 2021– Aug 2023
- Alternate In-charge | Media Management | May 2022– Aug 2023
- Member Secretary | Estate Management & Work Monitoring Committee | ICAR-CIPHET Ludhiana | Nov 2022– Aug 2023
- Member Secretary | Website Advisory Committee | ICAR-CIPHET Ludhiana | June 2021–Nov 22
- Member Secretary | Virtual Platform Development Committee | CIPHET-IIFA (Virtual Fair) 2021 - Oct, 03-04
- Member | Farm & APC Produce Price Fixation Committee | ICAR-CIPHET Ludhiana | June 2021– Aug 2023
- Member | Estate Management & Work Monitoring Committee | ICAR-CIPHET Ludhiana | June 2021–Nov 2022
- Member | Specification Review Committee | ICAR-CIPHET Ludhiana | 2021– Aug 2023
- Member | Standing Purchase Committee | ICAR-CIPHET Ludhiana | 2021– Aug 2023
- Member | Tender Evaluation Committee | ICAR-CIPHET Ludhiana | 2020– Aug 2023
- Institute Member | Krishi Portal of ICAR | ICAR-CIPHET Ludhiana | 2019– Aug 2023
- Member | Standing Purchase Committee for SCSP | ICAR-CIPHET Ludhiana | 2019–2020
- Member | Library Committee, and Tender Evaluation Committee | ICAR-CIPHET Abohar | 2018–2019
- Incharge | Agricultural Knowledge Management Unit | ICAR-CIPHET Abohar | 2018–19
- Alternate In-charge | Library, Workshop, and Guest House | ICAR-CIPHET Abohar | 2018–19
- Organization secretary | Research Scholars' sports meet | IIT Kharagpur | 2015–16
- Member of organization committee | Research Scholars' day | IIT Kharagpur | 2015
- Vice-President | Agricultural Engineering Society | IIT Kharagpur | 2013-2014
- Executive | Prakriti–Agri & food innovation fest | IIT Kharagpur | 2013, 2014

- Winner of Group Dance Competition | Nagpur cluster Kendriya Vidyalaya Sangathan | KV Sarni | 2005
- Trekking, traveling, staying fit, listening to music, making friends, watching documentaries & movies, and playing sports such as volleyball, cricket, badminton, and football

Training Conducted / Outreach Activities

- Course/Training Co-Coordinator | SLFMTTC, Govt. of Odisha Sponsored 05 Days Training of Agricultural Engineers (Officials) on Testing of Post-Harvest Machinery | ICAR-CIPHET Ludhiana | 03-07 July 2023
- Course/Training Coordinator | ICAR Sponsored 21 Days Winter School on Innovative storage solutions: The best way forward for reducing post-harvest losses, and doubling Farmers' Income (for 21 Trainees from 7 States & UT) | ICAR-CIPHET Ludhiana | 18 Nov – 08 Dec 2022
- Training Co-coordinator | Entrepreneurship Development Program (EDP) on PHM-Cold Room, Cold Storage, Ripening Chamber and Reefer-van for Horticulture Entrepreneurs | ICAR-CIPHET Ludhiana | 19-24 Sept 2022
- Training Coordinator | Post-Harvest Management of Onions and Grapes (>50 socio-economical backward participants/farmers) | Under SCSP Plan of ICAR-CIPHET | SNJB's KKHA Arts SMGL Commerce and SPHJ Science College, Savitribai Phule Pune University, Chandwad | 11-13 Oct 2021
- Training Coordinator | Processing and Value Addition in Millets and Pulses (>50 socio-economical backward participants) | Under SCSP Plan of ICAR-CIPHET | University of Agricultural Sciences, Raichur | 18-20 Mar 2021
- Training Coordinator | Training on Post-Harvest Management of Maize (>50 socio-economical backward participants/farmers) | Under SCSP Plan of ICAR-CIPHET | Office of AAE, Betul | 27-29 Nov 2019
- Training Co-coordinator | EDP on Guava Processing | ICAR-CIPHET Abohar | 05-07 Feb 2018
- Training Co-coordinator | EDP on Aonla Processing | ICAR-CIPHET Abohar | 08-10 Feb 2018
- Training Co-coordinator | EDP on Dehydration of Onions | ICAR-CIPHET Abohar | 23-25 March 2018
- Team Leader | Village Agriculture Development Plan – Remote Poor Village of India | NAARM Hyderabad | March 2017

List of Publications

Articles in Refereed Journals: 25

1. Ghodki, B.M.*, Patel, A., Choudhary, P., Kalnar, Y.B., & Narsaiah, K. (2023). TiO₂-epoxy nanocomposites coated steel: Surface morphology, spectroscopic, and photocatalytic characteristics. **Surface and Interface Analysis**, 55(5), 347-356
2. Guru, P.N., Mridula, D., Dukare, A.S., Ghodki, B.M., Paschapur, A.U., Samal, I., Nikhil R.M., Padala V.K., Rajashekar M., & Subbanna, A.R.N.S. (2022). A comprehensive review on advances in storage pest management: current scenario and future prospects. **Frontiers in Sustainable Food Systems**, 6, 993341.
3. Patel, A., Naik, S. N., Satya, S., Ghodki, B.M.*, Jana, S., & Sharma, P (2022). Utilization of industrial waste of amla and apple pomace for development of functional biscuits: physical, microstructural and macroscopic properties. **Journal of Food Processing and Preservation**, 46(10): e16835.
4. Devi, T.B., Kalnar, Y.B., Ghodki, B.M., Singh, A.K. (2022). Solar based multi-cold-storage chamber model using thermoelectric cooling effect. **Environment and Ecology**, 40(2B), 774-781 (NAAS 5.25).
5. Kalnar, Y.B., Dawange, S.P., Mann, S., Ghodki, B.M.*, & Devi, T.B. (2022). Development of sensor-based automatic colour sorting system for tomato. **Journal of Agricultural Engineering**, 59(1): 47-60.
6. Narsaiah, K., Bedi, V., Ghodki, B.M.*, & Goswami, T.K. (2021). Heat transfer modeling of shrimp in tunnel type individual quick freezing system. **Journal of Food Process Engineering**, 44(11), e13838.
7. Ghodki, B.M.*, Srihari, G., Dukare A.S., Kannaujia P.K., Kalnar Y.B., & Vishwakarma, R.K. (2021). Potential utilization of guar straw and wool in controlling relative humidity and temperature of storage environment. **Journal of Food Process Engineering**, 44(2), e13618.
8. Mounika, E., & Ghodki, B.M. (2021). Physical properties of Rambutan fruit (*Nephelium lappaceum* L.). **The Pharma Innovation Journal**, 10(4),1161-1163
9. Jeet, P.*, Ghodki, B.M., Amat, D., Anuja A.R., Balodi, R., & Upadhyaya, A. (2020). Enhancement of land and water productivity through Participatory rural appraisal. **Journal of AgriSearch**, 7(4), 234-240.
10. Ghodki, B.M.*, Chhetri, K.B., & Goswami, T. K. (2020). Numerical modeling of granular flow in star valve type cryogenic precooler. **Journal of Food Process Engineering**, 43(4), e13376.
11. Mahawar, M.K., Bibwe, B., Jalgaonkar, K., & Ghodki, B.M. (2019). Mass modeling of kinnow mandarin based on some physical attributes. **Journal of Food Process Engineering**, 42(5), e13079.
12. Ghodki, B.M.*, Dadlani G., Ghodki D.M., & Chakraborty S. (2019). Functional whole wheat breads: Compelling internal architecture. **LWT-Food Science and Technology**, 108, 301-309
13. Ghodki, B.M.*, Singh, S.S., Chakraborty, S., Jana, S., Ghodki, D.M., & Goswami, T. K. (2019). Influence of cryogenic treatment on micro-structural characteristics of some Indian spices: X-ray micro-tomography investigation. **Journal of Food Engineering**, 243, 39-48.

14. Ghodki, B.M.*, Patel, M., Namdeo, R., & Carpenter, G. (2019). Calibration of discrete element model parameters: soybeans. *Computational Particle Mechanics*, 6, 3-10.
15. Ghodki, B.M.*, & Goswami, T.K. (2019). Modeling of granular heat transfer in cryogenic grinding system: Black pepper seeds. *Chemical Engineering Research and Design*, 141, 302-316.
16. Singh, S. S., Ghodki, B.M.*, & Goswami, T.K. (2018). Effect of grinding methods on powder quality of king chilli. *Journal of Food Measurement and Characterization*, 12, 1686-1694.
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