

## Curriculum Vitae

**Dr. RACHNA SEHRAWAT**

**Assistant Professor**

Department of Food Process Engineering  
National Institute of Technology, Rourkela, Orissa  
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**Unmarried, Female, DOB – 18 January 1989**

### **RESEARCH INTEREST**

Extraction of bio-pigment, Processing of fruits and vegetables, Drying, Value addition and utilization of by-products

### **ACADEMIC DETAILS**

- Ph.D. (Food Engineering), National Institute of Food Tech. Entrepreneurship & Management (NIFTEM), Haryana, India, 2014-2018 (CGPA-8.41)
- M. Tech. (Food Engineering & Technology), Sant Longowal Institute of Engineering & Technology (SLIET), Punjab, India, 2011-2013 (CGPA-9.4)
- Post graduate Diploma in Bakery Science & Technology, Guru Jambheshwar University (GJU), Hissar, Haryana, India, 2010-2011 (70%)
- B. Tech. (Food Technology), Kurukshetra University, Haryana, India, 2006-2010 (79.98%)
- 12<sup>th</sup> Higher Secondary Education (C.B.S.E.), 2005-2006 (68.60%)
- 10<sup>th</sup> Secondary Education (C.B.S.E.), Rishikul Vidyapeeth, Sonapat, Haryana, India, 2003-2004 (79.20%)

### **UNIVERSITY AND COUNTRY VISITED**

- Awarded Seligman APV Travel Grant award of £1000 for attending 9th Asia-Pacific Drying Conference (ADC2017), Wuxi, China, 24 – 26 September 2017.
- Visiting research scholar for three months at King Mongkut's University of Thonburi, Thailand

### **PROFESSIONAL EXPERIENCE**

**Organization** National Institute of Technology, Rourkela, Orissa  
**Department** Department of Food Process Engineering  
**Designation** Assistant Professor  
**Duration** 27 February 2020 to till now

**Organization** : Amity University Noida, Uttar Pradesh, India  
**Department** : Amity Institute of Food Technology  
**Designation** : Assistant Professor  
**Duration** : 29 January 2018 to 25 February 2020

**Organization** : NIFTEM, Kundli, Sonapat, Haryana, India  
**Department** : Food Engineering  
**Designation** : Senior Research Fellow (SRF)  
**Duration** : 3 June 2014 to 2 June 2015

**Organization** : NIFTEM, Kundli, Sonapat, Haryana, India  
**Department** : Food Science and Technology  
**Designation** : Assistant Professor  
**Duration** : 15 January to 2 June 2014

**Organization** : Food Coast International Pvt. Ltd., Jalandhar, Punjab, India  
**Department** : Quality Analysis Lab  
**Designation** : Quality Assurance Executive  
**Duration** : September 2010 to June 2011

## TRAINING AND PROJECTS UNDERTAKEN

**Title** : **Study on superheated steam drying**  
**Duration** : 3 months (March-June 2016)  
**Organization** : **King Mongkut's University of Thonburi, Thailand (KMUTT)**  
**Description** : Conducted comprehensive analyses of various key properties of the dried products. These include the analyses of aroma profiles of the products, which involved the use of sophisticated instrumentation.

**Title** : **Development of an advanced drying unit for quality improvement of dried fruits and vegetables**  
**Duration** : 3 Years (2015-2018)  
**Organization** : NIFTEM  
**Description** : To design and fabricate advance drying unit. To compare drying characteristic of mango and onion by superheated steam, vacuum and hot air drying at NIFTEM and KMUTT.

**Title** : **Development of safe fruit and vegetable product retaining higher nutrients using high pressure processing (HPP)**  
**Duration** : 1 Year (2014-2015)  
**Organization** : NIFTEM  
**Description** : Collected review of literature and written review paper.

**Title** : **Microbial production, purification and structural elucidation of biopigments from agro-industrial waste**  
**Duration** : 6 months (2013)  
**Organization** : SLIET  
**Description** : Objectives of study were optimization of media components and process parameters for biopigments production; Extraction and purification of biopigments using various solvents; structural elucidation of purified biopigments using different spectroscopic techniques.

**Title** : **Utilization of kidney beans for the preparation of bhujia**  
**Duration** : 6 weeks (2010)  
**Organization** : Chaudhry Devi Lal Memorial Government Engineering College  
**Description** : Objectives of study were to prepare a Bhujia which is rich in protein by adding red kidney beans in ground form in different proportion

**Title** : **Training based on raw milk and the finished milk products**  
**Duration** : 6 weeks (2009)  
**Organization** : **Nestle India Pvt. Ltd** Samalkha (Panipat)  
**Description** : This training was regarding to the quality control of raw milk and the finished milk products.

**Title** : **Training based on biscuits quality control**  
**Duration** : 6 weeks (2008)  
**Organization** : **Britannia Biscuits Pvt. Ltd.** Lawrence Road Delhi  
**Description** : This training was regarding to the quality control of biscuit and various test like moisture content, gluten content, sedimentation, acidity were performed.

## HONORS, AWARDS AND FELLOWSHIPS

- Qualified National Eligibility Test (NET) 2015, conducted by Agricultural Scientists Recruitment Board (ASRB), India
- Qualified Graduate Aptitude Test in Engineering (GATE) 2010, conducted by Indian Institute of Technology (IIT) and Ministry of Human Resource and Development (Government of India), India
- Got highest marks in B. Tech. Food Technology branch in Chaudhary Devi Lal Memorial Engineering College, Panniwala Mota, Sirsa, India
- Third best poster award in National Conference on Technologies in Sustainable Food Systems 7-8 October 2016, organized by Sant Longowal Institute of Engineering and Technology (SLIET), Punjab
- Second prize in Lift India Ideations series organized by Lift India workshop, 2016 at Nestle, Manesar, Haryana.
- **Third prize in Village Adoption Programme-11 (Faculty and student-led program for farmers and entrepreneurs) as co-mentor awarded by NIFTEM, India**
- First runner-up award in PIP competition of Pulse based products Organized by Mc-Gill Canada and NIFTEM organized at NIFTEM, India
- Committee member in organising National/International workshop, conference, sports meet at NIFTEM
- Presented and attended more than 20 National/International conference, workshops
- **Awarded Seligman APV Travel Grant award of £1000 for attending 9th Asia-Pacific Drying Conference (ADC2017), Wuxi, China, 24 – 26 September 2017.**
- **Visiting research scholar for three months at King Mongkut's University of Thonburi, Thailand**
- **First Prize in oral presentation in AMIFOST 2018 (National conference) conducted on 18 September 2018 by Amity University, Noida**

## COURSES TAUGHT AS ASSISTANT PROFESSOR

- Food preservation and processing (January to June 2018, January to June 2019 to post-graduates)
- Post-harvest technology (January to June 2018, January to June 2019 to post-graduates)
- Principles of food preservation (July to December 2018 and January to June 2019 to graduates)
- Food Science (July to December 2018 to post-graduates)
- Principles of food biotechnology (July to December 2018 to graduates)
- Food industry waste management (July to December 2018 to post-graduates)
- Cereals, pulses and oilseeds technology (January to June 2013 to graduates)
- Post-harvest technology of meat, egg and poultry (January to June 2013 to post-graduates)

**Published papers**

1. **Rachna Sehrawat, Prabhat K. Nema\* and Barjinder Pal Kaur**, Quality evaluation and drying characteristics of mango cubes dried using low pressure superheated steam vacuum drying and hot air drying methods in LWT Journal of Food Science and Technology, 2018, 92/548-555. **Elsevier IF: 3.714** <https://doi.org/10.1016/j.lwt.2018.03.012>
2. **Rachna Sehrawat, Prabhat K Nema\* and Barjinder Pal Kaur**, Effect of superheated drying on properties of foodstuffs and kinetic modelling, Innovative Food Science and Technology, 2016, 34/285-301. **Elsevier IF: 4.085** <http://dx.doi.org/10.1016/j.ifset.2016.02.003>
3. **Rachna Sehrawat**, and Prabhat K. Nema\*, Low Pressure superheated steam drying of onion slices: kinetics and quality, Journal of Food Science and Technology, 2018, 55(10)/4311-4320. **Springer IF: 1.849** <http://dx.doi.org/10.1007/s13197-018-3379-4>
4. **Rachna Sehrawat**, Abhishek Chandra, Prabhat K Nema\*, Vinkel Kumar Arora, Drying of Fruits and Vegetables in a Developed Multimode Drying Unit and Comparison with Commercially Available Systems, Journal of The Institution of Engineers (India): Series A, 2019, 100 (3)/381-386. **Springer IF: 0.67** <http://doi.org/10.1007/s40030-019-00371-1>
5. **Rachna Sehrawat\***, Prabhat K Nema, Quality evaluation of onion slices using low pressure superheated steam and vacuum drying, Journal of Agricultural Engineering, 2017, 54(3), 32-39 <http://www.indianjournals.com/ijor.aspx?target=ijor:joae&volume=54&issue=3&article=004>
6. Somya Tewari, **Rachna Sehrawat**, Prabhat K Nema\*, Barjinder Pal Kaur, Preservation effect of high pressure processing on ascorbic acid of fruits and vegetables, Journal of Food Biochemistry, 2016 41(1),1-14. **Wiley IF: 1.552** <https://doi.org/10.1111/jfbc.12319>
7. **Rachna Sehrawat**, Paramjit S Panesar, Tanya L Swer, Anit Kumar, Response Surface Methodology (RSM) mediated interaction of media concentration and process parameters for the pigment production by *Monascus purpureus* MTCC 369 under solid state fermentation, Pigment & Resin Technology, 2017, 46(1),14-20. **IF: 0.708** <http://dx.doi.org/10.1108/PRT-08-2015-0077>
8. **Rachna Sehrawat**, P S Panesar, Reeba, Panesar and Anit Kumar, Biopigment produced by *Monascus Purpureus* MTCC 369 in submerged and solid state fermentation: A comparative study, Pigment & Resin Technology, 2017, 46(6) 425-432 **IF: 0.708** <https://doi.org/10.1108/PRT-10-2016-0095>
9. **Rachna Sehrawat**, Kumar Sandeep, Khalid Bashir, Kumar Satya Prakash, Tanya L Swer and Anit Kumar\* Bioutilization of agro-industrial waste to produce biopigment using *Monascus Purpureus* MTCC 369 by solid state fermentation, Indian Journal of Ecology, 2016, 43 (1), 128-133. <http://indianecologicalsociety.com/society/wp-admin/pdf/F1.23.pdf>
10. Tanya L. Swer, Komal Chauhan, Prodyut K. Paul, C. Mukhim, Khalid Bashir, **Rachna Sehrawat**, Production and optimization of anthocyanin-rich food colorant extracted from prunus nepalensis L. (Sohiong), Pigment & Resin Technology, 2018, 47(6)/453-463. **IF: 0.708** <https://doi.org/10.1108/PRT-04-2018-0040>
11. Savita Rani, Rakhi Singh, **Rachna Sehrawat**, Barjinder Pal Kaur, Ashutosh, Pearl millet processing: A review, Nutrition and Food Science, 2018, 48 (1)/30-44. **IF: 0.52** <https://doi.org/10.1108/NFS-04-2017-0070>
12. Anit Kumar, Rachna Sehrawat, Dharmesh Chandra Saxena\*, Development of pakoda using semi-automatic pakoda-making machine: thermal, rheological, physicochemical and sensory properties Journal of The Institution of Engineers (India): Series A, 2019, **Springer IF:0.67** <https://doi.org/10.1007/s40030-019-00385-9>
13. Anit Kumar, Prarabdh C.Badgujar, Vijendra Mishra, Rachna Sehrawat, Onkar A.Babar, Ashutosh Upadhyay, Effect of microfluidization on cholesterol, thermal properties and in vitro and in vivo protein digestibility of milk, LWT Journal of Food Science and Technology, 116. <https://doi.org/10.1016/j.lwt.2019.108523>

## BOOK CHAPTERS

1. Rupesh Singh Chavan, **Rachna Sehrawat**, Vijendra Mishra and Shraddha Bhatt. Milk Processing, In Encyclopedia of Food Safety and Health, 2016, 3, 729-735, 978-0-08-100596-5, <https://doi.org/10.1016/B978-0-12-384947-2.00464-5>
2. Rupesh S. Chavan, Anit Kumar, **Rachna Sehrawat** and Tanmay Nalawade. Dairy Engineering: Milk Processing and Milk Products (2017) In Dairy Engineering Advanced Technologies and Their Applications, published by Apple Academic Press, 81-102, (Murlidhar Meghwal, Megh R. Goyal, Rupesh S. Chavan) Hard ISBN 9781771883801, <https://doi.org/10.1201/9781315366210>
3. Rupesh S. Chavan, **Rachna Sehrawat**, Prabhat K. Nema, Kumar Sandeep, High Pressure Processing of Dairy Products (2017). In Dairy Engineering Advanced Technologies and Their Applications (Murlidhar Meghwal, Megh R. Goyal, Rupesh S. Chavan) published by Apple Academic Press, 127-150. Hard ISBN 9781771883801 <https://doi.org/10.1201/9781315366210>
4. Rupesh S Chavan, Somya Tewari, Shraddha Bhatt, Tanmay Nalawade, **Rachna Sehrawat**. Food Regulations Around the Globe (2017). In Dairy Engineering Advanced Technologies and Their Applications, (Murlidhar Meghwal, Megh R. Goyal, Rupesh S. Chavan) published by Apple Academic Press, 285-304. Hard ISBN 9781771883801, <https://doi.org/10.1201/9781315366210>
5. Tanya L. Swer\*, C. Mukhim, **Rachna Sehrawat** and Sandip T. Gaikwad, Applications of Freezing Technology in Fruits and Vegetables (2018). In Technological Interventions in Processing of Fruits and Vegetables, (**Rachna Sehrawat**, Khursheed A. Khan, Megh R. Goyal and Prodyut K. Paul), published by Apple Academic Press , 133-162, Hard ISBN 9781771885867 <https://doi.org/10.1201/9781315205762>
6. Anit Kumar, **Rachna Sehrawat\***, Tanya L. Swer and Ashutosh Upadhyay, High Pressure Processing of Fruits and Vegetables (2018). In Technological Interventions in Processing of Fruits and Vegetables (Rachna Sehrawat, Khursheed A. Khan, Megh R. Goyal and Prodyut K. Paul) published by Apple Academic Press, 165-184, Hard ISBN 9781771885867, <https://doi.org/10.1201/9781315205762>
7. **Rachna Sehrawat**, Onkar Babar, Anit Kumar\*, Prabhat Nema, Recent trends in drying of fruits and vegetables (2018). In Technological Interventions in Processing of Fruits and Vegetables (Rachna Sehrawat, Khursheed A. Khan, Megh R. Goyal and Prodyut K. Paul), published by Apple Academic Press, 109-132, Hard ISBN 9781771885867 <https://doi.org/10.1201/9781315205762>
8. Onkar A. Babar\*, Nilesh B. Kardile, **Rachna Sehrawat**, and Sandip T. Gaikwad, Use of Food Additives in Processing/Preservation of Fruits and Vegetables (2018). In Technological Interventions in Processing of Fruits and Vegetables (Rachna Sehrawat, Khursheed A. Khan, Megh R. Goyal and Prodyut K. Paul), published by Apple Academic Press, 275-300, Hard ISBN 9781771885867 <https://doi.org/10.1201/9781315205762>
9. **Rachna Sehrawat**, Prabhat Kumar Nema, Pramod Kumar, and Anit Kumar\* Classification of Dried Milk Products (2018). In Novel Dairy Processing Technologies Techniques, Management, and Energy Conservation (Megh R Goyal, Anit Kumar and Anil K Gupta), published by Apple Academic Press, 117-134, Hard ISBN 9781771886123, <https://doi.org/10.1201/9781315167121>
10. Anit Kumar, Ashutosh Updhyay, Rupesh Chavan, Usman Ali, and **Rachna Sehrawat\***, Biotechnological Route of Dairy Flavor Production (2018) Technological Interventions In Dairy Science: Innovative approaches in processing, preservation and analysis of milk product (Rupesh S. Chavan, Megh R. Goyal), published by Apple Academic Press, 159-176, Hard ISBN 9781771886093, <https://doi.org/10.1201/9781315169408>
11. Rachna Sehrawat and Prabhat K. Nema. Drying of Mango Products (2017). In Processing and Drying of Tropical Fruits (Law, C.L., Hii, C.L., Jangam, S.V., Mujumdar, A.S) Published in Singapore, pp. 123-144. ISBN - 978-981-11-1967-5 <https://www.arunmujumdar.com/file/Processing%20and%20Drying%20of%20Tropical%20Fruits.pdf>
12. Harloveleen Kaur Sandhu , Rachna Sehrawat \*, Anit Kumar and Prabhat K. Nema, Overview of food industry and role of innovation in food industry (2019) In Emerging Technologies in Food Science (Monika Thakur and V.K. Modi) by Springer (Accepted)

## BOOKS PUBLISHED

- Technological Interventions in Processing of Fruits and Vegetables” Edited by **Rachna Sehrawat**, Khursheed A. Khan, Megh R. Goyal and Prodyut K. Paul, ISBN 9781771885867. <https://doi.org/10.1201/9781315205762>, Apple Academic Press, distributed by **CRC press** (March, 2018)
- Food Security: Impact of Climate Change and Technology edited by Rachna Sehrawat, Hong-Wei Xiao, Sachin Vinayak Jangam, and Arun Sadashiv Mujumdar 2019 (E-book- 978-93-5382-220-0). <http://www.arunmujumdar.com/file/Food%20Securityimpact%20of%20Climate%20Change%20and%20Technology.pdf>

## CONFERENCE PROCEEDINGS

- Manufacture of low calorie balmithai, Neeraj jaiswal, **Rachna Sehrawat**, Alok Jha and Rakhi Singh 469-479, Food process Engineering and Technology Section 2 Editors (H. N. Mishra, S.L. Shrivastava, P.P. Tripathy and Jayeeta Mitra), 978-93-86256-30-0
- **Rachna Sehrawat\*** Prabhat K Nema, Pitam Chandra Effect of temperature on thiosulphinate content, antioxidant activity and phenolic compounds and of onion dried in low pressure superheated steam dryer, International conference, 2017 at Wuxi China

**Rachna (October, 2019)**