

## **Curriculum vitae**

### **Dr. Dibyakanta Seth**

Assistant Profesor

Department of Food Process Engineering

National Institute of Technology, Rourkela-769008, Odisha, India

Email: [sethd@nitrrkl.ac.in](mailto:sethd@nitrrkl.ac.in)

Ph: +91-661-246-xxxx

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### **EDUCATION**

- 2017, **Ph.D.**, Food Engineering & Technology, Tezpur University, Assam, India  
**Research topic:** Spray dried *misti dahi* (sweetened yoghurt) powder: process technology, encapsulation of bacterial cells, texture improvement and sorption studies.
- 2005, **M. Tech.**, Dairy Food Engineering, Dept. of Agricultural and Food Engineering, Indian Institute of Technology (IIT), Kharagpur, India
- 2002, **B. Tech.**, Agricultural Engineering, College of Agril. Engineering and Technology, Orissa University of Agriculture and Technology, Bhubaneswar, India

### **PROFESSIONAL EXPERIENCE**

- **June 2020- present**  
Assistant Professor, Dept. of Food Process Engineering, National Institute of Technology, Rourkela, Odisha
- **July 2010 – June 2020**  
Assistant Professor, Dept. of Food Engineering & Technology, Tezpur University, Tezpur, Assam
- **July 2009-June 2010**  
Assistant Professor, Dept. of Food Processing & Engineering, Karunya University, Coimbatore, Tamil Nadu
- **Oct. 2007-July 2009**  
Research Associate, National Dairy Research Institute (NDRI), Karnal, Haryana

### **INDUSTRIAL EXPERIENCE**

- **Aug. 2006-Sept. 2007**  
Technical Expert, Agricultural Promotion and Investment Corporation of Orissa Ltd. (APICOL), Bhubaneswar, Odisha
- **July 2005-July 2006**  
Quality Control Engineer, Prithwiraj Dairy & Food Products Pvt. Ltd. Cuttack, Odisha

### **RESEARCH PUBLICATIONS (PEER-REVIEWED JOURNALS)**

1. Nayak, P.K., Basumatary, B., Chandrasekar, C.M., Seth, D., Kesavan, R. (2020). Impact of thermosonication and pasteurization on total phenolic contents, total flavonoid contents, antioxidant activity, and vitamin C levels of elephant apple (*Dillenia indica*) juice. J. Food Process Eng. E-13447.

2. Barooah, N., Das, P., Barooah, M.S., Seth, D., Dutta, P. (2018). Storage Studies on Spray Dried Ripe Banana Powder Produced by Response Surface Methodology. *Int. J. Curr. Microbiol. App. Sci.* 7 (6), 1922-1933.
3. Seth, D., Dash, K.K., Mishra, H.N., and Deka, S.C. (2018). Thermodynamics of sorption isotherms and storage stability of spray dried sweetened yoghurt powder. *Journal of Food Science and Technology*.55(10), 4139-4147.
4. Seth, D., Mishra, H.N., and Deka, S.C. (2018). Effect of hydrocolloids on the physico-chemical and rheological properties of reconstituted sweetened yoghurt powder. *Journal of the Science of Food and Agriculture*. 98, 1696-1702.
5. Seth, D., Mishra, H.N., and Deka, S.C. (2017). Effect of microencapsulation using extrusion technique on viability of bacterial cells during spray drying of sweetened yoghurt. *International Journal of Biological Macromolecules*. 103, 802-807.
6. Seth, D., Misha, HN, and Deka, SC (2017). Effect of spray drying process conditions on bacteria survival and acetaldehyde retention in sweetened yoghurt powder: an optimization study. *Journal of Food Process Engineering*, 40(3), UNP e12487.
7. Seth, D., Mishra, H.N., Deka, S.C. (2017). Functional and Reconstitution Properties of Spray Dried Sweetened Yoghurt Powder as Influenced by Processing Conditions. *International Journal of Food Properties*. 20(7), 1603-1611.
8. Mishra, P., Brahma, A. and Seth, D. (2017). Physicochemical, functional and storage stability of hog plum (*Spondia pinnata*) juice powder produced by spray drying. *Journal of Food Science and Technology*. 54(5), 1052-1061.
9. Kalita, N.K., Deka, S.C. and Seth, D. (2017). Optimization and development of Misti dahi (sweetened yoghurt) from mixture of cow and goat milk. *International Food Research Journal*. 24(3), 1212-1219.
10. Das, AJ., Khawas P, Seth, D., Miyaji, T. and Deka, SC. (2016). Optimization of the extraction of phenolic compounds from *Cyclosorus extensa* with solvents of varying polarities. *Preparative Biochemistry and Biotechnology*, 46(8), 755-763.
11. Seth, D., Badwaik, L. and Vijayalashmi, G. (2015). Effect of feed composition, moisture content and extrusion temperature on extrudate characteristics of yam-corn-rice based snack food. *Journal of Food Science and Technology*, 52 (3), 1830-1838.
12. Das, AJ., Seth, D., Miyaji, T. and Deka, SC. (2015). Fermentation optimization for a probiotic local northeastern Indian rice beer and application to local cassava and plantain beer production. *Journal of the Institute of Brewing*, 121(2): 273-282.
13. Deb, M. and Seth, D. (2014). Studies on the physic-chemical and microbiological analysis of plain dahi of Assam (India). *Journal of Bioresource engineering and Technology*, 2(2): 21-26.
14. Badwaik, L. S., Prasad, K. and Seth, D. (2014). Optimization of ingredient levels for the development of peanut based fiber rich pasta. *Journal of Food Science and Technology*, 51 (10), 2713-2719.
15. Seth, D., Gopirajah, R. (2012). Development of extruded snacks using soy, sorghum, millet and rice blend-A response surface methodology approach. *International Journal of Food Science and Technology*, 47(7): 1526-1531.

16. Seth, D., Mishra, H.N. (2011). Optimization of Honey Candy Recipe using Response Surface Methodology. *American Journal of Food Technology*, 6(11): 985-993

### **BOOK/BOOK CHAPTERS**

- ❖ Deka S.C., Seth D. and Hulle, N.R.S. (2019). Food Bioactives-Functionality and applications in human health. Apple Academic Press, Ontario Canada, ISBN: 9780429242793.
- ❖ Deka S.C., Seth D. and Hulle, N.R.S. (2019). Technologies for Value Addition in Food Products and Processes. Apple Academic Press, Ontario Canada. ISBN: 9780429242847.
- ❖ Seth, D., Mishra, H.N., and Deka, S.C. (2018). *Process Technology of Sweetened Yoghurt Powder*. In: Applied Food Science and Engineering with Industrial Applications, AAP Press (distributed by CRC Press, Taylor & Francis Group) ISBN: 9781771887069 (*In press*).
- ❖ Shiby, V.K., Seth, D., Routray, W. and Mishra H.N. (2018). *Dahi (Curd) Powder and Dahi Powder based Energy and Health Drink Mixes*. In: Food Product and Process Innovations, NIPA publ. ISBN:9769386546159
- ❖ Seth, D. (2019). Physical properties of a frozen yogurt. In: Physical and Physicochemical Properties of Foods, Edited by Muthukumarappan.K. and Swamy G.J., Pan Stanford Publishing.
- ❖ Hiloidhari, M., Bhuyan, N., Gogoi, N., Seth, D., Singh, A., Prasad, S., Garg, A., and Kataki, R. AgroIndustry wastes: Feedstocks for biofuels and biomaterials for sustainable rural development. In: Refining Biomass Residues for Sustainable Energy and Bioproducts (Eds. Praveen Kumar, R., Gnansounou, E., Kenthorai Raman, J., and Baskar, G), Elsevier, 2019, pp. (ISBN: 9780128189962).
- ❖ Seth, D. (2019). Intervention of biotechnology in dairy processing. In: Biotechnology for sustainable energy and products. I.K. International Publishing, New Delhi. ISBN: 978-93-86768-63-6

### **E-COURSE MATERIALS**

- Developed 20 e-text materials in the subjects ‘Unit operations in food processing’ and ‘Food analysis and quality control’ in e-course development programme, **ePG PATHSHALA** of UGC, GoI, New Delhi.

### **AWARDS**

- Young Scientist ICFP 2016 Award in the International Conference on Food Properties held at Bangkok during May 31 – June 2, 2016.
- Outstanding Faculty in Engineering, Centre for Advanced Research and Design, Venus International Faculty Award (VIFA-2017), held at Chennai July 8, 2017.
- Young Educator Award in International Conference on Food Properties held at Sharjah, UAE during 22-24 January, 2018.

### **INTERNATIONAL/NATIONAL TECHNICAL TALKS**

- Seth, D. (2019). Spray drying of fermented dairy and non-dairy foods. In International Conference on Technological Innovations for Integration of Food and Health: A Focus on North-Eastern India (TiiFH-2019), Tezpur University, February 14-16.
- Seth, D., Jha, A. and Deka, S.C. (2018). Rheology of freeze dried and spray dried sweetened yoghurt. In: International Conference on Food Properties (ICFP-2018), Sharjah, UAE, 22-24 January, 2018.
- Seth, D., Mishra H.N. and Deka, S.C. (2017). Improving the rheological properties of reconstituted misti dahi powder by addition of different hydrocolloids. In: National seminar on Trends and Innovation in Food Processing Technology (TiFPT-2017), Tezpur University, February 9-10.
- Kumari, R. and Seth, D. (2016). Optimization of microencapsulation of probiotics in carambola fruit juice by spray drying. In: International Conference on Emerging Technologies in Agricultural and Food Engineering (ETAE 2016), IIT Kharagpur, December 27-30.
- Seth, D., Mishra H.N. and Deka, S.C. (2016). Influence of processing conditions on functional and reconstitution properties of spray dried sweetened yoghurt powder. In: International Conference on Food Properties (ICFP-2016), Bangkok, Thailand, May31- June2, 2016.
- Seth, D., Mishra H.N. and Deka, S.C. (2016). Optimization of a Lab-scale spray drying process for Misti Dahi, using Response Surface Methodology. In: 50th Annual Convention of the Indian Society of Agricultural Engineers, CAET, OUAT, Bhubaneswar, Odisha, January 19-21.
- Kalita, N.K., Seth, D. (2014). Development of cow and goat mix milk yoghurt- A response surface methodology approach. In: National Seminar on “Recent Advances in Food Science and Nutrition (NSFSN-2014)”, Centre for Food Science and Technology, Sambalpur University, Odisha, Mar 21-22; pp.38.
- Seth, D., Borah, A. (2012). Encapsulation of *streptococcus aureus* and the physical properties of the beads. In: National workshop on “Advances in Applied Microbiology and Bioprocess Engineering”, Tezpur University, Assam, India.
- Seth, D., Sen, D. (2012). Development of low fat misti dahi powder using vacuum drying. In: International Conference on Food and Nutrition Technology for Public Health Care, IISMAAS, New Delhi, India, pp.21.
- Seth, D. (2011). Development of Extruded snacks using Yam, Rice and Corn flour blends. In: National symposium on Emerging Innovative Technologies for Assurance of Quality and Safety in Processed Foods, IIT Kharagpur, India, pp.14.
- Seth, D., Jani, D. (2010). Dairy waste management. In: International Conference on Food Technology, IICPT, Thanjavur, Tamilnadu, India, pp.77.

### **CONFERENCE PROCEEDING PUBLICATION, POSTER PRESENTATION**

- Seth, D. (2011). Development of Extruded snacks using Yam, Rice and Corn flour blends. In: National symposium on Emerging Innovative Technologies for Assurance of Quality and Safety in Processed Foods, IIT Kharagpur.
- Seth, D. and Sen, D. (2013). Vacuum dried misti dahi- process technology. In: International Conference on Food Technology, IICPT, Thanjavur, Tamilnadu. Pp.111.
- Badwaik, L.S., Choudhury M., Dash, K.K., Borah, P.K., Sit, N., Seth, D. and Deka, S.C. (2013). Effect of process parameters on osmotic dehydration of bamboo shoots using

sodium chloride solutions. In: International Conference on Food Technology, IICPT, Thanjavur, Tamilnadu. Pp.78.

- Deb, M. and Seth, D. (2013). Characterization of free and encapsulated probiotic strain (*Lactobacillus sporogenes*) – In vitro. In: International conference on Innovations in Food Processing, Value chain Management and Food Safety, NIFTEM, Sonipat, Haryana.
- D Das, P., Seth, D. (2011). Fortification of Misti Dahi (Sweet Curd) with fig fruit powder. In: National Seminar on Role of Bioactive Compounds in Foods on Human Health., Tezpur University, Tezpur, Assam. Pp. 54.
- Seth, D., Rajoria, A., Patel, A.A. (2010). Storage studies of low fat gulab jamun mix powder. In: National Seminar on Food Security in Times of Crisis, Karunya University, Coimbatore, pp.83.
- Vijaylaxmi, G., Seth, D. (2010). Pulsed electric field processing. In: National Seminar on Food Security in Times of Crisis, Karunya University, Coimbatore. pp.66.
- Jaiswal R., Seth, D. (2010). Thin layer drying and mathematical modelling for spinach. In: National Seminar on Food Security in Times of Crisis, Karunya University, Coimbatore. pp .81.
- Seth, D., Mishra, H.N. (2004). Quality Evaluation & Processing of Honey Candy. In: International Conference on Emerging Trends in Agricultural Engineering, IIT Kharagpur. pp. 218-219.

#### **ACADEMIC/RESEARCH HONOURS**

- Acting as Paper Coordinator of the paper ‘Unit Operations in Food Processing’ in the subject Food Technology in UGC e-course development programme, ***ePG PATHSHALA***.
- Qualified ICAR ***National Eligibility Test-2009*** in the subject Dairy Engineering & Technology.
- Qualified ***GATE-2003*** in Agricultural Engg. and was recipient of AICTE-GATE fellowship during M.Tech. Degree programme
- Acted as rapporteur in National Seminar on Role of Bioactive Compounds in Foods on Human Health., Tezpur University, Tezpur, Assam

#### **R&D PROJECTS**

- Development of Ready to Reconstitute *Misti Dahi* Powder. Funded by MoFPI, New Delhi, Duration 2012 to 2015, Fund value: Rs.15,97,000.00
- Development of Ready to Reconstitute Freeze Dried *Misti Dahi* Powder. Funded by SERB (DST), New Delhi, Duration 2016 to 2017, Fund value: Rs. 5,50,000.

#### **PROFESSIONAL DEVELOPMENT COURSES**

- Winter School on “Entrepreneurship Development through value addition of underutilized crops” conducted by CAET, OUAT, Bhubaneswar during 15 Nov to 5 Dec 2018.

- Faculty Development Programme on ‘Current approaches in teaching and research in science and technology’ conducted by School of Engineering, Tezpur University during 15-27 December, 2014.
- National Course on ‘Membrane Technology and Application’ conducted by IIT Guwahati during 09-10 December, 2014.
- ISTE workshop on ‘Fluid Mechanics’ conducted by IIT Kharagpur during 20-30 May, 2014.
- Training course on ‘Development of Value Added Fermented Synbiotic Functional Foods’ organized by SMC College of Dairy Science, Anand, Gujarat during 29 Nov-12 Dec, 2011.
- Winter School on ‘Technological Advances in Novel Dairy Foods’ organized by National Dairy Research Institute, Karnal, Haryana during 01-21 March, 2011.

### **ADMINISTRATIVE**

- Programme Officer for NSS cell, Tezpur University
- Student mentor
- Department Tender and Purchase Committee member
- Laboratory In-charge
- Departmental representative in AICTE Cell of the University
- Tezpur University Entrance Examination Centre incharge, 2011 and 2013.
- Other duties like BTech/MTech Admissions, CSAB, various committee of cultural/sports activities
- Acted as External examiner in various subjects at different Institutes

### **TRAINING/MENTORING/TUTORING**

- Mentored Ms. Tapasya Kumari from Maitreyi College, Delhi University, New Delhi, in Summer Internship Programme during 3<sup>rd</sup> June-1<sup>st</sup> July 2013.
- Mentored *Mr. Punit Mishra* from G. B. Pant University of Agriculture & Technology, Pantnagar, Uttarakhand, in Summer Internship Programme during 1-28 June 2012.

### **PEER REVIEW ACTIVITIES**

LWT-Food Science and Technology, International Journal of Food Properties, Journal of Food Science and Technology, Journal of Food Processing and Preservation, Journal of Food Process Engineering, International Food Research Journal etc.

### **GUIDANCE**

- **M. Tech.**                      21 guided
- **B. Tech.**                        14 guided

### **COURSES TAUGHT**

- Transport Phenomena in Biological and Bioenvironmental Systems (Interdisciplinary)
- Fluid Mechanics (UG course)
- Mechanical operations in food processing (UG/PG course)
- Technology of Milk and Milk Products (UG/PG course)
- Food Plant Utilities (UG course)