



ALAK KUMAR SINGH, PH.D.
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Prof. Alak Kumar Singh, graduated from HBTI, Kanpur, in Food Technology, submitted his PhD Thesis in Food Technology from HBTI, Kanpur in 2013. He has worked as lecturer from 1995 to 2005, Assistant Professor from 2005 to 2008, Associate Professor from 2008 to 2013 and Professor from 2013 to till date in Harcourt Butler Technological Institute Kanpur U.P. (An autonomous Institute of Govt. of U.P.). He has worked in research programme on “Controlled Atmosphere Storage of fruits” for two years at Indian Institute of Technology, Kharagpur. He has worked on research project sanctioned by Council of Science & Technology, U.P., Lucknow. He has supervised more than 90 B. Tech. and 30 M. Tech. students. He has reviewed several scientific journals. He has attended several summer schools and conferences. He has organized several conferences and faculty development programs. He has been working as Associate Dean Student Welfare from last 10 years. He has also worked as Nodal Officer IGRS, HBTU Kanpur Government of Uttar Pradesh. He has qualified Graduate Aptitude Test in Engineering (GATE-1993).

RESEARCH INTEREST

- Food Microbiology
- Food Packaging
- Whey Processing
- Fruit and Vegetable Processing
- Membrane Processing

COURSES OFFERED

B. Tech.	Food Microbiology Food Packaging and Storage Food Processing Waste Management
M. Tech.	Microbiology and Chemistry of Foods Advance Food Technology Technology of Frozen Food

PUBLICATIONS

I. SCIENTIFIC JOURNAL PAPERS

1. **Alak Kumar Singh**, H. K. Sharma, P. Kumar and B. Singh (1999). “Physico-chemical changes in white button mushroom (*Agaricus bisporus*) at different drying temperatures” International Journal of Mushroom Research and Development, Mushroom Res. 8(2): 27-29.
2. **Alak Kumar Singh** and T. K. Goswami, (2006). “Controlled Atmosphere Storage of Fruits and Vegetables: A Review”, J. Food Sci. Technol., 43 (1): 1-7.

3. Ashish Khare, Amit Pratap Singh, Ravindra S. Patil, K. Singh and **Alak Kumar Singh** (2007) "Utilization of Whey into Beverages: A review", Beverage & Food World, 34 (8): 27-32.
4. **Alak Kumar Singh**, Shishir Sinha and Karunakar Singh (2009) "Study on β -Galactosidase Isolation, Purification and Optimization of Lactose Hydrolysis in Whey for Production of Instant Energy Drink" International Journal of Food Engineering, 5 (2): Article 5.
5. **Alak Kumar Singh** and Karunakar Singh (2012) "Study on Hydrolysis of Lactose in Whey by use of Immobilized Enzyme Technology for Production of Instant Energy Drink" Advance Journal of Food Science and Technology, 4 (2).
6. **Alak Kumar Singh** and Karunakar Singh (2012) "Utilization of Whey for the Production of Instant Energy Beverage by Using Response Surface Methodology" Advance Journal of Food Science and Technology, 4 (2).
7. Vivek Kumar and **Alak Kumar Singh** (2018) " Computerized and Electronic Controls in Food Packaging" Journal of Applied packaging Research, Vol. 10 (1).
8. Mahendra Kumar and **Alak Kumar Singh** (2018) Study of sorption and desorption of Cd (II) from aqueous solution using isolated green algae *Chlorella vulgaris*, Applied Water Science, 8:225.
9. Mahendra Kumar and **Alak Kumar Singh** (2019) Valorization of coal fired-fly ash for potential heavy metal removal from the single and multi-contaminated system, heliyon, 5.
10. Ravi Kumar and **Alak Kumar Singh** (2019) Clarification of Guava (*Psidium Guajava*) Fruit juice using multi-enzyme treatment: optimization of processing parameters, International Journal of Innovative Technology and Exploring Engineering, 8 (12): 5266.

SPONSORED PROJECTS

1. Development and characterization of nanoemulsion based sparkling wine in hard-shots pellets (Principal Investigator) – ongoing (as Co-PI)
Sponsoring authority: Ministry of Human Resource and Development, Govt. of India
Project cost: Rs. 17.23 lakh.
2. Development of functional fat spread to reduce the risk of coronary heart diseases-ongoing (as Co-PI)
Sponsoring authority: Ministry of Human Resource and Development, Govt. of India
Project cost: Rs. 18.03 lakh.
3. Development of symbiotic beverage from underutilized Indian fruits to alleviate oxidative stress and inflammation in gut- ongoing (as Co-PI)
Sponsoring authority: Ministry of Human Resource and Development, Govt. of India
Project cost: Rs. 18.96 lakh.
4. Creation of infrastructure facilities for Human Resource
Sponsored authority: Ministry of Food Processing Industries, Government of India, New Delhi. Total cost of the Project Rs 50 Lakhs has been completed in 2009.
5. Utilization of Whey for the Production of Instant Energy Beverage by use of Immobilize Enzyme Technology
Sponsored authority: Council of Science & Technology, U.P., Lucknow for three years duration. Total cost of the project Rs 6.96 Lakhs has been completed in Dec., 2012.

MY STUDENTS (2016–2019)

Degree	Name	Project Title	Status
Ph.D.	Mr. Ravi Kumar	Production of enzyme clarified juices from selected Indian tropical fruits	In-Progress
	Mr. Mahendra Kumar	Toxic heavy metals removal from industrial effluents by adsorption process	In-Progress
	Mr. Umesh Kumar	Study of rheological properties of heat straw pulp for paper production	In-Progress
M. Tech.	Suraj Gupta	Development and Quality Evaluation of Gluten Free Cookies From Unripe Banana (<i>Musa paradisiaca</i>)	Completed-2017
	Vinayak Singh	To Study the Nutritional Composition and Health Benefits of Wheat Grass and The Development of Wheat Grass Balls	
	Himalaya Singh	Optimization of Flaxseeds Flour Fortified Biscuits	Completed-2018
	Anoop Kumar	Study on Refractance Window Drying of Indian <i>Jujubi</i> Pulp	Completed-2019
	Dhawal Asthana	Study on production characteristics of wheat grass juice	
	Shailendra Pandey	Development of curcumin nano-composite	
B. Tech.	Gaurav Gupta Abhinav Sharma	Extraction and Utilization of Essential Oil Recovered From Orange Peel	Completed-2017
	Aditya Agarwal Chirag Saraswat Rishal Chaudhary	Studies on the Development of Whey Based Mango Beverage	
	Shivansh Tandon	Extraction and Utilization of Essential Oil Recovered From Orange Peel	
	Deepak Kumar Prasoon Sahu	Preparation of Sugar Free Fruit Jam	Completed-2018
	Rahul Ahirwar Ashish Mishra Sandeep Ranjan Himanshu Kumar	Fortification of Jam For Increasing Its Anti-oxidant Properties and Making It Self-Preserved	
	Amit Batra Kanishk Dwivedi Priyankshi Narang Vatsala Mishra	Incorporation of Ground Flaxseeds Into Bread and Its Effect on Sensory and Nutritional Characteristics	
	Abhishek Ankur Chaubey Harsh Mittal Sonam Baghel	Development of Low Calories Cake Using Stevia	
		Completed-2019	

AWARDS AND RECOGNITION

1. Worked as Co-Chairman in 2 days Workshop on “Rapid detection of Food adulteration” Organized at HBTU, Kanpur during 30 September- 01 October, 2019.
2. Worked as Co-Chairman in one week Faculty Development Program on “Recent advancement in food processing and preservation” Organized at HBTU, Kanpur during 26-31 August, 2019.
3. Worked as Co-Chairman in one week Faculty Development Program on “Recent Development on Food Processing and Packaging” Organized at HBTU, Kanpur during 24- 29 September, 2018.
4. Worked as co-convener in Vocational Training Programme on “Preservation and Processing of Summer Seasonal Fruits and vegetables” organized by BEFT Department, HBTI Kanpur under TEQIP-World Bank Project during May 8 – 20, 2006.
5. M. Tec & Ph.D viva voce examination conducted in Other Universities: Amity University, IARI New Delhi, AMU Aligarh and BHU Varanasi.

ADMINISTRATIVE RESPONSIBILITIES

1. Member Board of Studies for Food Technology discipline at HBTI Kanpur.
2. P.G. Coordinator in the Department of Biochemical Engineering & Food Technology for Food Technology discipline.
3. Faculty advisor of Association of Biochemical Engineers & Food Technologists HBTI Kanpur
4. Managing Summer Training of undergraduate and postgraduate Food Technology students of the Department.
5. Managing Educational Tour of final year undergraduate Food Technology students of the Department.
6. Worked with senior faculty member in a Bakery Course organized by STEPHBTI Kanpur for Entrepreneurial Development and Training Programme.
7. Examiner in Food Technology Theory and Practical papers of U.P. Technical University, Lucknow U.P.
8. Examiner in Food Technology Theory and Practical papers of C.S.J.M. University, Kanpur U.P.
9. Examiner in Food Technology Theory and Practical papers at undergraduate and postgraduate level of Dr. B. R. Ambedkar, University, Agra U.P.
10. Examiner in Food Technology Theory papers at undergraduate level of Bundelkhand University, Jhansi, U.P.
11. Examiner in Food Biotechnology Theory papers at undergraduate level of Integral University, Lucknow, U.P
12. Examiner in Food Technology Theory papers at diploma level of Board of Technical Education, Government of Goa.
13. Acted as Warden of first year B. Tech. boys hostel (LV Old hostel East Campus) during Feb. 2005 to July 2007
14. Acted as Warden of Second year B. Tech. boys hostel (WCH II Hostel West Campus) during August 2007 to July 2009

15. Departmental coordinator of TEQIP-World Bank project.
16. Departmental representative in Industry Institute Partnership Cell.
17. Acted as Assistant Superintendent of Examination in U. P. Technical University Semester Examination at HBTI Kanpur Centre for 4 years.
18. Acted as Group Leader of Centre Controllers appointed by U.P. Technical University Lucknow for four reputed Engineering colleges in Kanpur city during Semester examinations from 2008 to 2012.
19. Acted as Assistant Dean Student Welfare, at Institute level, HBTI Kanpur w.e.f., 23.7.2009 to 29.9.2014.
20. Acted as Member of Training & Placement Cell for Chemical Engineering & Chemical Technology (Bio, Food, Oil, Paint, Plastic & Leather Technology) branches w.e.f., June 2009 to till Dec. 2010.
21. Appointed as Officer - in- Charge Security of, HBTI Kanpur w.e.f., 02.02.2010 to 2. 7. 2011.
22. Acted as Member in Proctorial Board of Institute w.e.f., July 26, 2009 to 29.9.2014
23. Looking the responsibility of Member of academic council at National Sugar Institute Kanpur from 2012 to till 2015.

MEMBERSHIP OF SCIENTIFIC BODIES/SOCIETIES

1. Life Member: Association of Food Scientists and Technologists (India).
2. Life Member: Oil Technologists Association of India (OTAI).
3. Life Member: Association of Biochemical Engineers & Food Technologists.
4. Life Member: International Harcourtian Alumni Association.
5. Member: Indian society for Technical Education (ISTE).
6. Honorary Secretary, Samajik Jan Kalyan Samit.

PROCEEDINGS/ABSTRACTS IN CONFERENCE/WORKSHOP

1. Dipika Trivedi, Sayyad Abdul and **Alak Kumar Singh** (2019) International Conference On Recent trends in agriculture, food science, forestry, horticulture, aquaculture, animal sciences, biodiversity and Climate Change, Title “Sorption isotherm study of ICPD treated-HAD banana slices” Organized by Krishi Sanskriti at Jawaharlal Nehru University, New Delhi, 21 September, 2019.
2. Anoop Kumar, Sayyad Abdul and **Alak Kumar Singh** (2019) International Conference On Recent trends in agriculture, food science, forestry, horticulture, aquaculture, animal sciences, biodiversity and Climate Change, Title “Evaluation of physicochemical properties of RW dried Indian Jujubi Pulp Powder” Organized by Krishi Sanskriti at Jawaharlal Nehru University, New Delhi, 21 September, 2019.
3. Anoop Kumar, Sayyad Abdul and **Alak Kumar Singh** (2019) International Conference On Recent trends in agriculture, food science, forestry, horticulture, aquaculture, animal sciences, biodiversity and Climate Change, title “Sorption isotherm study of RW dried Indian Jujubi Pulp Powder” Organized by Krishi Sanskriti at Jawaharlal Nehru University, New Delhi, 21 September, 2019.

4. Dipika Trivedi, Sayyad Abdul and **Alak Kumar Singh** (2019) International Conference on Technological Innovations for Integration of Food and Health, Title “Swell drying of fruits and vegetables” Tezpur University, Tezpur, Assam February 14-16, 2019.
5. Anoop Kumar, Sayyad Abdul and **Alak Kumar Singh** (2019) International Conference on Technological Innovations for Integration of Food and Health, Title “Refractance Window Drying of Fruits and Vegetables” Tezpur University, Tezpur, Assam, February 14-16, 2019.
6. Medha Sharma, Anit Kumar, Vivek Kumar and **Alak Kumar Singh** (2019) Enhancement of Quality and Shelf Life of Orange (*Citrus reticulata*) by Using Orange Peel-Based Coating Treatment, International Conference on Technological Innovations for Integration of Food and Health (TiiFH 2019): A focus on North-Eastern India, held between February 14-16, 2019 at the Tezpur University, Tezpur, Assam, India.
7. Charu Singh, Anit Kumar, Vivek Kumar, Medha Sharma and **Alak Kumar Singh** (2019) Nutritional and Pasting property of wheat flour and fermented wheat flour (Seera) in International Conference on Technological Innovations for Integration of Food and Health (TiiFH 2019): A focus on North-Eastern India to be held between February 14-16, 2019 at the Tezpur University, Tezpur, Assam, India.
8. Anit Kumar, Mansi Srivastava, Kaustubh Kumar, Harloveleen Kaur Sandhu, Lakshya Bahl, Vishwan Bharadwaj, Ashutosh Upadhyay, **Alak Kumar Singh** (2018) Gluten-free Muffins: Optimization and Characterization of gluten free Muffins Based on Seera and Quinoa Flour. International conference (8th International Food Convention (IFCON-2018)) organized by CSIR-CFTRI, Mysore, India on 12-15th December, 2018.
9. K. Pathak and **Alak Kumar Singh** (2000) “Development of Vegetarian Cake Recipe” Research Paper presented in Silver Jubilee Seminar on Emerging Trends in Food Processing: Technology and Value Addition, Organized by Deptt. of Food Technology, Bundelkhand University, Jhansi (U.P.), May 26-27, 2000 (pp.28).
10. Sharma H.K, Kumar P, Panesar P.S. and **Singh A. K.** (2000). “Recombined/Reconstituted Milk and Fresh Milk: A Futuristic View” Research Paper presented in Silver Jubilee Seminar on Emerging Trends in Food Processing: Technology and Value Addition, Organized by Deptt. of Food Technology, Bundelkhand University, Jhansi (U.P.), May 26-27, 2000 (pp.34).
11. Katiyar Shikha, Roy R, Pathak A.K. and **Singh Alak Kumar** (2000). “Osmotic dehydration of Fruits” Poster Paper presented in “Silver Jubilee Seminar on Emerging Trends in Food Processing: Technology and Value Addition”, Organized by Deptt. of Food Technology, Bundelkhand University, Jhansi (U.P.), May 26-27, 2000 (pp.47).
12. **Singh A. K.**, Sharma H. K., Pal P., Kumar P., Panesar P. S. and Singh H. (2000). “Physico-chemical changes in white button mushroom (*Agaricus bisporus*) at different drying temperatures” Poster paper presented in “International conference on Microbial Biotechnology, Trade and public Policy” organized by the Department of Microbiology, Osmania University, Hyderabad (A.P.), during 15-17 July, 2000 (Abstract No. BT-P-13, pp105).

INVITED LECTURES

1. Delivered lecture on “Technical Education Quality Improvement Programme - Phase 3” during GATE classes organized by Department of Food Technology Engineering, Bundelkhand University, Jhansi, on 18 December, 2018.
2. Invited as guest faculty and presented on “biscuit industry” in national level workshop “Udhyam Samaagam: Under the Ministry of MSME in association with State Industry

Department, U.P.” on “Food and Agro Based Industry” at Fatehpur, held on February 21-23, 2019.

3. Invited guest lecturer for national training on “Recent Trends in Value Addition of Vegetable” held under “Center for Advanced Science and Technology” organized by Chandra Shekhar Azad University of Agriculture and Technology, Kanpur on “Techniques of Vegetables Processing”, held on March 05-06, 2019.
4. Deliver an oral presentation on “Recent Advantages in Post-Harvest Processing of Pulses and Vegetable” in national conference “Post-Harvest Technology of Vegetable for Increasing Shelf Life” organized by Chandra Shekhar Azad University of Agriculture and Technology, Kanpur held on March 13-14, 2019.

CO-CURRICULAR ACTIVITIES

1. Attended Workshop on “NBA accreditation: from output to outcome” under aegis of NPIU and organized by SPIU-UP, on April 12, 2019 at Lucknow.
2. Attended a Faculty Development Program on “Material Synthesis and Advanced Characterization Techniques” under TEQIP-III organized by Department of Chemistry, H.B. Technical University, Kanpur U.P., during December 1-4, 2018.
3. Attended a Faculty Development Program on “Methods and Techniques for Enhanced Teaching and Learning in Technical Education” under TEQIP-III organized by Department of Chemical Engineering, H.B. Technical University, Kanpur U.P., during October 15-20, 2018.
4. Workshop on the occasion of World Food Day 2018 on “Our actions are our future: A zero hunger world by 2030 is possible” organized by AFST (I) Kanpur chapter & Department of Food Technology, HBTU Kanpur in STEP-HBTI auditorium, on October 16, 2018, sponsored by AFST(I) CFTRI Mysore.
5. Presented research paper on “Optimization of Flax Seed Flour Fortified Biscuits” during the “International Conference On Food and Nutrition (ICFN-18)” at Jodhpur, on 6 October 2018.
6. Attended a Faculty Development Program on “Recent Advances in Chemical Engineering” under TEQIP-III organized by Department of Chemical Engineering, H.B. Technical University, Kanpur U.P., during July 23-27, 2018.
7. Organized three weeks Induction Program for New Entrants, 2018-19, as per mandate of AICTE, at HBTU Kanpur during July 2018 and acted as Deputy Coordinator of Induction Program.
8. Attended Summer Training Program on “Active Learning for Senior Faculty” organized by Knowledge Incubation for TEQIP, IIT Kanpur U.P., during June 11-15, 2018.
9. Workshop on “Cancer awareness” organized by , Dhanvantri Super Specialty Hospital Kanpur, on May 5, 2018 at Radhakrishnan Auditorium, HBTU Kanpur.
10. Attended Workshop on “Outcome based education and NBA-SAR preparations” organized by H.B Technical University Kanpur in collaboration with Thiagarajar College of Engineering, Madurai Tamilnadu, during Jan 31 and Feb 1, 2018 sponsored by World Bank TEQIP-III.
11. Organized one week Induction Program for New Entrants, 2017-18, as per mandate of AICTE, at HBTU Kanpur during January 15-21, 2018 and acted as Faculty Mentor & Motivational Activity Coordinator.

12. Attended training Workshop for Faculty Mentors on “Induction Programme for New Students” organized by National Project Implementation Unit at Harcourt Butler Technical University, Kanpur U.P., during September 22 -24, 2017 sponsored by World Bank TEQIP-III.
13. Attended workshop on “Management Capacity Enhancement Programme Incompliance with NBA and NAAC Accreditation” organized by Engineering Staff College of India in collaboration with Department of Electrical Engineering, H. B. Technical University Kanpur U.P., during March 29 -31, 2017 sponsored by World Bank TEQIP-II.
14. Attended workshop on “Effective Pedagogy for Engineering Faculties” organized by Engineering Staff College of India in collaboration with Department of Electrical Engineering, H. B. Technical University Kanpur U.P., during March 26 -28, 2017 sponsored by World Bank TEQIP-II.
15. Workshop on “Energy Conservation and Energy Audit in Academic Institutions” organized by Engineering Staff College of India in collaboration with Department of Chemical Engineering, H. B. Technical University Kanpur U.P., during March 07 -09, 2017 sponsored by World Bank TEQIP-II.
16. Organized and delivered an expert lecture in Faculty Development Program on “Emerging Trends in Food and Bioprocess Industries” under TEQIP Phase-II jointly organized by Department of Biochemical Engineering & Department of Food Technology, H.B. Technical University., Kanpur U.P., during February 6-11, 2017.
17. Attended and delivered a expert lecture in Faculty Development Program on “Advances in Enzyme Production & their Industrial Application” under TEQIP Phase-II organized by Biochemical Engineering & Food Technology Department, H.B.T.I., Kanpur U.P., during December 19-24, 2013.
18. Faculty Development Program on “Curriculum Development and Evaluation Methods in Technical Education” under TEQIP Phase-II jointly organized by Plastic Technology Department and Mechanical Engineering Department, H.B.T.I., Kanpur U.P., during July 1-6, 2013
19. Refresher course on “Biotechnological Approaches for Chemical Process Industries ” organized by the Networking cell, H.B.T.I. Kanpur U.P., during May 11-15, 2007 sponsored by TEQIP-World bank.
20. Refresher course on “ Applied Mathematical Techniques for Chemical Sciences” organized by the Networking cell, H.B.T.I. Kanpur U.P., during April 11-15, 2007 sponsored by TEQIP-World bank.
21. Short Term Training Programme on “Global Industrial Concepts in Textiles” organized by the Government Central Textile institute Kanpur, U.P., from January 10 to 21, 2005 sponsored by AICTE through ISTE, New Delhi.
22. Short Term Training Programme on “Eco-Friendly Chemical Technologies” organized by the Department of Oil & Paint Technology, H.B.T.I. Kanpur, U.P., during March 11-24, 2002. Sponsored by AICTE, New Delhi.
23. Short Term Training Programme on “Eco-Friendly Chemical Technologies” organized by the Department of Oil & Paint Technology, H.B.T.I. Kanpur, U.P., during March 11-24, 2002. Sponsored by AICTE, New Delhi.
24. Member of Research Degree Committee (RDC) of Bundelkhand University, Jhansi for last three years.
25. Member of Academic Council of National sugar Institute, Gov. of India for last four years.

26. Invited as paper setter of National Entrance Examination of National sugar Institute, Gov. of India twice in last four years.
27. Invited in the scrutening committee for varification of new opening institutions (under AICTE).