

# SYMPOSIUM ON COMPUTATIONAL GASTRONOMY

THE EMERGING DATA SCIENCE OF FOOD, FLAVORS, NUTRITION, & HEALTH



Complex Systems Laboratory, IIT-Delhi, 21 December 2022



## :: Symposium Schedule ::

- **08:30 – 09:15** : Registration + *Computational Gastronomy CoSyLab Poster Session*

### Inaugural Session

- **09:30 – 09:40** : Opening Remarks :: **Prof. Ranjan Bose (Director, IIT-Delhi)**
- **09:40 – 10:00** : Keynote Talk: “Blending Food and Data Science—The Need of the Time”  
**Chef Manjit Singh Gill (President, Indian Federation of Culinary Associations)**

### Making Food Computable

- **10:00 – 10:50** : “Making Food Computable—A Data-Driven Approach to Food”  
**Prof. Ganesh Bagler (IIT-Delhi)**
- ❖ **10:50 – 11:30** : *Group Photograph + Refreshments/Tea Break + CoSyLab Poster Session*

### Computational Gastronomy: Education, Policy & Practice

- **11:30 – 11:50** : “A Data-Driven Approach for Food and Nutrition Policy”  
**Mr. Pawan Agarwal (Former CEO, FSSAI; Founder and Chief Executive at Food Future Foundation).**
- **11:50 – 12:20** : “Refreshing the Culinary Education”  
**Prof. Kamal Kant Pant (Principal, IHM Pusa, New Delhi).**
- **12:20 – 12:40** : “Computational Gastronomy for Food”  
**Chef Akshay Malhotra (TagTaste).**
- **12:40 – 13:00** : “Computational Gastronomy for Food”  
**Chef Parvinder Singh Bali (Corporate Chef, The Oberoi Centre of Learning and Development, Delhi).**

- ❖ *Lunch Break: 13:00 – 14:30 : Lunch Discussions + CoSyLab Poster Session*

### Charting the Data-driven Future of Food

- **14:30 – 15:00** : “Can a Computer Think Like a Chef?”— **Mansi Goel (Ph.D. Research Scholar, IIT-Delhi)**
- **15:00 – 15:30** : “Emergence of the home chefs and Small/Medium Home based good enterprises post COVID”  
**Rushabh Jhaveri (Founder, Recipe Cup, USA)**
- **15:30 – 16:00** : “Leveraging Computational Gastronomy in the Wholesale Food Supply Chain”  
**Alon Har-Tal (Co-Founder and CTO at Cheetah, Israel-USA).**

- ❖ **16:00 – 16:30** : *Tea Break + CoSyLab Poster Session*

### Data-Driven Food for Sustainability, Nutrition, and Health

- **16:30 – 17:00** : “A data-driven Smart Protein future”— **Mansi Virmani (Good Food Institute)**
- **17:00 – 17:30** : “Gut Microbiome: Connecting Diet with Health”— **Prof. Tarini Shankar Ghosh (IIT-Delhi)**
- **17:30 – 17:40** : *Concluding Remarks by Prof. Ganesh Bagler & Certificate Distribution*

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## :: POSTERS ::

- **[RECIPE]** “Discovery of the molecular essence of Indian cuisine and its applications”, Research: Anupam Jain, Rakhi NK, Ganesh Bagler\* (arXiv:1502.03815).
- **[RECIPE]** “Data-driven investigations of culinary patterns in traditional recipes across the world”, Navjot Singh and Ganesh Bagler\* (Best Paper Award; DECOR, IEEE ICDE 2018, Paris 2018).
- **[RECIPE]** “RecipeDB: A resource for exploring recipes”, D Batra et al., (2019).
- **[RECIPE]** “Ratatouille: Novel Recipe Generation”, Mansi Goel, Pallab Chakraborty, Vijay Ponnaganti, Minnet Khan, Sritanaya Tatipamala, Aakanksha Saini, Parul Sikri, Shrey Rastogi, Niharika, Adarsh Singh Kushwah, and Ganesh Bagler\* (2022).
- **[RECIPE]** “Turing Test For Chef”, Mansi Goel, Shubham Garg, Ansh Mittal, Bharat Soni, Manvik Arya, and Ganesh Bagler\* (2022).
- **[RECIPE]** “The Tree of World Cuisines”, Jushaan Kalra, Tript Sharma, Utkarsh Upadhyay, Sakshi Arora, Saad Ahmad, Bhavay Aggarwal, and Ganesh Bagler (2019)
- **[FLAVOR]** “FlavorDB: A resource to explore flavor molecules”, Neelansh Garg et al., Nucleic Acids Research (2018).
- **[FLAVOR]** “Predicting Odor Clusters using Machine Learning”, Sharad Jain, Rudraksh Tuwani and Ganesh Bagler\* (2022).
- **[FLAVOR]** “Data-driven analysis of perfumes”, Shayna Malik, Sanket Deshpande, Mansi Goel, and Ganesh Bagler\* (2022)
- **[TASTE PREDICTION]** “BitterSweet: Building Machine Learning Models for Bitter & Sweet Taste Prediction”, Rudraksh Tuwani, Somin Wadhwa and Ganesh Bagler\* (2019)
- **[TASTE PREDICTION]** “How sweet is that? Machine Learning Models for Predicting Sweetness”, Mansi Goel, Aditi Sharma, Ayush Chilwal, Sakshi Kumari, Ayush Kumar, and Ganesh Bagler\* (2022).
- **[HEALTH]** “DietRx: An integrative resource for health impacts of food”, Rudraksh Tuwani, Rakhi NK, Neelansh Garg, and Ganesh Bagler\* (2019).
- **[HEALTH]** “SpiceRx: A resource for exploring health impacts of culinary herbs and spices”, Rakhi NK, Rudraksh Tuwani, Neelansh Garg, Jagriti Mukherjee and Ganesh Bagler\*, bioRxiv 273599 (2018).
- **[HEALTH]** “WhatDish: Food Logging and Nutrition Control”, Nitesh Narwade, Mansi Goel, Deepanshu Pandey, Purva Parmar , Gauri Toshniwal, Vishesh Agrawal, Shivangi Dhiman, Lavanya Gupta, Anushka Gupta, Vishnumolakala Nikhila, Amuru Hareesh, Ekta Gambhir, Ronak Chhajer, Samiksha Garg, Meenal Jain, Astha Jain, and Ganesh Bagler\* (2022).
- **[HEALTH]** “Foodle: Gamification for better nutrition and health”, Ayush Singh Chilwal, Sakshi Kumari, Ayush Kumar, Mansi Goel, and Ganesh Bagler\* (2022).
- **[UC-Irvine (USA)]** “Food and Wellbeing Recommendation Systems for Human and Environmental Health”, Nitish Nagesh, Iman Azimi, Tom Andriola, Amir M. Rahmani, Ramesh Jain, University of California Irvine, USA.