

SYMPOSIUM ON COMPUTATIONAL GASTRONOMY

THE EMERGING DATA SCIENCE OF FOOD, FLAVORS & HEALTH

Center for Computational Biology, IIT-Delhi, 21 December 2019

:: Symposium Schedule ::

- **08:30 – 09:00** : Registration + *Computational Gastronomy CoSyLab Poster Session*

Inaugural Session

- **09:00 – 09:10** : Opening Remarks :: Prof. Ranjan Bose, Director, IIT-Delhi
- **09:15 – 09:25** : Keynote Talk: “The role of science in sustainable food practices”— Chef Manjit S. Gill (President, Indian Federation of Culinary Associations)
- **09:30 – 09:40** : Keynote Talk: “The power of data in culinary enterprise”— Chef Anil Grover

Data-driven Food Innovations

- **09:40 – 10:30** : “Can Computers Cook? — Leveraging Artificial Intelligence for Data-driven Food Innovations”— Prof. Ganesh Bagler (IIT-Delhi)
- **10:35 – 11:00** : *Refreshments/Tea Break + CoSyLab Poster session*

Different Dimensions of Gastronomy

- **11:00 – 11:35** : “What is Indian cuisine? An anthropological perspective.” by Dr. Kurush Dalal, Mumbai.
- **11:40 – 12:20** : “Recent advances odor prediction”, Dr. Rishemjit Kaur, CSIR-CSIO, Chandigarh.
- **12:25 – 12:55** : “Can FlavorDB help us decode the relationship between mythology and taste. A chefs perspective”— Chef Akshay Malhotra

Lunch Break: 13:00 – 14:00 : Group Photograph + Lunch Discussions + CoSyLab Poster Session

- ❖ **14:00 – 14:25** : **Master Chef Demonstration Session**— “What goes behind cooking? The science of emulsions”— Chef Sanjay Thakur

Empowering Chefs with Data (*Resources from Complex Systems Laboratory, IIT-Delhi*) — Charting the Future

- **14:30 – 15:00** : “RecipeDB: A database of worldwide recipes?”— Devansh Batra, Nirav Diwan, Utkarsh Upadhyay, Jushaan Kalra, Jaspreet Singh Marwah (IIT-Delhi)
- **15:00 – 15:20** : “FlavorDB: A flavor resource”— Tript Sharma & Dheeraj Khanna (IIT-Delhi)
- **15:20 – 15:50** : “DietRx: An integrative resource for health impacts of food”—Manasi Malik (IIT-Delhi)
- **15:50 – 16:30** : *Tea Break + CoSyLab Poster Session*

Ayurveda and Nutrition

- **16:30 – 17:00** : “Patterns of variation in chemosensory genes: potential implications in precision nutrition”— Prof. Mitali Mukherjee (CSIR-Institute of Genomics and Integrative Biology)
- **17:00 – 17:30** : “Designer diet plan: Personalized considerations for health and nutrition in Ayurveda”—Dr. Bhavana Prasher (CSIR-Institute of Genomics and Integrative Biology)
- **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) | Android App: Rishabh Bharadwaj Lavanya Gupta and Ganesh Bagler*.
- [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)
- [FLAVOR] “FlavorDB: A resource to explore flavor molecules”, Neelansh Garg et al., Nucleic Acids Research (2018).
- [FLAVOR] “Classification of flavor molecules across ingredient categories”, Jagriti Mukherjee, Rudraksh Tuwani and Ganesh Bagler* (2018).
- [FLAVOR] “Predicting Odor Clusters using Machine Learning”, Sharad Jain, Rudraksh Tuwani and Ganesh Bagler* (2019)
- [FLAVOR] “Data-driven analysis of perfumes”, Sanket Deshpande and Ganesh Bagler* (2019)
- [TASTE PREDICTION] “BitterSweet: Building Machine Learning Models for Bitter & Sweet Taste Prediction”, Rudraksh Tuwani, Somn Wadhwa and Ganesh Bagler* (2019)
- [TASTE PREDICTION] “How sweet is that? Predicting sweetness from molecular descriptors”, Aditi Sharma, Sharad Jain, Rudraksh Tuwani, and Ganesh Bagler* (2019)
- [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] “Data-driven analysis of biomedical literature suggests broad-spectrum benevolence of culinary herbs and spices”, Rakhi N K, Rudraksh Tuwani, Jagriti Mukherjee, and Ganesh Bagler*, PLoS ONE, 13(5): e0198030 (2018).
- [HEALTH] “Finding patterns in spice-disease associations data: Itemset Mining Approach”, Akshita Sawhney, Debajyoti Bera and Ganesh Bagler* (2018).