



IUFOST

March 28, 2024

06:00 Eastern Time (US and Canada)

06:00 – 07:30 USA and Canada (GMT-5)
11:00 – 12:30 Central European Time (GMT+1)
17:00 – 18:30 Beijing Time (GMT+8)

Interdisciplinary Approach towards Global Food and Nutrition Security of Sustainable Development Goals SRD

Abstract:

Safe, nutritious, and palatable food that is available, accessible, and affordable to all citizens at all-time is recognized as one of the greatest societal challenges as reflected in the Sustainable Development Goals. The future global food system must be sustainable and resilient to meet the demands of a growing world population with finite natural resources of the planet and exacerbating climate changes. Scientific discoveries and technological innovations are sought for effective tools to address the challenges. The convergence of sciences through interdisciplinary efforts across all the disciplines is being pursued to look for systematic solutions. This Scientific Roundtable Discussion (SRD) will feature several thought leaders of our time on interdisciplinary approaches to advancing the sustainable and resilient global food system. The distinguished speakers will offer their latest thinking on the intricate relationship among various dimensions of the global food systems, the current frontiers of food and nutritional sciences including food processing and processed food, opportunities, and anticipated impacts of effective interdisciplinary research among food, nutrition, and social sciences, the trends of food and nutrition industrial development, and an outlook of a much-improved food system to meet the SDG demands. IUFOST, in concerted efforts with IUNS, FAO, UNIDO and WHO, brings in experts to deliberate and suggest the way forward through a productive exchanges and discussion with the audience and those interested. The Scientific Round Table discussion with the experts is scheduled to be held on March 28, 2024.



Organizers: IUFOST

Co-Chairs: Dr PG Rao, Scientific Council and Dr Hongda Chen, Chair, Scientific Council

SPEAKERS



Prof. Sir Charles Godfray,
Oxford Martin School
United Kingdom



Prof. Fereidoon Shahidi,
Memorial University of Newfoundland
Canada



Prof. Anne-Marie Hermansson,
Chalmers University of Technology
Sweden



Dr. Susana Socolovsky,
Argentine Association of
Food Technologists (AATA)
Argentina



Prof. Rekha S. Singhal,
Institute of Chemical Technology
Mumbai, India

Remarks by Dr. V . Prakash and Dr. Pingfan Rao



Registration link: <https://us06web.zoom.us/j/82985090890>





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Prof. Sir Charles Godfray The Meat and Dairy Debate

Reductions in the global consumption of meat and dairy seem inevitable if we are to stop climate change. But meat consumption has already become a politicised issue. I shall ask, can these reductions occur with popular support, without imperilling the nutrition of vulnerable groups, and with a trust transition for those whose livelihoods depend on meat and dairy farming. I shall also touch on the role of novel substitutes and the meat and dairy consumption in low-income countries.

Charles Godfray is a population biologist with broad interests in science and the interplay of science and policy. He has spent his career at Oxford University and Imperial College and is currently Director of the Oxford Martin School and Professor of Population Biology at Oxford. His research has involved experimental and theoretical studies in population and community ecology, epidemiology and evolutionary biology. He is particularly interested in food security and chaired the UK Government Office of Science's Foresight project on the Future of Food and Farming and recently stepped down as chair of the UK's agricultural and environment (Defra) ministry's Science Advisory Council.

Prof. Anne-Marie Hermansson Global Challenges and the Critical Needs of Food Science and Technology (FS&T)

Sustainability depends on access to healthy and affordable food. Due to climate change, we need to adapt production to reduce diet-related greenhouse gas emissions. Indicators of the SDGs show ongoing developments, but critical needs of FS&T are often hidden, even if FS&T is fundamental for the conversion of agricultural raw materials into safe and healthy food products. The report Global Challenges and the Critical Needs of Food Science and Technology was endorsed by IUFoST and published in Trends of Food Science and Technology (Lillford and Hermansson 2021). Ongoing trends will be discussed related mission-oriented research areas, which demonstrate the critical needs for future FS&T throughout the food chain.

Anne-Marie Hermansson is Professor emerita in Structured bio materials and Food Science at Chalmers University of Technology. 2010- 2012, she held the position as Vice President of Strategic Research Areas at Chalmers and before that she was Director of the Structure and Material Design Unit at RISE and Director of the Excellence Centre SuMo Biomaterials at Chalmers. 2012-2018, she was a Board member of the Royal Swedish Academy of Sciences as well as Chair of the Royal Academy National Committee of Nutrition and Food Sciences. She is a fellow of the Royal Swedish Academy of Science, the Royal Swedish Academy of Engineering Sciences (IVA) and fellow of IAFOST (International Academy of Food Science and Technology). In 2004, she received the AOCS, 2004 Food Structure & Functionality Division Lifetime Award. In 2007 she received the IVA Gold medal. 2019, she received the EFFoST Lifetime Achievement award. Anne-Marie Hermansson has a M.Sc. in chemical engineering from Chalmers University of Technology and a Ph.D. in Food Technology from Lund University. She has published around 200 papers and conference proceedings. Anne-Marie Hermansson is Professor emerita in Structured bio materials and Food Science at Chalmers University of Technology.

Prof. Rekha S. Singhal

A fine network of interdisciplinary, trans-disciplinary and multidisciplinary sciences can ensure global food and nutritional security

The canopy of food science embraces a broad range of scientific disciplines ranging from chemical sciences (analytical chemistry as well as chemistry of food components, ingredients, additives and their conglomerate and possible interactions), biological sciences (microbiology, biochemistry, toxicology and physiology), nutrition (nutritionals as well as nutraceuticals), engineering (for development of processes/packaging/machinery), psychology (food intake by humans, food marketing professionals, and understanding consumer behaviour), and even AI/ML/VR for rapid quality assurance (online manufacturing or during transport and even storage). In addition, environmental sciences (to ensure food security in the face of threatening climate change, and propelling food processing in an ecologically sustainable manner through concepts such as 'zero waste', 'life cycle analysis' and 'circular economy'), energy scientists (to study the food-water-energy nexus) and even veterinary sciences (for understanding zoonotic diseases) also come in the realm of interdisciplinary food science and technology. One cannot forget the computational scientists whose expertise in blockchain technology enables traceability of every single commodity in a food on the plate and its journey from farm to plate. An integration of all these sciences contributes to the food and nutritional security of a diverse human populations from pediatrics to geriatrics and to vulnerable groups such as in disease-specific conditions as well as the vast majority struggling with lifestyle related diseases globally.

Rekha S. Singhal is a professor of food technology at Institute of Chemical Technology (formerly UDCT of University of Mumbai) with 35 years of experience in teaching various courses in food science and technology at undergraduate and postgraduate levels; and supervising 45 doctorates and 120+ masters in food science and related areas such as bioprocess technology and food biotechnology. A passionate teacher and researcher, she is also involved in policy making levels in various government bodies in India, and contributes to academic and research organizations in different capacities. Her work amalgamates chemical, biological and engineering sciences with an aim of understanding the science and technology behind food product quality and its process parameters. Her areas of work include carbohydrate chemistry and technology, fermentative production and downstream processing of microbial metabolites, and supercritical carbon dioxide extraction of bio-molecules.



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Prof. Fereidoon Shahidi

Food, Nutrition and Health: Full Use of Resources and Processing

Food processing provides an opportunity for formulating nutritious, safe and wholesome products to the growing world population. Thus, concerted efforts by food scientists, engineers, chemists, health professionals and regulators are essential. Of course, full use of the resources is important, and challenges imposed by climate change may or may not be easy to overcome, hence full use of the resources is imperative. Meanwhile, nutrient rich components as well as health-promoting ingredients from processing lines that are often discarded must be utilized in manufacturing secondary products and this applies to both terrestrial and aquatic resources. Attention should also be paid to the hurdles that might arise from ill-defined ultra-processed hype that exists in both fundamental and practical manner.

Dr. Fereidoon Shahidi is University Research Professor, Memorial University of Newfoundland; Founder and Director of the International Society of Nutraceuticals and Functional Foods (ISNFF), Disciplinary Group of IUFoST; Founder and Editor-in-Chief of related publications (Journal of Food Bioactives, etc), one of the most cited authors in Food Science and Technology. He is President Elect of IAFoST.

Dr. Susana Socolovsky

The Heavy Burden of Regulatory and Labeling Constraint on Processed Foods in South America

For the last 10 years, the Latin American food industry has experienced an ordeal in regards to the restrictions posed on the sales of processed foods that are high in solid fat and sugar. Both in supermarkets where restrictions exist on the exhibition to -most importantly- in the school environment where they are banned. From Mexico to Guatemala, and almost all the South American countries processed foods have faced a turmoil of criticism derived from the NOVA classification, which has received great attention by the press. We will review consumer perspectives on food processing and food security across Latin America.

Susana Socolovsky, Ph.D., CFS is a Doctor in Chemistry from the University of Buenos Aires, devoted 20 years to scientific research and teaching organic chemistry and food science at UBA. She was awarded the Argentine National Biennial Prize on Organic Chemistry in 1985. Elected Fellow of the International Academy of Food Science and Technology and a Certified Food Scientist by IFT's Certification Institute. She has authored multiple scientific papers, reviews, book chapters and magazine articles, has lectured in more than 260 Conferences in 20 countries, and dictated courses in 14 countries. Dr. Socolovsky has worked as an International Technical Consultant in Regulatory and Scientific Affairs and Food Innovation for the last 30 years. President of the Argentine Association of Food Technologists, Member of the Argentine Nutrition Society, has served in Scientific Committees of several nutrition and food science congresses. Non-governmental representative at Mercosur regulatory meetings, Codex local meetings. Professional Member of IFT, an IFT Food Science Communicator. She has served on the IFT Jury for the Food Innovation Awards for Latinamerican FS&T associations.



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