



IUFoST

**International Union of
Food Science and Technology**

Strengthening Global Food Science and
Technology for Humanity

TERM OF OFFICE REPORT

***September 2020 through
October 2022***

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ABOUT IUFoST

IUFoST is the global scientific organisation representing more than 300,000 food scientists, technologists and engineers through its work in over 100 countries around the world. It is a voluntary, non-profit association of national food science organisations linking the world's food scientists and technologists. IUFoST is one of only 39 scientific unions elected to the International

Science Council by its multi-disciplinary peers and IUFoST is the sole representative of the discipline of food science and technology. IUFoST also represents international food science and technology to other international organisations, such as WHO, FAO and UNIDO.

VISION

To strengthen the application of food science and technology for the benefit of all humanity

MISSION

Promote international co-operation and information exchange, to provide education and training to food scientists and technologists around the world and to promote professionalism and professional organisation among food scientists, technologists, and engineers.

▪ IUFoST President’s Message	Page 4 - 5
▪ IUFoST Board Report	Page 5 - 7
▪ Term Review - Global Members’ Fora, Declaration of Action on the Sustainable Development Goals and Key Focus of IUFoST	Page 7 - 10
1. IUFoST Update as UNFSS began in September 2021	
2. IUFoST Global Members’ Fora - Sharing Food Science and Technology by country and region	
3. The Declaration and Plan of Action	
▪ Term Review - Interdisciplinary Activities Collaboration and Action to improve Food Systems	Page 11
Association of African Universities (AAU) and IUFoST sign MoU	Page 12
New IUFoST Task Force: Food Processing for Nutrition Diet and Health	Page 12 - 13
Scientific Council Term Report	Page 13 - 14
Academy Executive Council Term Report and Fellows Election Results	Page 14 - 17
Under-graduate Curricula, Approval Process and Global Recognition Working Group 1.1 Term Report	Page 17 - 18
Education Emerging Issues and Key Focus Areas Working Group 1.2 Term Report	Page 18 - 20
Food Safety Scientific Communications Working Group 2.1 – Term Report	Page 20 - 21
Food Safety Emerging Issues, Key Focus Areas and Global Research Interests Working Group 2.2 – Term Report	Page 21 - 22
Food and Nutrition Security Working Group 3.2 – Term Report	Page 22 - 23
Global Outreach and Industry Relations Working Group - Term Report	Page 23 - 24
CODATA Working Group – Term Report	Page 24 - 26
Codex Committee – Term Report	Page 26 - 27
Early Career Scientists (ECS) Administrative Council – Term Report Now College of Early Career Scientists (CECS)	Page 27 - 28
New IUFoST Disciplinary Grouping Global Food Regulatory Science Society (GFORSS)	Page 28
IUFoST Adhering Body Supported Events Uruguay and China	Page 29
Publication Special Issues, Additional IUFoST Resources	Page 29
IUFoST Lifetime Achievement Award Winners and Young Researcher Professor Ruth Oniang’o, Professor Delia Rodriguez-Amaya, Dr Dominic Agyei	Page 30
IUFoST/IAFoST Governance 2022 – 2024	Page 30 - 34
Financial and Administration Term Report	Pages 34 - 35
21 st World Congress of Food Science and Technology Singapore	Pages 36 - 38

President's Report

Dear Friends,

Greetings to all of you. As you may know, IUFoST experienced extremely difficult years in 2020 to 2022, not only because of the pandemic that has not spared any region of the world, but it had to re-orient its own governance structure and streamline many agendas to achieve more from less. The good news is IUFoST fought the battle with determination and put the organization on track again. In fact, it is moving at a higher pace now owing to global active participation of many of its members and a set of goals that is all inclusive. In this context, we welcome new members who will be officially inducted during the General Assembly of IUFoST at the Singapore Congress this year. During this term we also have created a new College of Early Career Scientists. This will be pursued more vigorously to encourage the younger food scientists across our membership regions globally to be interactive.

The need for sustainable food systems for the future is apparent more than ever since the pandemic and the recovery process and future resiliency in our Food Chain is recognised as science dependent. This is especially so in delivering safe and nutritious food from Farm to the Consumer by primary, secondary, and tertiary processing. This coupled with industries at different levels and traditional food practices coming from thousands of years of sustainable social systems at the micro level is one of the networking agenda items of IUFoST. The Scientific Council and IAFoST kept their focus on the goals of Food and Nutrition Security, as well as, Food Safety and Capacity building and contemporary global issues, resulting in numerous Scientific Information Bulletins and Discussion group reports. Recently the importance of food processing issues, Codex issues and industry relations has been addressed with the formation of Committees to focus on these subjects with a vibrant science-based approach. The role played through local solutions of adaptable, affordable, and accessible technologies in many cases to solve global problems was also a major focus of IUFoST. IUFoST has also kept attention on Food losses and wastes and that Scientific Roundtable Discussion was one of the first to be introduced, followed by others on Food Safety and Traditional foods to name a few which that were great successes. The sustainable and holistic and integrated approach of the Union has been addressed keeping in view the focus of United Nations Sustainable Development Goals. This work is complemented and supplemented by more than seven working groups with monthly activity in each of them covering the subject of Food Safety, Food and Nutrition Security, with sustainable food systems and Capacity Building. The updated curricula of the IUFoST accreditation process was put in place during this term and R&D institutes and academia adopting IUFoST global standards will be officially recognised during the Singapore Congress. The Association of African Universities MOU is already agreed in principle and will be signed by IUFoST soon.

IUoST has interacted with R&D houses in industries worldwide at all levels including cottage, women-led entrepreneurs, micro, small, medium, large, and global industries. This synergy must gear up by applying global knowledge for local solutions together with academia and R&D organizations worldwide with the activity from the bottom of the mountain rather than driven from the top. The role of sustainable nutritious food in boosting the Immunity of individuals is another important scientific push that has brought Food Science closer to Nutrition Science, especially during and after the pandemic. As a notable example IUoST and the International Union of Nutritional Sciences through the International Science Council presented a two-day webinar which was one of the hallmarks of interfacing with other unions. IUoST took the lead in this and is a role model for Inter-Union activity. This

synergy was essential to ensure that the food scientists and nutrition scientists working together have a greater role to play in the battle against the pandemic of malnutrition, undernutrition, anemia, micronutrient deficiencies; and a healthy mother and child on the one side, and the millions of overweight people due to lifestyle patterns and unhealthy diets on the other.

Early February 2022 saw us at invited sessions of the International Science Council (ISC) General Assembly. IUFOST was commissioned by ISC to begin a blog to be shared with all their members of FS&T. We took the lead and wrote on “From Industrial Processing to Local Food Preservation”. It has been a hectic and well spent term for the Union as our visibility has increased exponentially, especially with our acceptance by the Scientific Group of the United Nations Food Systems Summit. As a recognised Scientific Partner IUFOST was an active participant in the September 2021 UN Food System summit. IUFOST documents outlined three specific areas of interest. The first was Education, Training, and Capacity Building. The second was Traditional Foods and Role of Food Science and Technology. The third was Global Governance and the role of Food Science and Technology for sustainable food systems. These also addressed the Sustainable Development Goals of the UN by 2030. IUFOST Vision and Mission in place through IUFOST Declaration is to establish this process globally while redefining the speed and direction of IUFOST for Future Years. The message of integrating local solutions for global problems and global solutions for local problems with a science-based approach is the way forward ensuring a healthy world with Food and Nutrition Security, which IUFOST has set for itself as one of the goals.

IUFOST through its Board, Fellows, members, various working groups, Academy, and Scientific Council and various committees, and the newly formed college of early career scientists and ever active secretariat is moving forward with confident optimism to partner in these challenging goals. This dedicated approach in the focused areas of Food Science and Technology is taking the global leadership in Food Science and Technology forward, steered by science-based approaches and international networking.

These are some of the highlights and headlines of the activities of IUFOST for this term 2020-2022 for which all of us should be proud.

The IUFOST World Congress will be held in Singapore during 31 October to 3 November 2022. We look forward to being there in person to meet all of you, to hear your ideas and generate the support that will make IUFOST meet its purpose, which is to serve all of humanity through strengthening the promotion and application of Food Science and Technology.

- Vishweshwaraiah PRAKASH
President
IUFOST

Board Report

Throughout this Term of Office, August 2020 through October 2022, the Board has met every four to six weeks. Included in every agenda is a report from the Academy, Scientific Council and Treasurer and Secretariat. Strategies and actions during this term have revolved around re-building and strengthening IUFOST's profile internationally with concrete actions to demonstrate the Union's global scientific breadth and representation for the benefit of its members and associates. As you are aware from past interim reports, many of these are being

accomplished through the IUFoST Working Groups and Committees with added support from the Academy and from the Scientific Council.

The Board has been keenly aware that the financial health of the Union has required strict budgeting throughout the Term and the diversification of revenue streams. The Board has agreed with the Undergraduate Curricula Working Group to initiate a cost system for the service, while still reflecting individual needs and services. In addition, the Board has formally approved the concept of institutional and associate affiliations with IUFoST as reflected in our newly adopted By-Laws. Further, the Board has begun work in initiating an annual high-level revenue-sharing summit with a national member using the collaboration between sciences at the highest levels to provide opportunities for innovation, research, and funding for FS&T's work in future food systems from different regions of the world.

The new IUFoST By-Laws have been received and filed by the Canadian Government. Correcting the IUFoST By-Laws to reflect a fair and judicious governance structure suitable for a global organisation was completed during this past Term. The Board thanks again all members of the IUFoST By-Laws Committee for their careful work and all those who externally reviewed the By-Laws before it was placed before you for a vote in December 2021. It is a major achievement for us all to have received an overwhelmingly positive response from our national membership with 96% voting in favour of accepting the By-law amendments. The reflected changes in the governance structure may be apparent already. Some position titles changed, including the Academy Presiding Officer who once again has become the Academy President, as was the situation, without conflict, for more than 20 years. The revised By-Laws responded to your concerns and have addressed the imbalances and brought in more transparency to the system.. Once again our thanks for your support and contributions. Most importantly, IUFoST governance has returned to a professional and collegial manner of operation. The Board itself is no longer divided into sections in the new By-Laws, as the previous two-tier system allowed for an executive branch where it was possible for decisions to be made for the entire Board without consultation with due consultation. Now the Board is represented as a whole – each member has equal weight and consensus is the preferred method of operation and vote by majority decides each issue.

Global representation in our membership has been another area of focus. We are pleased that new countries continue to apply to join IUFoST, and we are working to obtain new representation in those cases where there are gaps. The plan is for a working group of Adhering Bodies and others to review the financial structure for dues in 2023 and see if there are amendments that could be made to better assist our global membership.

The Nominations and Elections process for this term was over-) and the processes were vetted and approved by them. In this regard there were the nominations and elections in the Academy for the 2022 IAFoST Fellows; the nominations for the Academy Executive Council 2022 – 2024; the nominations for the Board of Directors and Scientific Council for the term 2022 – 2024. The Nominations and Elections Committee approved the roster of nominees and confirmed election by acclamation as agreed according to the IUFoST By-laws if enough suitable nominees are put forward and these nominees fill the governance spaces available. This was the case and members will see in the following pages the names and background of your colleagues in the Union who have stepped forward to help govern the Union in the next two years. IUFoST thanks all its Adhering Bodies or Fellows who put forward such excellent nominees.

During this Term the Board also put before the General Assembly some changes in what was formerly the Early Career Scientists Section of IAFoST and IUFoST. You responded in your vote in favour of a change to the College of Early Career Scientists, led by an Executive Group. This

group held a highly successful symposium in 2021 and we look forward to more ongoing activity in the next two years. Recognising that there are outstanding mid-career scientists who are not acknowledged officially within IUFoST and IAFoST to date, or able to work actively in the Union in a recognisable way, the General Assembly will be asked to consider the adoption of a new Section in IUFoST/IAFoST governance that allows this key group of outstanding scientists to work together with other members of the Union in areas of importance to them to help drive the future success of the discipline in responding to food systems needs.

Communication vehicles are being improved and standardised, beginning with the development of a new website. Further improvements need to be made with communications in general and are underway, including a website section where you can obtain videos and copies of presentations from the many IUFoST webinars and Scientific Roundtable Discussions. A monthly News Brief has been developed to provide regular updates and opportunities for your involvement in the Union's affairs. Interim Reports issued twice per annum, have been introduced on all activities of the Union and reporting on the administrative and financial affairs. During this past Term, Three Interim Reports have been distributed to members and this report provides members with the final and full-Term Review of IUFoST and IAFoST activities and governance.

One of the ways in which IUFoST has been responsive to the needs of its members is in carefully considering advice of our Fellows and Members over issues that are viewed as necessary for the Union to take a role. Such is the case in the recent formation of the IUFoST Task Force on Food Processing for Nutrition, Diet and Health. Led by IUFoST members and Fellows of the Academy, this Task Force is looking at classification systems for food processing and will provide scientific facts and data to support objective decisions across involved sectors. This is a major international effort that is greatly needed. You will read more about this further into this Report.

To end, the Board of Directors thanks IUFoST members for all your support and involvement in the successes achieved during this past term of office. Our service to the Union has been made possible by your commitment to our goals for the profession, its standards, and its role in healthy and sustainable future food systems.

- **IUFoST Board of Directors**

ADVANCING FOOD SCIENCE AND TECHNOLOGY

TERM REVIEW

Global Members' Fora, Declaration of Action on the Sustainable Development Goals, a key focus of IUFoST



1. IUFoST Update as UNFSS began in September 2021

The World Food Systems Summit is not the end of the work but just the beginning of concrete actions. These concrete actions will be accomplished by many global and national organisations, and governments and IUFoST and IAFoST will be working with many other partners towards the

SDG and therefore FS&T goals. Far from the work coming to an end - it is now becoming more critical and focussed. IUFoST needs to continue to raise its profile, show the scientific evidence, and ensure the attention of governments and funding agencies. That is what we will continue to do. The reference documents IUFoST prepared in the lead up to the United Nations Food Systems Summit (UNFSS) included expert white papers– *Global Governance and the Role of Food Science and Technology for Sustainable Food Systems*; *Food and Nutrition Security: Traditional Foods and Processes – Towards a Healthy Diet for all* and *Food Science and Technology Education and Training for Capacity Building* were accepted and included as IUFoST was an official partner in the Science Group’s body of work at the UN. The convening of the IUFoST Members Forum in early October 2021 was the first step, followed by the IUFoST declaration of action that was released on the eve of World Food Day 2021. The Members Forum, led by many national and regional bodies of IUFoST, set the course for the declaration that IUFoST released on the eve of World Food Day with the IUFoST Plan of Action. Another Members Forum was held in April 2022, featuring the work of members.

2. IUFoST Global Members’ Fora - Sharing Food Science and Technology by country and region

The Fora’s focus and purpose were to recognise and highlight some of the ongoing work of IUFoST Adhering Bodies and the policy framework in countries/regions towards the Sustainable Development Goals. These models offered science-based evidence of local solutions that can be translated to global problems. These offered a discussion platform between IUFoST members following the UN Food System Summit. One of the outcomes was the declaration released prior to World Food Day leading to the sustainable actions of IUFoST and its partners. More on the work being done will be evident through the IUFoST World Congress in Singapore.

3. Declaration and Action Plan

More than two-thirds of the 17 SDGs directly are related to food. As the [World Bank](#) reported in October 2021, 100 million more people have fallen into extreme poverty as a result of the global pandemic. Food Science and Technology and its post-harvest partners are placing billions of meals on the table each day.

Excerpted from declaration –

Global Food Science and Technology through the International Union of Food Science and Technology (IUFoST) is re-affirming its commitment and its action plan towards meeting future food & nutrition security challenges and the SDGs by its ongoing actions to address and thus reduce food losses and waste; mitigating environmental effects through encouragement for innovative and new technologies; expanding knowledge of traditional foods and processes and their health impacts; working on influencing consumer demand for healthier foods that restrict unhealthy foods by educating the consumer on food choices/habits and new alternatives, expanding knowledge of how food reacts with the body to reduce over nutrition, improve capacity building and education and training at all levels, especially in combating nutrition maladies and advocating safe food for all.

Food sufficiency is tied closely to food safety. Food safety programmes should include public health risks, hazard monitoring, safety objectives based on the various steps in food handling, foodborne disease monitoring and overall science-based food safety guidelines. Promoting these initiatives would empower IUFoST through its national scientific bodies globally and Fellows of the International Academy of Food Science and Technology (IAFoST) and its partners, which can contribute to addressing food system issues at the global level through solutions that meet local needs as well. This approach will fill the void in the supply side gaps, drive demand changes, increase the efficiency of post-harvest operations, reduce the gaps from farm to consumer and promote food and nutrition security.

1. There is an elevated recognition to advance from food security to meet calorie requirements to nutrition security with health outcomes in mind. Foods can be purposely integrated into individual diets for improved health and well-being.
2. Food and nutrition security for the under-nourished but with diet transition, obesity and obesogenic food and drink are accepted as greater challenges for Food Science and Technology to deliver technology solutions.
3. Food Science and Technology is a critical and integral part for the entire food, nutrition, and health enterprises. Sciences of food will be more effective if a more inclusive and system view is taken by uniting sciences and technology from agri-food production to processing and distribution to consumption and healthy outcome.
4. Effectively informing all stakeholders and the public about sciences of food is now more important than before. Capacity building to attract and inspire all talents, including those of future generations, is vitally important in ensuring sciences of food for addressing SDG goals.

IUFoST and its Membership, Fellows and Associates commit to further mobilisation and towards concrete action in the following areas through stewardship, activism, engagement of business and policy makers, and developing and spreading the science to achieve the SDGs:

1. Renews commitment to delivering the Sustainable Development Goals (SDGs) including no poverty, zero hunger and good health and well-being.
2. Aims for zero food loss and waste for both food security and global environmental conservation through advocacy, sustainable consumption, infrastructural development, waste utilization and unused biological resources.
3. Advocacy to increase budgetary allocation to food and agriculture especially in low-and middle-income countries (LMICs) where there is a widening gap in food production and sustainable consumption levels.
4. Increased capacity building and accessibility of resources especially for poor smallholder farmers and women that account for the bulk of food production and food processing activities in LMICs. Focus on young scientists through mentorships, scholarships, and empowerment of girl students for tomorrow's leadership in Food Science and Technology.
5. Channeling of considerable resources to reducing post-harvest food losses in LMICs, promoting upstream and downstream food processing and market led innovations, removing distortions, and strengthening food value chains. There will be increased emphasis on traditional foods and processes in valuing Food Culture over centuries with an approach for sustainable food consumption and production by considering the importance of social sciences in enabling and empowering communities.
6. Encouraging governments to establish/enhance their food processing and value additions sectors to underscore their critical importance to the economy not only in LMICs but also in high income countries to prevent food wastage.
7. Promotion of the production of safe, healthy, and nutritious foods, reduction of the huge burden of foodborne illnesses in all regions and countries, the diet transition for minimising obesity and noncommunicable diseases burden (especially reducing very high calorie, fat dense as well as sugar rich foods consumption), strengthening food regulatory sciences and development of new approaches for improving food safety in the food chain.
8. Promotion of food processing for a healthy diet, sustainable food processing research including unconventional sources of foods such as conversion of insects to edible foods and innovative algae bio refinery and emerging technologies where the energy utilization and negative impact on the environment are considerably lower.
9. Promotion of multidisciplinary approaches to mitigating the damaging effects of climate change on the close interaction between water, energy, and food, and trans disciplinary research to build sustainability and resilience at the water, energy, food nexus in many parts of the world that rely on ecosystem services for agriculture and food processing. Water conservation, clean water and water recycling are processes in which Food Science and Technology applications and competence can be utilized efficiently.

Actions: Improving Food Systems by showcasing national and regional opportunities and best practices:

- Robustness of food regulatory systems is a prerequisite to sustainable food systems. IUFoST is strengthening its commitment to Codex through active engagement by its Codex Committee.
- Bridging the gap between academia with the public (inter-government institution collaborations) and private sector is a key to the sustainable food system.
- Initiatives for urban environments for food system. IUFoST can demonstrate through actions of its national bodies. Proof of optimized energy and water usage is available in the urban and indoor agriculture environment through application of Food Science and Technology.
- Risk assessment data mining needs capacity building, through collaborative efforts regionally and globally. The behaviours behind producers' production push versus consumers demand pull and relationship with culture need more scientific data. For improving food safety approaches like risk assessment, hazard surveillance / monitoring, surveillance and investigation need to be focused.
- IUFoST needs to emphasize producing sustainable foods with considerations on feed (animal/aquatic environment/nutrition) as much as human food.
- Capacity building, empowering younger generation as the drivers for sustainable food systems
- Technology exchange within IUFoST adhering bodies especially "upgrading, up cycling", reduction of food loss and waste into industrially valuable products.
- IUFoST would focus on bringing awareness through consumer education, together with interdisciplinary collaborators, to start changing consumer habits to practice sustainable consumption. Education through communication to all sectors and engagement with consumers, nutritionists, medical fraternity, and the governments continue to be vital. IUFoST national and regional bodies have demonstrated successful communication vehicles to increase scientific knowledge of facts around food. Experts representing food science and technology in the areas of fortification, food safety, food processing and product development, production and market economy, human nutrition, food engineering, and quality control would work with partners in agriculture, animal breeding, and genetics, livestock processing, social agencies, government regulatory bodies, and UN agencies including Codex.
- Capacity building and collaborative research efforts are required from governments and must include industry engagement; overall a cross-discipline engagement is needed with food science and technology in Science and Technology is critical. IUFoST needs to work together with the private sector on some of the challenges related to diet transition with obesity and NCDs, especially high calorie and fat dense as well a sugar-rich foods. IUFoST will work closely with all stakeholders to address these issues, including involvement of consumers through education.

Other key objectives for global Food Science and Technology (through IUFoST) are:

- a) Enlist academic, research, and higher education institutions to build capacity, actively support various flagship programs of governments on food and nutrition, The intended result of these actions is to prepare a skilled, highly qualified, and resilient agri-food workforce for the future. This can be accomplished through primary education in food, food processing and distribution, and nutrition. They will improve health and well-being in homes and communities which will provide a healthy future
- b) Engage with food businesses to ensure availability of safe and healthy food, while creating demand for safe and healthy food through a social and behavioral change of citizens,
- c) Enable further growth of the associations and professional development of their members.
- d) Expand the knowledge base of the profession through collaboration and cross-disciplines, to foster dialogue between sectors
- e) Enable further growth of the associations and professional development of their members.

The search for sustainable food solutions are the triggers for IUFoST mobilization, as the global voice of food science and technology. Translation of success stories throughout the world using Food Science and Technology can significantly help in achieving the SDGs and future resilient and sustainable food systems. For more on the IUFoST contribution to World Food Day, our competency background, and new IUFoST actions arising related to SDGs, please read IUFoST declaration on the Eve of World Food Day 2021. IUFoST also prepared a short brief to commemorate World Food Day 2022.

https://www.iufost.org/sites/default/files/IUFoST%20Declaration%20on%20the%20Eve%20of%20World%20Food%20Day%202021_1.pdf



TERM REVIEW Interdisciplinary Activities Collaboration and Action to improve Food Systems

The interdisciplinary collaboration as a focus area, for sustainable, adaptable, and healthy future of food systems, was in fact, one of the prime agendas for the UN System Summit. Evidence-based solutions for resilient future food systems require coordination and interdisciplinary work from the farm to table.

Sustainable Development Goals in relation to Food Science and Technology represent 13 of the 17 listed goals. Prevention of food losses, food waste, use and focus on scientific support for understanding traditional foods, new and emerging processing, scale up of R&D, science based immune boosting foods with nutrients, training the trainer and capacity building all form the cornerstones of IUFoST work. Interdisciplinary partnerships are one of IUFoST's goals to strengthen the future food system.

After the UN Climate Change Conference (COP 26), the UNFSS, the 76th UN General Assembly in 2021 and after Covid pandemic stress, it was agreed that the food science and technology community and the nutrition science community should work together with international, regional, and national partners to provide comprehensive solutions to transform food systems to ensure healthy and sustainable diets for the world's people for today and tomorrow. It was also noted that the ongoing Covid pandemic and recent environmental calamities make this an urgent challenge. As an example, traditional foods were referred to as playing a central role in sustaining populations and to popularize their use, there is need to adopt, upgrade and adapt small scale processes and small- scale entrepreneurship from where they are produced to make them sustainable.

To that end, ***The Power of Food Science and Technology and Nutrition for Sustainable Planet Health*** was co-chaired by Dr. Vish Prakash (IUFoST President) and Professor Alfredo Martinez, (IUNS President) over two days on November 16 and 17, 2021 at the invitation of and hosted by the International Science Council.

Previously, IUFoST had been invited to prepare two sessions during the ISC General Assembly in February 2021. The discussions centred on Interdisciplinary Collaboration to Sustainable, Adaptable and Healthy Future Food Systems.

Speakers, including members of other ISC Unions, ICSU Past President Gordon McBean, Academy Presiding Officer-elect Charles Aworh, Alejandra Medrano, ALACCTA President, agreed that Food science and Technology is central for nutrition and food security across both rich and poor countries, at primary, secondary and tertiary levels, for sustainable livelihoods. Using local solutions for global replications have provided a focussed approach for IUFoST. Sustainable actions, strategies and pathways for adaptable, accessible, and affordable food and nutrition security must be clearly firmed up with capacity building, infrastructure as well as human resource. All these facets of science and technology underpinning IUFoST's work bring together Food Science, Nutrition, Biology, Soil Science, Forestry, Fisheries, Information Technology, and the Science of Climate Change at large.

The IUFoST Blog commissioned by and for the International Science Council (ISC) for its membership of more than 140 national and regional scientific organizations including Academies and Research Councils as well as the global unions has started. IUFoST President Dr. V. Prakash explored how scaled-down models of low-carbon food production can provide

local answers to the global issue of sustainable food practices “From industrial processing plants to local food preservation”.

Association of African Universities (AAU) and IUFoST sign MoU

This Memorandum of Understanding (MoU) establishes a collaborative relationship between the Association of African Universities (AAU), and The International Union of Food Science and Technology (IUFoST) for the purpose of organizing training and education for capacity building in Africa, especially in the areas of Food Science and Technology and Agro-food production and processing.

The Association of African Universities (AAU), an international non-governmental not-for-profit organization with an initial membership of 34 institutions in 1967 has grown to a current membership of more than 400 institutions in 46 African countries. It operates in three official languages, namely English, French, and Arabic.

As the representative voice of higher education in Africa, AAU aims to raise the quality of higher education in Africa and strengthen its contribution to Africa's development by, inter alia, providing support to their core functions and facilitating critical reflection on, and consensus-building around, issues affecting higher education and the development of Africa.

The AAU 2020-2025 Strategic Plan recognizes that higher education is central to social and economic development of all societies and underpins all development targets from poverty reduction to employability, health to environmental sustainability and food security. Meeting the targets of the UN sanctioned SDGs, or African Union's Continental Education Strategy for Africa (CESA 16-25), and Science, Technology, and Innovation Strategy for Africa (STISA 2024), will depend upon producing competent and skilled graduates with requisite skills to create jobs, take up employment, drive innovation and advance progress, and prosperity through knowledge production (research) and knowledge dissemination (teaching and learning).

AAU and IUFoST are developing a work plan for each of the first five years of the MoU addressing future food security challenges and the SDGs through actions to address and thus reduce food losses and waste; mitigating environmental effects through encouragement for innovative and new technologies; expanding knowledge of traditional foods and processes and their health aspects; educating the consumer on food choices and new alternatives; expanding knowledge of how food reacts with the body to reduce over nutrition; improve capacity building and education and training at all levels, especially in combating undernutrition, and safe food for all. These help AAU and IUFoST in collaboration through capacity building and education to address food system issues at the global and regional levels that meet the local needs as well. This would contribute to filling the void in the supply side gaps and influencing demand changes and including nutrition into food security, reduction of the gaps from farm to consumer and increasing the efficiency of post-farm operations and influencing demand. The MoU will be signed formally at the 21st World Congress of Food Science and Technology in Singapore.

New IUFoST Task Force: Food Processing for Nutrition, Diet and Health

The IUFoST Board, following consultations with the Scientific Council and Academy Executive Council, has now approved the formation of a new Task Force of immense international importance.

This Task Force, IUFoST Task Force: Food Processing for Nutrition, Diet and Health – began thorough consultations with internationally well-known experts from the global communities of human nutritionists, food scientists and food process engineers. Then, IUFoST established an International Task Force to address and clarify the role of food processing and the uses of terms such as ultra-processed foods in food classification systems. The latter include the very well-known NOVA classification where food processing has been built-in to define and use a concept of ultra-processed foods. As this concept has created significant controversies, the uses of food processing concepts in food classification systems must be critically reviewed. IUFoST has also recognised an international need for food systems classifications to harmonize underpinning dietary guidelines and policies as well as public health-related decisions that are based on scientific facts and data to support objective decisions across the involved sectors. The Task Force has a core membership, co-chaired by Drs. Yrjo Roos and Erich Windhab. It will work together with an Advisory Board of scientists in eminent positions in various scientific communities and also individuals publicly known for their contributions and expertise in other related topics. This Advisory Group is led by Dr. Sam Saguy. Members will hear more about this at the IUFoST World Congress in Singapore in one of the scientific sessions.

Scientific Council Term Report

Chair: Dr. Fereidoon Shahidi

Past Chair: Dr. Vish Prakash

Chair Elect: Dr. Hongda Chen

Councillor: Dr. Stephane Guilbert

Terms of Reference

The Scientific Council operates in conjunction with the Board. Its responsibilities include:

- a) oversight of the scientific standard and integrity of IUFoST activities,
- b) approval of publicly released scientific materials and the content of learned statements on scientific matters,
- c) oversight of IUFoST official publications and related congress publications,
- d) advice for chairs and members of working Groups, scientific commissions, and Task Forces, no larger than is essential, to carry out specific tasks such as preparation of position papers and offering of expert advice,
- e) development and fostering of relationships with the international scientific community according to IUFoST's vision and mission in conjunction with the ongoing global work of the Union,
- f) representation and Ambassadors role in IUFoST at all scientific events in which members of the Scientific Council participate during their terms in office.

During the Term of office 2020-2022, The Scientific Council has been actively involved and advising in every area of IUFoST and IAFoST scientific activity.

This has included advice and involvement in documents prepared by IUFoST and IAFoST working groups, members and fellows related to scientific responses, actions of the Union: Papers:

- United Nations Food Systems Summit, Submission of documents in March and preparation for the Summit in September 2021
- IUFoST Declaration of Action on the Eve of the World Food Day 2021
- IUFoST submission to Codex November 2021

Publications and Special Issues approvals:

- Special Issue in *Food Control* on Traditional Foods
- Reports on IUFoST scientific roundtable discussions in *Journal of Food Bioactives*
- Papers in *Science of Food*
- Special Issue of Early Career Scientist Symposium in *Future Foods*

Conferences/meetings:

- IUFoST/ EFFoST special sessions, November 2021
- IUFoST/International Science Council (ISC) invited session February 2021
- IUFoST Invited Dialogue for UN Food Systems Summit – July 2021
- IUFoST/IUNS two-day conference invited by the International Science Council (ISC), November 2021

Scientific Roundtable Discussions (SRDs):

The Scientific Roundtable Discussions SRDs began in late 2019, continued :

- SRD 6 – Food Processing Overview (December 2020)
- SRD 7 – Sustainable Food Packaging (February 2021)
- SRD 8 – Food Culture and Traditional Foods (March 2021)
- SRD 9 - Consumer Behaviour and Healthy Diets (July 2021) – organised by the Academy
- SRD 10 – Alternative Edible Proteins (September 2022)

The IUFoST Scientific Council initiated and supervised the production and distribution of the following Scientific Information Bulletins (SIBs) authored by invited experts and peer reviewed:

- Fresh Produce Decontamination: Adapting to a World of Sustainable Resources (October 2022)
- Bubbles in Food: Structure Creation out of thin air (April 2022)
- 3D Printing: Opportunities, Principles, Limitations and New Ways in Food Production (December 2021)
- Dynamic Transformation of Micro-and-nano Particle of Lipids in Gastrointestinal Tract: Pros and Cons for Potential Health Effects of Food Components (Lipid Particle Structural transformations in the Gi Trace and Potential Health Effects) (June 2021)
- Urban Food Production (Indoor Farming): Sustainable and Safer Indoor Farming of Produce Using New Technologies (May 2021)
- Food Processing: Opportunities and Challenges (November 2020)
- Partially Hydrogenated Oils (August 2020)
- Recent Advances of Artificial Intelligence Applications in Food (September 2020)

The Chair of the Scientific Council has been a member of the IUFoST Board and reported to the Board at each meeting regarding the scientific activities of the Union. On an ongoing basis the Scientific Council has provided advice and support to the General Secretariat on all issues related to the scientific output of the Union, organisation of working groups and all scientific activity.

Academy Executive Council Term Report and Fellows Election Results

Aman Wirakartakusumah, (Indonesia) President

Charles Aworh, (Nigeria) President Elect

Roger Clemens, (USA) Immediate Past President

Chin-Kun Wang, (Taiwan) Councillor

Jairo Romero, (Colombia) Councillor

IUFoST delivers on its mission to ‘Strengthen Global Food Science and Technology for Humanity’, guided by the Cape Town Declaration and the Declaration on the Eve of World Food Day 2021. During a time when the world is seeing further significant increases in

population and spikes in food prices, and food insecurity often driven by major climatic disturbances, health crises, as well as surges in energy prices, world and G20 leaders continue to stress the Sustainable Development Goals (SDGs) by 2030, with their aim to improve world food security, to make major reductions in world hunger and poverty, while investing in education and sustainability. In catching up with SDGs, The UN Secretary General prepared a for a Sustainable Food System Summit in September 2021.

IUFoST is playing its part by its efforts with its national scientific body members, its Academy Fellows and through developing productive partnerships internationally. IUFoST has focused its efforts in three key areas of Food Safety, Education and Food and Nutrition Security.

IAFoST, the 'Centre for Food Science Excellence', which is at the forefront of all IUFoST activities, welcomed the 12th Class of outstanding food scientists, technologists and engineers to the International Academy of Food Science and Technology in 2020. Academy Fellows also elected Professor Sir Charles Godfray, the 2020 IUFoST Distinguished Lecturer, into the roster of Fellows. The Fellows Induction Ceremony, led by Dr. Roger Clemens, although necessarily conducted by video, was nonetheless an outstanding and important occasion. For those wishing to see and hear the ceremony, please contact the IUFoST Secretariat for a copy of the video presentations. This induction ceremony will be replicated on the occasion of the IUFoST World Congress in Singapore, where both the 2020 Fellows and the 2022. Our congratulations are offered again to these **New Fellows** inducted in August 2020:

Cesarettin Alasalvar – Turkey; Richard Archer – New Zealand; Sheryl Barringer – USA; Bhandari Bhash – Australia; Jianshe Chen – China; Munir Cheryan – USA; Manjeet Chinnan – USA; Jeff Farber – Canada; Navam Hettiarachchy – USA; Afam I.O. Jideani – South Africa; Kiyoko Kubomura – Japan; Ken Lee – USA; Jiang Lianzhou – China; Chii-Cherng Liao – Taiwan; Gustavo Gutierrez-Lopez – Mexico; Ken Marsh – USA; Yasuki Matsumura – Japan; Cheikh Ndiaye – Senegal; Minh Nguyen – Australia; Keshavan Niranjan – United Kingdom; Indrawati Oey – New Zealand; Adebola Osinowo – Nigeria; Parachuri Rao – India; Ricardo Simpson – Chile; Rakesh Singh – USA; Kenneth Swartzel – USA; Carol Wallace – United Kingdom; Dorota Witrowa-Rajchert – Poland; Ahmed Yousef – USA.

The IUFoST Board of Directors, Scientific Council and Members of the Academy Council are elected by the General Assembly and Academy Fellows respectively. IUFoST continues to work together with its regional bodies, disciplinary and special interest groups to further its Mission. Members of IUFoST Working Groups are appointed by the IUFoST Board of Directors from among nominations received from IUFoST Adhering Bodies, Academy Fellows, and Committee members. More than 70 Fellow nominations were received, and we thank everyone who submitted nominations. There will be other opportunities for those not successful on this occasion. We welcome everyone's contributions to the mission of IUFoST.

The Inaugural Meeting of the Academy Council (2020-2022) was held on September 17, 2020, and the Academy Council met monthly subsequently. The first meeting set the tone for the activities of the Academy Council and five crucial documents were considered- Cape Town Declaration, Global Challenges and Critical Needs of Food Science and Technology, Top Five Issues from Survey of Fellows 2017, UN Food Systems Summit Background 2020, and IUFoST Interim Report May 2020. The need to be very aggressive in addressing critical issues in the next few years was stressed including the Covid-19 pandemic, curriculum development, strengthening adhering bodies, increasing contribution of Fellows to IUFoST activities starting with profiling of Academy Fellows and developing a simple database, strengthening academia-industry-government partnership, greater collaboration with CODEX Alimentarius

Commission and other professional bodies through International Science Council, and contributing to UN Food Systems Summit (UNFSS) in September, 2021. Highlights of the Academy Council activities for the period under review (September 2020-July 2021) include:

IAFoST Academy President, Dr. Aman Wirakartakusumah, is invited to be a member of UNFSS Scientific Committee and the Academy contributed to IUFOST's presentations including "Education and Training for Capacity Building" and "Food and Nutrition Security: Traditional Foods and Processes-Towards a Healthy Diets for All" that led to the recognition of IUFOST as a major partner in UNFSS.

A structured questionnaire was prepared and sent to Academy Fellows and a database of Fellows that identified their areas of specialization and major interests has been developed. Contribution to several IUFOST Scientific Roundtable Discussions (SRDs) and Scientific Information Bulletins (SIB).

A meeting of the Academy Executive Council was arranged with Dr. Purwiyatno Hariyadi, Vice Chairman of CODEX, who made a PowerPoint presentation on the Commission and its activities, followed by extensive discussion towards fostering greater collaboration between IUFOST and CODEX. This resulted in the formation of the IUFOST Codex Committee.

An IAFoST SRD on "Consumer Behaviour and Healthy Diets" was co-chaired by Academy President and Academy President-Elect on July 1, 2021. The panelists at the SRTD included Prof. Sir Charles Godfray of Oxford University, Dr. Pavinee Chinachoti, Chair, Food Innovation and Regulation Network, Thailand, Dr. Sebastiano Porretta, Senior Researcher, Italian Ministry of Economic Development, Italy, Dr. Caroline Smith DeWaal, EatSafe, GAIN, USA, and Dr. Petra Klassen Wigger, Global R&D Scientific Advisor Nutrition and Health, Nestle, Switzerland.

IUFOST/IAFoST UNFSS Science Days invited Dialogue was co-chaired by IUFOST President, Dr. Vish Prakash, and IAFoST President Dr. Aman Wirakartakusumah on July 5, 2021. There were 13 panelists, and many Fellows among them including Carol Wallace, Charles Aworh and Jairo Romero. Global partners such as Rural Outreach Africa, International Food Policy Research Institute, Institute of Catastrophic Loss Reduction, and other R&D organizations, academia, non-governmental organizations, public and private enterprises were among the contributors.

IAFoST President, Dr Aman Wirakartakusumah presented the role of science and technology Park during Science Days on the Food Industry and Start-ups at the UN Science Days symposium on July 9.

On November 16 and 17, 2021, IAFoST contributed speakers and sessions to the two-day joint webinar, the first ever conference between IUFOST and IUNS under the coordination by ISC, bridging between food science, technology, and nutrition.

The Academy Executive Council (AEC) began the Call for Nominations to the Academy, 2022, in November, followed by the ballot of 44 nominees for election in late December 2022. The election deadline of new Fellows for class 2022 induction was end of January 2022. Those elected to the Academy are listed below. We thank everyone who put forward nominations of outstanding scientists and we congratulate those elected who are recognised by their peers as the scientific leaders in our discipline. **The 13th Class of Fellows** will be inducted at the 21st World Congress of Food Science and Technology to be held in Singapore, 31 October to 3 November 2022. The followings are the names of fellows to inducted in Singapore:

Rotimi E. Aluko – Canada, Dong Uk Ahn – USA, Pamela Byrne – Ireland, Farid Chemat – France, Pavinee Chinachoti – Thailand, Sin Bin Chua – Singapore, Ratih Dewanti-Hariyadi – Indonesia, Jong-Bang Eun – Korea, Maria dL Francisco – Philippines, T. K. Srinavasa Gopal – India, Brian Guthrie – USA, Lara Hanna Wakim – Lebanon, Suzana Caetano de Silva Lannes – Brazil, Ning Li – China, Catherine (Chengchu) Liu – USA, Keshun Liu – USA, Antonio Lopez-Gomez – Spain, Gordon McBean – Canada, John McDermott – USA, Mitsutoshi Nakajima – Japan, Ian Noble – UK, Anne Doloras Perera – New Zealand, Cristina Sabliov – USA, Lateef Sanni – Nigeria, Cristina L. M. Silva – Portugal, Rimantas Venskutonis – Lithuania, and Qiang Wang – China.

On March 16, 2022, IAFoST held a SRD on SARS-CoV-2-induced Host Metabolic Reprogram (HMR) Global Management of COVID-19 & Post-Acute Sequelae of COVID-19 (PASC) and produced a white paper that was published in Journal of Food Bioactives Volume 18 (June 2022). During the 21st World Congress 2022 in Singapore, the Academy will hold a symposium on Future of Food: Innovation, sustainability and health entitled Nutritional Strategies for Post-Acute Sequelae of COVID-19 (PASC) Management, as a continuation of the Academy SRTD held in March 2022.

Education - Under-graduate Curricula, Approval Process and Global Recognition Working Group 1.1 Term Report

Sara Valdez-Martinez (Mexico) and Keshaven Niranjan (UK), Co-Chairs
Bhesh Bhandari (Australia)
Feri Kusnandar (Indonesia)
Elizabeth Arenas (Philippines)
Adeboye Adedola (Nigeria)

Background:

Education WG 1.1, in its current form, was set up in Oct 2020 with the following objectives:

1. Develop Core curricula guidelines and recognition/approval/accreditation
2. Review Curricula guidelines, update and make recommendations for improvement.
3. Review historic process for under-graduate programme assessments.
4. Formulate a decision on developing new mechanisms and/or continue under-graduate assessments which is based on the request from Adhering Bodies or Institutions.
5. Establish a timeline or procedure, depending on the availability of funding, for assessors to visit the institutions.
6. Where possible, coordinate the assessors' visits with regional or annual FS&T meetings sponsored by adhering bodies to maximise the utilization of essential resources.
7. Develop manual(s) for assessment and report writing as a reference for assessors to conduct assessment and evaluation.
8. Establish IUFOST international benchmarking for approvals.

WG Membership:

Co-Chairs: Sara Valdes Martinez (Mexico) and Keshavan Niranjan (UK) Members: Bhesh Bhandari (Australia) Feri Kusnandar (Indonesia) Elizabeth Arenas (Philippines) Adeboye Adedola (Nigeria)

Modus operandi: As mentioned above, the WG was set up in Oct 2020, but had its first meeting in December of that year which was a virtual event given that we were in the middle of the pandemic. The WG aspires to meet once every month and it did so initially to kick start its activities. Now that that processes and tasks are streamlined, the WG meets at least once every couple of months. The WG members have not yet met in-person but intend to do so shortly at the IUFOST Congress in Singapore.

Key Achievements:

- Consistent with the objectives of the WG, the main task undertaken was to set up the process for programme recognition.
- An on-line application form has been developed for universities to seek recognition for the first time or renew recognition accorded by IUFOST earlier
- An excel based scoring sheet has also been developed to facilitate programme evaluation in an objective and consistent manner, which can be used for programme evaluation remotely or by visiting the institution.
- The application and evaluation processes have been tested, validated, and rolled out.
- Under the newly installed process, the relevant programmes offered by the following universities have been recognised: University of British Columbia, Hong Kong Polytechnic and Monash University (Malaysia). The results have also been conveyed to the respective universities

Future work:

1. Fresh applications are being regularly received and a significant part of the activities of this WG is expected to be focused on programme evaluation and recognition.
2. In addition, the WG will also aim to engage with the national/regional adhering bodies in a more purposeful manner, and help promote trans-national educational programmes, particularly focusing on the links between food and health, diet and disease, and food and the environment. In order to achieve this, the WG needs to induct new members with expertise in the nutrition, health, and environmental impact assessment areas.
3. Finally, the WG will also review its own objectives and endeavour to make it more fit-for-purpose.

Education Emerging Issues and Key Focus Areas Working Group 1.2 Term Report

Cristina L.M. Silva (Portugal) Chair
Azis Sitanggang (Indonesia)
Ferruh Erdogan (Turkey)
Estela Nunes (Brazil)
Chelo Gonzalez (Spain)
Fátima Miller (Portugal)
Obadina Adewale (Nigeria)
Lu Biavi (China)

Meetings held (dates): 30 April 2021; 21 May 2021, 2 July 2021, 15 July 2021, 10 September 2021, 30 September 2021, 28 October 2021, 27 January 2022, 18 February 2022, 28 February 2022, 1 April 2022, 6 May 2022, 3 June 2022, 7 July 2022, 8 September 2022, 16 September 2022

1. Working Group Outline (including refinement/additions by WG members)

- Assess the 'Learning Platforms' in place and teaching methods to build educational and training capacity for current and future food systems.
- use networking, surveys, and other methods to determine the current state of education and how institutions have responded (or are responding) to disruptions such as the COVID-19 pandemic.
- Identify emerging issues for academia.
- Identify potential actions to be taken to ensure capacity building.

- Prepare a comprehensive listing of the approaches to learning used in various training programmes at the primary, secondary, college and university levels.
- Working Group WG1.2 may add to these objectives and plans while noting the outline of activity for other Education Working Groups to ensure no overlap

2. Overview of activities during this reporting period

Since April 2021, the WG1.2 activities were structured into three main topics:

Topic 1: Teaching Methods and Methodologies (lead by Chelo Gonzalez)

Topic 2: Current Key Topics needed in Food Studies Curricula (lead by Azis Boing Sitanggang)

Topic 3: Organization of two sessions for IUFoST 2022 in Singapore (lead by Cristina Silva)

The following activities were developed:

Topic 1:

- Organization of the webinar on **“Student motivation and engagement in synchronous online teaching”** identification of potential speakers, timetable, and program activities, webinar was held on Thursday, June 17th, 2021.
- World survey to students and teachers on: **“Remote Classes on Food Studies”**: survey was developed in 2021 and will be worldwide disseminated at Session 1 of IUFoST 2022

Topic 2:

- Organization of the webinar on **“Future Development of Food Science Education”** identification of potential speakers, timetable, and program activities, webinar was held on Thursday, October 21st, 2021.
- World survey to teachers, students, and employees on: **“Current Food Science & Technology and Food Engineering (FST&E) professional activities and related education”**: survey was developed in 2022 and will be worldwide disseminated at Session 2 of IUFoST 2022

Topic 3:

- Organization of two sessions for IUFoST 2022 in Singapore:
 Session 1 : **WG 1.2 Education – Lessons for the Future: a Post-Pandemic New Context for Food Studies Teaching Methods** (BR8); 1st November at 10:30 GMT+8
 Session 2: **WG 1.2 Education – Emerging Issues on Education and Key Focus Areas** (BR8); 2nd November at 15:30 GMT+8

3. Priorities identified and targets established to date

Topic 1: Teaching Methods and Methodologies (lead by Chelo Gonzalez)

- To support academia (teachers and students) during the hybrid teaching classes.

Topic 2: Current Key Topics needed in Food Studies Curricula (lead by Azis Boing Sitanggang)

- Identify emerging issues/key topic that may be introduced or inserted in Food Science and Technology Curricula.

Topic 3: Organization of two sessions for IUFoST 2022 in Singapore (lead by Cristina Silva)

- Disseminate current activities and carry out two round tables on the two topics to further identify future activities.

4. Name of WG correspondent (s) for reports, internal news, IUFoST E-news, social media if possible

Topic 1: Teaching Methods and Methodologies (lead by Chelo Gonzalez)

- Webinar organization: Chelo Gonzalez
- Survey: Estela Nunes & Cristina L.M. Silva

Topic 2: Current Key Topics needed in Food Studies Curricula (lead by Azis Boing Sitanggang)

- Azis Boing Sitanggang & Fátima Miller
- Survey: Cristina Silva & Sam Saguy

Topic 3: Organization of two sessions for IUFoST 2022 in Singapore (lead by Cristina Silva)

Food Safety Scientific Communications Working Group 2.1 Term Report

Chair: Carol Wallace (UK)

Members: Ratih Dewanti-Hariyadi (Indonesia)

Afam Jideani (South Africa)

Cesar Ozuna (Mexico)

Jay Kant Yadav (India)

The working group was formed as a new group and met for the first time in December 2020. Preliminary Objectives were related to scientific communication of food safety issues and the group agreed to:

- Review communication vehicles available/needed to deliver food safety messages to all audiences
- Examine most effective methods for various markets – i.e., between scientists, policy makers at national/regional levels/ inter-disciplinary, industry and consumer
- Use of IUFoST to promote awareness of Food Safety issues and the importance of Food Science and Technology from ‘farm to consumer’
- Target publications, using Scientific Information bulletins, social media to disseminate scientific information on food safety widely

In the first half of 2021 it became evident that a number of the original group members including the Vice Chair were unable to prioritise group meetings and agendas in their work schedules and by the end of the first year it was clear that the working group was reliant on a small core group of members who were willing to engage (Carol Wallace, Ratih Dewanti-Haryadi, Afam Jideani, César Ozuna and Jay Kant Yadav).

Nevertheless, by focussing on key areas of impact the group has been able to make some progress with impactful food safety communication. Focus areas have been communicating for the annual World Food Safety Day and sharing food safety expertise at IUFoST and related international events. This has included:

- World Food Safety Day 2021 – A group statement, *Safe food now for a healthy tomorrow*, was drafted and released via the IUFoST Website.

- World Food Safety Day 2022 – A group statement supporting the calls to action under the campaign *Safer food, better health* was prepared in English and translated into French, Arabic, Spanish, Indonesian, Hindi and Igbo. Working group members (Carol Wallace, (UK), Ratih Dewanti-Hariyadi (Indonesia), Afam Jideani (South Africa), César Ozuna (Mexico), Jay Kant Yadav (India) and special contributors Amine Kassouf and Victoria Jideani recorded video or audio versions of the statement, and all were released on World Food Safety Day via the IUFoST Website.
- United Nations Food Systems Summit July 2021, Official Side Event organised by IUFoST 5th July 2021, Global Food Systems Governance – the Role of Food Science and Technology. Carol Wallace acted as Panellist with recorded presentation.
- IUFoST and IUNS Joint Virtual Conference, November 2021: Carol Wallace and Ratih Dewanti-Hariyadi provided Invited Presentations on *Food Safety Culture, an essential ingredient for safe and healthy diets* and *Developing Microbiological Criteria to Improve Food Safety: lessons learned from Indonesia*, respectively.

Moving forward, it will be important to add to the working group membership so that we have enough members with the necessary skills and experience to take the agenda forward. There is a need for a Co-chair position. It is proposed that a call for members be launched at the 2022 World Congress and the new membership be involved in reviewing, amending/extending and prioritising the work agenda of the group.

Food Safety Working Group on Emerging Issues, Key Focus Areas and Global Research Interests Term Report

Charles Aworh, (Nigeria) Chair
Jong-Bang Eun (South Korea)
Srinivasa Gopal, (India)
Conrad Perera (New Zealand)
Kazutaka Yamamoto (Japan)
Chen Zheng (China)

The objectives of IUFoST Working Group (WG 2.2) are related to Emerging Issues, Key Focus Areas and Global Research Interests in the area of Food Safety.

2. Membership

Charles Aworh (Nigeria) Chair, Conrad Perera (New Zealand), Don Mercer (Canada), Srinivasa Gopal (India), Kazutaka Yamamoto (Japan), Jong-Bang Eun (South Korea) and Chen Zheng (China).

3. Meetings

The inaugural meeting was held on 21st December 2020 and thereafter the Group met invariably every 4th Wednesday of the month with IUFoST President, Vish Prakash, attending twice.

4. Summary of Activities and Accomplishments

- Contributed to the establishment of the IUFoST Codex Committee to strengthen the contributions of IUFoST, as an observer organization, in supporting the Codex mandate.
- Supported IUFoST's successful participation in the United Nations Food Systems Summit in September 2021 and contributed to IUFoST Declaration on the Eve of World Food Safety Day on 16th October 2021 that articulated IUFoST Plan of Action in mobilizing resources and working with partners to achieve the SDGs including no poverty, zero hunger and good health and well-being.

- Contributed to International Science Council sponsored joint IUFOST-IUNS (International Union of Nutritional Sciences) Conference of 16-17 November 2021 on “Power of Food Science and Technology and Nutrition for Sustainable Planet Earth” that reinforced the benefits of close partnership in addressing global issues in food and nutrition.
- Proposed, arranged, and facilitated a draft Scientific Information Bulletin (SIB) on “Antimicrobial Resistance: A Food Safety Concern” by Martin Cormican and Dearbhaile Morris of the University of Ireland, Galway which is currently being evaluated.
- Proposed the development of IUFOST-sponsored educational videos on safe food handling and preservation practices for low-and middle-income countries (LMICs) in areas such as post-harvest handling of fresh fruits and vegetables; post-slaughter handling of meat; fresh fish handling practices; sun drying; and home canning.
- Prepared brief write-ups on water & food hygiene, AMR, digital technology & food safety.
- Served as jury for IUFOST Singapore 21st World Food Congress competitions.

5. New Terms of Reference

- (i) Advise on Emerging Issues in Food Safety, the areas of key focus needed by IUFOST and its members and provide scientific dissemination of areas of Global Research Interests
- (ii) Elaborate on focus areas, technology, research and the benefits to human health, nutrition, and wellbeing
- (iii) Identify key focus areas and global research interests to encourage networking and collaboration
- (iv) Identify strategies for alerting and predicting (when possible) food safety issues and potential food hazards in different regions of the world
- (v) Examine methods of interacting with academia, industry, and government, and interdisciplinary approaches to promote food safety issues and to provide the scientific underpinning to all issues to all audiences
- (vi) Provide strategies for furthering IUFOST’s mission related to Food Safety
- (vii) Organize at least two scientific roundtable discussions annually.

Food and Nutrition Security Working Group 3.2 Term Report

P.G. Rao (India) and Cheikh Ndiaye (Senegal) Co-chairs
 John McDermott (USA)
 Yunbo Lo (China)
 Mitsutoshi Nakajima (Japan)
 Anne Perera (New Zealand)
 Lara Hanna-Wakim

Report of Working Group 3.2 from its inception February 2021.

1. Following the UNFSS, the working group continued updating actions points from the World Food Day forum and the world food day celebrations with a consistent plan to share all outcomes of both events at national through exchange of information studying and matching them with the topics and organize a much broader session at the forthcoming IUFOST Congress in Singapore. This opportunity to study policies, identify gaps and propose improvements will help find what technological solutions are relevant and good for implementation.
2. With the linkage attempts UNFSS between Food Systems with SDG's and the role of IUFOST through national, regional Adhering Bodies and the Food and Nutrition Security Working Group would play there was a need to review the Terms of reference of the later to fully cover in delivering its mandate and mission as Food and Nutrition security

paradigm is drastically changing over time as sustainability and inclusion are also as important as resilience. Through wide consultation among members and the secretariat the main additions were review of progress made in following up plans, identification of national and regional proposals and opportunities for better inter sectoral cooperation , in addition to elaboration and focus, support areas of research and benefits, in addition to mechanisms of interactions to include strategies and for resource mobilization and before last consolidate areas of interdisciplinary in order to strengthen capabilities of national officials and lastly exchange ideas on policies and programs implementation and coordination and assist in the monitoring and evaluation.

3. The working group assisted to heighten the profile of IUFoST and IAFoST by coopting more fellows, participating in more dissemination and exchange of information fora and targeted the selected following topics to be championed by Fellows, members, and associates to complement the earlier topics championed prior to the UNFSS and the flow of information emanating from the outcome of the Summit as a base for future actions. The areas are Interaction with Academic, Research, Industry and Govt, Food Safety Policy, Food Engineering, Food Waste minimization and challenges that require Food Science and Technology. This exercise serves the purpose of identification of Global Research interests and strategies by focusing on these four subjects.
4. It is envisaged that more focus and actions in these subjects will emerge after the Congress in late October early November 2022, under the topic Empowerment of Sustainable Food Systems through Food and Nutrition Security with three presentations to achieve Sustainable Development Goals by 2030 Science Educational Interventions, Food Quality and Safety Policies and Development of 3D chef machine systems.

The group appreciates the contribution from its members and the logistical support for the secretariat making its input possible.

IUFoST Global Outreach/Industry Relations (GOIR) Working Group Term Report (2021-2022)

Chair: Pavinee Chinachoti (Thailand)
Richard Khaw (Singapore)
Bobby Krishna (Dubai)
Yew Ming Koh (Malaysia)
Jianshe Chen (China)
Maduebibisi Iwe (Nigeria)

Summary of activities

To identify immediate goal and objectives that matters most, on May 12th, 2021, we invited Dr. Peter Lillford and Dr. Pingfan Rao to provide their perspectives on the WG directions at the first meeting. According to their view and fruitful discussion, it is clear that the WG shall rebuild, encourage, and strengthen the relationship and interaction between IUFoST and food industry. This goal could be achieved by offering adhering bodies and others within the IUFoST the international policy, scientific interactions and supports through roundtable discussion, educational webinars, and policy documents. Following up from this meeting, the WG has finalized our vision and mission.

Vision: To assure **FOOD SECURITY** through **COMMUNICATION** and **ENGAGEMENT** among academic, food industry and adhering bodies

Mission: Encourage close interaction among IUFoST and food industry

To kick-off our activities, the WG organized our 1st seminar series on the topic of “Nutritional and Health Claims of Food Products”. This is due to a growing trend of functional food and ingredient industry. However, information regarding functional and health claim regulation is still limited and deviated across regions. The first session aimed at introducing definition of functional foods as well as the current regulatory status of functional health claims in ASEAN regions. Three invited speakers include Pauline Chan (Director Scientific Programs, ILSI SEA Regional Office), Dr. Tee E-Siong (President, Nutrition Society of Malaysia) and Malee Jirawongsy (Advisor to Division of Innovative Health Products and Services, Thai FDA). This session took place as a pre-conference of Food Innovation and Asia Conference 2022, Thailand, through an online platform on June 15th, 2022. The seminar was joined by a total of 97 attendees (59 via Zoom, 38 via Facebook Live) from academia, local and international food personnel, and governmental officers. The next session will be at 21st IUFoST World Congress, Singapore. The speaker panel, including Dr. Tee E-Siong, Pauline Chen and Dr. Pavinee Chinachoti, will continue their discussion with the extended topic on how possible to harmonize the health claim regulation among the ASEAN regions. In addition, food with functional claim (FFC) will be addressed by Dr. Chinachoti.

Additional tentative topics and activities that will be of interest for the food industry at the local and regional scale of each committee have been listed by the Chair and the committee members. The WG aims to incorporate our activities with local conferences or workshops to attract attention from local participants as well as to efficiently control the budget.

IUFoST CODATA Working Group Term Report

Members: Mariusz Piskula (Poland)
Chin-Kun Wang (Taiwan)
Pingfan Rao (China)

The International Science Council was established in July 2018 and invited IUFoST to engage in the activity of its Committee on Data for Science and Technology (CODATA). Initially, Dr. Pingfan Rao and Dr. Mariusz Piskula were the IUFoST nominees to work with CODATA. Later, they become ‘Ambassadors’ or points of contact to engage with the Digital Representation of Units of Measure (DRUM) initiative as well CODATA Delegates.

On 1st October 2020 they participated in the *DRUM and International Scientific Unions/Associations Briefing Session*, where they received detailed information on expected activities.

On 27th November 2020 IUFOST Delegates participated in *The International FAIR Convergence Symposium*. In the closing plenary session of this Symposium a call for sessions at the SciDataCon 2021, (part of the *International Data Week 2021*) was announced to be held both virtually and onsite in Seoul, the Republic of Korea, on 15th-16th November 2021. Proposals for sessions were invited with the deadline of 31st March 2021. From 1st December 2020 Dr. Chin-Kun Wang replaced Dr. Pingfan Rao as CODATA Delegate. At the suggestion of the Scientific Council, Dr. John Rumble (Academy Fellow previously involved in CODATA) was invited to help Chin-Kun Wang and Mariusz Piskula to prepare the proposal for the Session at the SciDataCon 2021.

The IUFoST Delegates were invited to extraordinary virtual CODATA General Assembly on 15th December 2020 to review the outcome of the vote on the constitutional changes and update the delegates on recent developments and CODATA activities. <https://codata.org/events/general-assembly/virtual-general-assembly-december-2020/>

The IUFoST Ambassadors to the CODATA DRUM Task Group participated also in the virtual workshop hosted by the International Bureau of Weights and Measures (BIPM) entitled "[The International System of Units \(SI\) in FAIR Digital Data](#)," which was held on 22nd -26th February 2021 and focused on more general challenges of data interoperability arising within units of measure.

As mentioned above, Dr. John Rumble, Dr. Chin-Kun Wang and Dr. Mariusz Piskula prepared and submitted the Session proposal for the SciDataCon 2021, part of the *International Data Week 2021: Data to Improve our World*. Due to the pandemic situation the conference was rescheduled to 2022. Fortunately, our SciDataCon Session proposal under the title: *Using Big Data in Improving Human Health through Food Science and Technology* was accepted.

Synopsis for the session

IUoST session (308) in SciDataCon 2022:

"Using big data in improving human health through food science and technology" was held on 23rd June 5:00-6:30 UTC.

Contents:

1. 1. Dr. Carsten Johannes Carlberg (Germany)

ERA chair holder at the Polish Academy of Sciences in Olsztyn, Poland

Topic: Omics technologies in food and health

1. 2. Chin-Kun Wang (Taiwan)

Chung Shan Medical University, Distinguished professor, and former president. Fellow of IAFoST & ISNFF. Executive councillor of IAFoST

Topic: Precision nutrition and food science

1. 3. Jun Nishihira (Japan)

Department of Medical Management and Informatics, Hokkaido Information University, currently President.

Topic: Relationship between dietary and lifestyle habits, Health information and genetic background

1. 4. Yong Sang Song (Korea)

Professor, Dept. of Obstetrics and Gynecology, Seoul National University College of Medicine

Topic: Precision cancer medicine in ovarian cancer

1. 5. Dr. Adriano Costa de Camargo (Chile)

Assistant Professor at the University of Chile, a food scientist

Topic: Much more than rice and beans: open data in food science and nutrition in Brazil and Chile.

Short Session summary:

1. Dr. Carsten Johannes Carlberg talked about the relationship between health issues and genomic and epigenetic heterogeneity of individuals. This showed a great potential of food science and technology after using the big data on human health.

2. Dr. Chin-Kun Wang mentioned the use of big data bank on disease prevention, medicinal therapy, risk analysis, food consumption required and the role of food industry.

3. Dr. Jun Nishihira focused on the big data setup and the involvement of all experts. Available information was provided by IT and AI system.

4. Dr. Yong Sang Song presented the risk of ovarian cancer by using the analysis of genome and microbiota. Functional food bio actives were available for the intervention.

5. Dr. Adriano Costa de Camargo introduced the big data of food science and technology in Southern America, especially in the COVID-19 pandemic period.

This session successfully connects the big data and human health promotion through food science and technology. Personalized and precision concept could play important roles in the future food science and technology.

IUFoST Codex Committee Term Report

Samuel Godefroy (Canada)
Charles Aworh (Nigeria)
Pamela Byrne (Ireland)
Pur Hariyadi (Indonesia)
Nik Daud (Malaysia)
Kazutaka Yamamoto (Japan)
Jairo Romero (Colombia)
Lara Hanna Wakim (Lebanon)
Amine Kassouf (ECS)

The Codex Committee of IUFoST was formed in mid 2021. For the 44th Session of the Codex Alimentarius Commission (CAC44) in November 2021, the document – *IUFoST Providing Food Science and Technology Expertise and Solutions – Supporting the CODEX Mandate* – was prepared by the IUFoST Codex Committee. The document raises the IUFoST profile, which is the only non-governmental organisation recognised by Codex to represent the views of the international food science and technology community. The document reminds Codex and its member states that IUFoST is a key scientific resource to promote the goals of Codex to ensure food safety and to promote trade in food. The text of the IUFoST Codex document for CAC44 is available here. (<https://www.iufost.org/resources/iufost-codex-documents>).

Since then, members of the Codex Committee have been involved with numerous codex meetings and most recently reported on the July session of the Codex Committee on Pesticide Residues (CCPR53).

The 53rd session of the Codex Committee on Pesticide Residues (CCPR53) was organized virtually between the 4th and 8th of July 2022. The meeting gathered around 400 delegates from member states and observer organizations.

Excerpts from the report of the IUFoST Codex delegation which included representatives from the Global Food Regulatory Science Society (GFoRSS), acting as the disciplinary organization for IUFoST on food regulatory science are included here.

The IUFoST Codex Delegation attending this meeting consisted of :

- Prof. Samuel Godefroy, IUFoST Codex Committee
- Dr. Amine Kassouf, IUFoST Codex Committee
- Dr. Karima Zouine, GFoRSS member /expert
- Dr. Ruba Goussous, GFoRSS / Expert
- Dr. Wiem Guissouma, GFoRSS / Expert

This report is structured to offer comments on the main agenda items discussed, with the aim to identify key conclusions of CCPR53 and their potential impacts on the food science and technology community, in particular the community of developing countries.

Summary of Key points of discussion

The discussions focused mainly on the fact that the use of CRMs is equally important for the quality control of analysis for all chemicals (contaminants and residues). In that sense, members suggested coordinating with CCMAS on this matter.

Several countries, particularly Japan and Egypt, specified that the analytical value for CRMs is certified only when, for instance, the storage period and conditions are respected as per the certification conditions. They stressed out that the analytical value cannot be considered as certified once the storage period is surpassed. In this context, they mentioned that using expired CRMs is considered non-compliant to ISO 17025 requirements.

The chair of the EWG emphasized that all relevant international protocols, standards, and guidelines would be considered during the development of this work.

The Codex Committee on Pesticide Residues (CCPR) could be considered as one of the most important technical Codex committees for low-income countries, given the important provisions that tend to serve as a guide for pesticide regulatory requirements of developing countries.

The current move of CCPR to develop guidance related to pesticide analysis using LC-MS/MS techniques and discussions related to Certified Reference Materials and other requirements represent areas where the IUFOST scientific community may consider to be engaged, with a possible offer:

- To continue to contribute to electronic WGs under way
- To support further training and capacity development efforts in these areas.

The IUFOST science community may also play a role to support countries in developing approaches enabling to adopt and /or adapt Codex Standards for pesticides to their own jurisdictions.

Early Career Scientists (ECS) Administrative Council Term Report (Renamed College of Early Career Scientists)

George Ooko (Kenya)
Chibuike Udenigwe (Canada)
Emmanuel Hatzakis (USA)
Elizabeth Arenas (Philippines)
Fatima Miller (Portugal)

The Administrative Council decided that a major area of focus would be placed on an Early Career Scientists Symposium to highlight work of the ECS This symposium was held on 15 and 16 September 2021, under the title of **Food Innovations for the Sustainable Development Goals**. The aim of the symposium was to share the exciting research accomplishments of early career and young scientists as well as foster important discussions on the contributions of food science innovations in meeting the Zero Hunger and other relevant SDGs.

First International Early Career Scientists Symposium of IUFOST/IAFOST

– Food Innovations for the Sustainable Development Goals

The two sessions of 2.5 hours on 15 and 16 September encompassed four ECS plenaries per day and a total of nine (9) Young Scientist (PhD candidates) Research Pitches chosen from submissions for Young Scientists Research Pitch Competition. The Early Career Scientist Plenary speakers Anet Jambrak (Croatia), Azis Sitanggang (Indonesia), Zhilong Yu (Canada), Adriano Costa de Camargo (Chile), Matthew Moore (USA), Anya Ashim (Tonna) South Africa, Amanda Naaum (Canada) and Jay Kant Yadav (India) set the highest standards as they reported on the innovative research they are undertaking related to the Sustainable Development Goals.

The 'Pitch' competition finalists (9) highlighted innovative research findings in the following sub-themes: Processing for food preservation; Nutritional & health enhancements; Food packaging; Efficient resource use.

The top Pitch presentations were recognised at the Symposium closing and the international jury (Peter Lillford, Aman Wirakartakusumah, Suzana Lannes, Sze Leong and Artur Wiktor) was thanked for its work. The reviewers of all pitch abstracts were also thanked including Chin-Kun Wang, Suzana Lannes, and Pingfan Rao, as well as ECS Executive Council colleagues..

Winners of the PhD Research Pitch Competition:

- ⇒ **1st Prize: Zhitong Zhou, University of Guelph**, Canada. *Beyond Burger versus Beef Burger – Does Food Structure Alter Lipid Digestion?*
- ⇒ **2nd Prize: Jerrell Felim, National Taiwan Ocean University**. *Utilization of Jellyfish to Conserve Ocean Sustainability and as a Functional Food for Osteoarthritis*
- ⇒ **3rd Prize: Anjali Vithanage, University of Kelaniya**, Sri Lanka. *Effect of edible oil-mediated intestinal absorption of chlorogenic acid on antioxidant capacity in Wistar rats*

Subsequently the Council concerned itself with its internal governance structure and this resulted in the document presented to the General Assembly with the renamed College of Early Career Scientists. There is a session at the IUFOST World Congress prepared by the ECS Council that is focussed on young scientists.

New IUFOST Disciplinary Grouping Global Food Regulatory Science Society (GFORSS)

The GFORSS has been added to the list of IUFOST global specialist advisors. The Society aims to promote the development of competencies, know-how and knowledge including scientific and policy analysis, underpinning food regulatory decisions and in support of the development and implementation of Food control systems. Founding members are from multiple countries: Australia, Canada, Chile, China, Egypt, India, Ireland, Lebanon, Morocco, Saudi Arabia, Tunisia, and from the United Nations International Development Organisation (UNIDO).



As one of its first actions, GFORSS has launched a series of food safety capacity building webinars. To kick off the series, GFORSS organised two virtual events dedicated to food contact material assessment and regulatory management. *Food Contact Materials – International Regulatory Framework and Food Contact Materials Recycling – Regulations and Guidance*.

IUFoST Adhering Body Supported Events

INNOVA 10, International Symposium of Food Innovation and Development

27 September - 1 October 2021, Uruguay.

Foundation Latitud held Innova 2021, the *10th International Symposium of Food Innovation and Development* in September. INNOVA is recognised as a major regional reference event about science and technology of food and has been held biennially since 2004.

The conference offered oral and e-posters presentation with current topics and impact worldwide, with recognized experts in their field, providing a week to share with colleagues from different parts of the world in an exciting academic and professional environment. Speakers around the conference themes of Food Chain Supply – New Approaches; Food Waste and Reutilization; Food innovation through biotechnology; Innovation in food Engineering and Functional foods – new ingredients sources included Alexander Mathys, Gustavo Gutierrez, Hugo de Vries and Rotimi Aluko.

The Chinese Institute of Food Science and Technology (CIFST) and IUFoST collaborated again for the *11th International Forum on Food Safety and Health*, held from 27-29 September 2021 and again in June 2022. Among the distinguished speakers were Gordon McBean, Vish Prakash, Pingfan Rao, Donald Mercer, Sebastiano Porretta and Mitsutoshi Nakajima. Representatives of six Governmental departments were present and more than 500 attended from industry and academy. Online viewers numbered more than 1.06 million. Several Forum innovations over the past years include the Entrepreneurs Dialogue Summit under the theme of Changes and Innovation in the new era of safety and health. The CIFST Food Nutrition and Healthy Society compiled and released the 'Consensus on Dairy Products and Childhood Nutrition at this year's Forum.

Publication Special Issues underway and additional IUFoST Resources now available- for the record

- ⇒ Food Control Special Issue – ***Innovative and Sustainable Development with Traditional Foods and Food Culture***. Guest Editors Sebastiano Porretta and Lijing Ke. Food Control Editor in Chief – Ralf Greiner.
- ⇒ Future Foods Special Issue – ***Food Innovations for the Sustainable Development Goals***. Papers from Early Career Scientists and PhD Students. Guest Editors Elizabeth Arenas and Chibuikwe Udenigwe. Future Foods Editor in Chief, Bhesh Bhandari.
- ⇒ Science of Food – Article by Gordon McBean on interdisciplinary collaboration and IUFoST
- ⇒ IUFoST Codex Document – ***IUFoST Providing Food Science and Technology Expertise and Solutions – Supporting the Codex Mandate*** (submitted and accepted by Codex at their 44th Session in November). To read and/or distribute further:
<https://www.iufost.org/sites/default/files/IUFoST%20CRD%20related%20to%20Agenda%20Item%208.1.pdf>
- ⇒ Meeting report, Journal of Food Bioactives - ***The Power of Food Science and Technology and Nutrition for Sustainable Planet Health: Food Processing Saves Lives***. DOI: <https://doi.org/10.31665/JFB.2021.16286>
- ⇒ IUFoST Scientific Information Bulletins <https://www.iufost.org/scientific-council/scientific-information-bulletins-sibs>

IUFoST Lifetime Achievement Award Winners

IUFoST called for nominations and announced the outcome of the IUFoST 2021 Lifetime Achievement Awards during this term. Two global leaders are sharing this year's Lifetime Achievement Award. Dr. Ruth Oniang'o and Dr. Delia Rodriguez-Amaya are the joint winners of this award because of their outstanding work and scientific achievement over a lifetime of service and excellence. Both will be addressing the delegates to the IUFoST 21st World Congress of Food Science and Technology in Singapore.

IUFoST Young Researcher Award Winner

From among global nominations, The Young Researcher Award for 2021 was awarded to Dr. Dominic Agyei of the University of Otago in Dunedin, New Zealand. Dr. Agyei will be recognised at the World Congress and is speaking in one of the scientific sessions on the subject of his expertise.

IUFoST/IAFoST Governance 2022-2024

The Call for Nominations for election to the IUFoST Board of Director and Scientific Council, was overseen by the IUFoST Nominations and Elections Committee and sent to IUFoST Delegates in late May 2022 and with nominations open until 22 July 2022.

By-Laws Excerpt:

The Call for Nominations for the Board of Directors shall be sent to all Adhering Bodies and for the Scientific Council to all members of the Academy according to appropriate practice with oversight from the Nominations and Elections Committee. For positions for which the number of candidates exceeds the number of positions, a ballot containing the full list of candidates and statements outlining their credentials shall be circulated to delegates of Adhering Bodies in due time before each General Assembly.

The Nominations for all elections, Academy Executive Council, Scientific Council and Board of Directors produced a roster of excellent nominees, affirmed by their Adhering Bodies, vetted by the Nominations and Elections Committee, and who fulfil the need as well for appropriate geographical representation. The results are noted here.

[IUFoST Board of Directors, Term 2022- 2024](#)

With short introductions for new members of the 12- member Board:

President, **Dr. Aman Wirakartakusumah** (Indonesia)

Past President, **Dr. Vish Prakash** (India)

Incoming President Elect, **Dr. Samuel Godefroy** (Canada)

Samuel Godefroy is the former Director General of Health Canada's Food Directorate, Canada's Food Standard Setting body and a former Vice Chair of the FAO/WHO Codex Alimentarius Commission. Professor. Godefroy assumed senior food regulatory positions at the executive level with Health Canada for over 15 years. Prof. Godefroy is the founder and the current president of the Global Food Regulatory Science Society, a non-for-profit organization, aiming to promote food regulatory science disciplines at the international level. Samuel is currently Full Professor of Food Risk Analysis and Regulatory Policies in the Department of Food Science, Faculty of Agriculture and Food Sciences, Université Laval, Québec, QC, Canada and is leading the development of a [Food Risk Analysis and Regulatory Excellence Platform \(PARERA\)](#), hosted by the Institute of Nutrition and Functional Foods (INAF) of Université Laval. Prof. Godefroy currently serves as a senior food science and regulatory expert on a number of advisory bodies and committees domestically and internationally, including on the International Advisory Committee of the China Centre for Food Safety Risk Assessment (CFSA). Prof. Godefroy also serves as a strategic and operational advisor to international food safety capacity building initiatives focused on regulatory enhancement, implemented by the United Nations Industrial Development Organization (UNIDO) and the Food and Agriculture Organization of the United Nations (FAO). He is a Fellow of IAFoST and co-chair of the IUFoST Codex Committee.

Dr. Pavinee Chinachoti (Thailand)

Professor PAVINEE CHINACHOTI, Ph.D. graduated in Food Science, University of Illinois, Urbana-Champaign, USA. She joined the Department of Food Science at Univ. of Massachusetts in 1986. Her core strengths are in food shelf-life extension, marine oils, pet food, starch and bakery technology, health, and functional foods.

She has over 80 papers published in peer-reviewed journals, over 100 abstracts and presentations, about 30 book chapters and proceedings. She joined Hill's Pet Nutrition, Inc. Over 6 years she produced 6 patents, several product launch supports and Colgate's Chairman You Can Make a Difference Award (global award). She received Outstanding Professor award from NE IFT (Institute of Food Technologist, Eastern Conference), Outstanding Advisor Award (College of Food and Natural Resources, Univ. of Massachusetts), etc.

She was Chemistry Leader in the Global Innovation Incubator (GII) of Thai Union Frozen Products. She was the past President of Food Science and Technology Association of Thailand (FoSTAT).

She is acting as Advisory board of FoSTAT, Chair of Food Innovation and Regulation Network (FIRN) project and joining the National Food and agriculture committee of many government agencies in Thailand. She is member of Fellows of IAFoST 2022 and chair of GOIR working group of IUFoST.

Dr. Alejandra Medrano (Uruguay)

Dr. Alejandra Medrano is a Research Scientist and Professor in the Chemistry Faculty, Universidad de la República (Udelar) Uruguay.

She is a researcher for the National Agency for Research and Innovation - ANII and for the Basic Sciences Development Program (PEDECIBA). She received her PhD in Chemistry from Udelar in 2009. Since 2012, she has been the Head of Laboratory of Bioactivity and Nanotechnology of Food at the Department of Food Science and Technology, Udelar.

She has published more than 100 articles in indexed journals and communications in national/international conferences and she has also published 4 book chapters. She has been a main researcher in more than 20 projects funded by different agencies and industries.

As a professor of the Udelar, she is a member of the commission of the Food Science and Technology postgraduate. Participating in 5 undergraduate and 6 postgraduate courses. In the last ten years, she has supervised more than 15 end-of-Degree Projects and 5 post-graduate Theses.

She is currently the President of the Latin-American and Caribbean Association of Food Science and Technology (ALACCTA) 2020-2022 and representative of Latin-American AOAC. Organizing more than 20 scientific events online and 5 Congress in Uruguay of the Food Science and Technology and Food Engineering.

Dr. Misutoshi Nakajima (Japan)

Mitsutoshi Nakajima received his PhD in Chemical Engineering from the University of Tokyo, Japan, in 1982. He worked on chemical engineering projects in Kyushu University (1981-1985), moved to National Food Research Institute (1985-2007) and University of Tsukuba (2007-present), specializing food science and engineering. He has been also involved in Alliance on Research for the Mediterranean and North Africa (ARENA) since 2007, in which he was ARENA Director for 6 years. He has developed microchannel emulsification technology for monosized droplets production, and the laboratory scale equipment is commercially available. He has published about 450 original scientific articles and received several awards from academic societies and Minister of MEXT, Japan. Currently he is Specially Appointed Professor, University of Tsukuba, Japan. He also contributes as Project Manager of Moonshot Agriculture, Forestry and Fisheries Research and Development Project entitled "Development of Innovative Food Solution for Simultaneous Food Loss Reduction and QoL Improvement".

Dr. Cheikh Ndiaye (Senegal)

Dr Ndiaye as the first Fellow of the UNU received a PhD and Advanced Certificate for Research and Development in Food Technology and Post-Harvest Conservation and Processing with management and marketing skills. Fluent in French, English and Spanish. He started his career at the Institute of Food Technology in Senegal as chairman and project coordinator food packaging and quality control, acted in several management positions in Research and Development and taught at the University of Dakar and at the ITC /UN -Helsinki School of Economics -Program Development Cooperation in food safety, food sanitation, food quality, fermentation industries and conservation of processed foods and beverages. After a long and successful collaboration became consultant and inter regional coordinator of activities in food, biotechnology and nutrition of the joint partners UN/ECA-ARCT-WHO, UNU/AAU-EEC, UNCTAD, UNDP, UNIDO and various sub regional organizations.

To assist FAO, organize the ICN and the WFS ..., Dr Ndiaye joined as a Senior Regional Food Policy and Nutrition and served as coordinator of various technical programs such as the Codex Alimentarius and Infoods /Afro Foods coupled with managerial and technical support for management of the FAO Regional Office for Africa. Group Leader, Technical Team Coordinator, Overall Technical Teams Coordinator and Member of the Regional Management Team.

Since 2010, in collaboration and support of colleagues and partners organized the Food Information Council for Africa /the African Food and Agriculture Skills Development center /and more recently after being associated to IUFoST and IAFoST as Fellow of the Institute and Academy, initiated the Senegalese Institute of Food Science and Technology (SenIFoST). All with training facilities and headquarters in Dakar and collaborative partners in Accra benefit from a wide database and cooperative networks in food.

Dr. Declan Troy (Ireland)

Declan J. Troy is the Assistant Director of Research, Teagasc – The Irish Agriculture and Development Authority. He also is Director of Technology and Knowledge Transfer for the Teagasc Food Programme and is Head of the Teagasc Ashtown Food Research Centre.

During this career he has published over 150 scientific peer reviewed publications, books, book chapters and scientific articles, mainly in the area of meat quality. The main focus of his research is on the biochemistry of muscle proteins and

their role in meat tenderness. Declan has always encouraged the up-take of science-based innovations by the food industry and has interacted widely with the sector to this end. His work has contributed to the introduction of new technologies at industrial level particularly in Ireland's competitive beef sector. In 2017 he was awarded the American Meat Science Association's International Award. He has collaborated in his research programme with many different research groups from Europe and all around the world including Australia, Korea, New Zealand, Uruguay, China, Brazil and of course the USA.

Declan has fostered highly successful international collaborations and exchange of knowledge in food science by coordinating EU and nationally funded research projects worth more than €90 million that supported 135 PhD students globally in different laboratories at collaborating institutions. Most recently, he has been appointed as the Director of the National Consumer Food Centre in Teagasc funded by the Department of Agriculture, Food and the Marine.

Declan sits on many national and international committees formulating research priorities in food science and advising state agencies and companies. He is currently a member of the UNECE Working Group on Meat Quality. He was Chairman of the World Congress of Food Science and Technology 2016 (IUFoST 2016) in Dublin in his capacity as President of the Institute of Food Science and Technology of Ireland (2016 - present). He has also been appointed (2019) as head of the International Secretariat of the International Congress of Meat Science and Technology (ICoMST) of which he was chair both in 2006 (Dublin) and 2017 (Cork) and he is the Academic Leader of Meat Technology Ireland (MTI) a €20m meat industry led research and innovation programme.

Dr Pingfan Rao, China

Joining the Board as per their governance roles in the Academy Executive Council and Scientific Council:

Dr. Charles Aworh (Nigeria), Academy President

Dr. Oguwa Charles Aworh is Lifetime Achievement Award recipient and past Academy Chair of Nigerian Institute of Food Science and Technology (NIFST). He obtained a B.Sc. (Hons) from the University of Ibadan (UI), Nigeria, MSc and Ph.D. in Food Science and Technology from Cornell University, USA. He is a retired Distinguished Professor and served three-terms as Head, Department of Food Technology, UI. He has been visiting Research Fellow/Professor at University of Leeds, UK; University of British Columbia, Canada; and Alexander von Humboldt Research Fellow, Hamburg University of Technology, Germany. He is pioneer Chairman of UI's Multidisciplinary Central Research Laboratory. His areas of research include post-harvest technology and processing, food safety, biotechnology, and capacity building. He has published extensively, supervised 120 MSc and 17 PhD students and is mentor for African Women in Agricultural Research and Development and IUFoST young scientists. He has served on several IUFoST bodies including Chair, Food Safety Working Group (WG 2.2) and Co-Chair, Codex Committee.

Dr. Hongda Chen (USA), Scientific Council Chair

Dr. Hongda Chen is National Program Leader for Bioprocess Engineering and Nanotechnology at the National Institute of Food and Agriculture (NIFA), USDA. He leads a national portfolio of food science, engineering and technology in research, education, and extension for advancing food processing and manufacturing technologies for safe, nutritious, and value-added products. He also leads the nanoscale science and nanotechnology for agriculture and food systems. He directs multiple competitive grants programs in the Agriculture and Food Research Initiative (AFRI). Dr. Chen received M.S. in food science and technology, and Ph.D. in engineering from University of California, Davis. He was a tenured professor of Food Engineering at University of Vermont before joining USDA. Dr. Chen has been active in IUFoST since early 2000. He is a founding charter member of International Society of Food Applications of Nanoscale Science (ISFANS). He served Science Council as a member from 2018-2020, and Chair-Elect from 2020-present. Dr. Chen is an elected Fellow of Institute of Food Technologists (IFT), International Academy of Food Science and Technology (IAFoST) of IUFoST, and American Society of Agricultural and Biological Engineers (ASABE). He received the Lifetime Achievement Award from the International Association for Engineering and Food (IAEF) in 2019.

Judith Meech, Secretary-General (non-voting)

Academy Executive Council 2022-2024:

President, **Charles Aworh**,

Past President, **Aman Wirakartakusumah**

Councillor: **Chin-Kun Wang**, Taiwan

Incoming President Elect

Dr. Fereidoon Shahidi (Canada)

Fereidoon Shahidi, Ph.D., FACS, FAGFD-ACS, FAOCS, FCIC, FCIFST, FIAFoST, FIFT, FISNFF, FRSC, is a University Research Professor and Distinguished Scholar in the Department of Biochemistry at Memorial University of Newfoundland. He has authored over 1,000 publications as research papers and book chapters, 78 books, and 10 patents. His research interests are primarily in the areas of nutraceuticals and functional foods with particular attention to lipids, proteins, polyphenols, natural antioxidants, and oxidation control. His work has been cited widely (see Google scholar). He has received numerous awards from different societies, including the American Chemical Society (ACS), American Oil Chemists' Society (AOCS), Institute of Food Technologists (IFT), and the Canadian Institute of Food Science and Technology (CIFST), among others. He has served on and chaired many international committees, evaluating different programs both nationally and globally, such as the

nutraceuticals and functional food research at the USDA and as a member of the Washington-based Council of Agricultural Science and Technology on nutraceuticals. He is currently the chair of the Scientific Council of the International Union of Food Science and Technology (IUFoST) and serves as the editor-in-chief (EIC) of the *Journal of Food Bioactives* (JFB) and the journal of *Food Production, Processing and Nutrition* (FPPN). Shahidi is the principal founder of the International Society for Nutraceuticals and Functional Foods (ISNFF), a Disciplinary Interest Group of IUFoST and Founding EIC of the *Journal of Functional Foods* for which he served in that capacity for 10 years. He was a principal founder of the Nutraceutical and Functional Food Division of IFT. He has trained nearly 200 graduate students, highly qualified personnel, visiting professors, scholars, and PDFs, now his colleagues in over a dozen countries.

Incoming Councillor **Dr. Stephane Guilbert** (France)

Stéphane Guilbert is Emeritus Professor in Food Science at Institut Agro Montpellier. His research is grouped around three main axes *i) state of water in foods in relation to their physicochemical and microbiological stability, ii) Mass transfer (gas, water, solutes) in food and food-packaging and iii) emerging technologies to face the new challenges of sustainable processing of agricultural products.*

Recently he initiated research on *territorial metabolism, on food waste and losses and on sustainability of food systems.*

In the last 10 years, he was scientific leader of more than 40 research projects carried out with international institutions, major international companies, and SME.

He is author of more than 160 original peer reviewed publications, 150 communications and 50 book chapters (Scopus Author ID: 7006154182 / ORCID ID 0000-0002-8964-670X). His h factor is 50 (SCOPUS).

He is scientific Councillor of IUFoST international association and editor of "Innovative Food Science & Technologies" (IFSET) journal published by Elsevier.

During his professional career he has developed extensive experience in *i) collaboration with industry, ii) management of an institution as CEO of a French national public institution "Agreenium", and iii) high education at undergraduate and post-graduate levels and capacity development in the context of private sector.*

Scientific Council (nominees are Fellows of the Academy)

Chair: **Dr. Hongda Chen**

Past Chair: **Dr. Fereidoon Shahidi**

Incoming Chair Elect **Dr Lilia Ahrne** (Denmark)

Prof. Lilia Ahrné is Professor in Dairy Process Technology at University of Copenhagen. She has PhD in food engineering from the School of Biotechnology at the Catholic University of Portugal with an internship at University of California Davis. In 1994, she moved to Sweden with an EU fellowship from the FP5 (Air Mobility) to perform a one-year PostDoc project hosted by Tetra Pak Processing Systems in collaboration with Lund University. After working for Tetra Pak, she joined SIK- The Swedish Institute for Food and Biotechnology, now part of RISE – Research Institutes of Sweden, and for 10 years, she was the director of Process and Technology Development department and adjunct Professor in Food Technology at Chalmers University of Technology. She has been president of EFFoST (European Federation of Food Science and Technology) and led the Food Science Sweden, a collaborative platform financed by the major Swedish food research actors. She has been member of the National Committee Food Sciences of The Royal Swedish Academy of Sciences (KVA) and member of the Expert Group on FOOD 2030 for the European Commission R&I Directorate F. Her research interests are to understand the effect of processing on physical, chemical, and structural characteristics of foods, and use this knowledge to develop new processes and products. Processes under study include both traditional and novel technologies.

Incoming Councillor **Dr. P.G. Rao** (India)

Dr Rao occupied various Scientist positions in CSIR Institutes, before attaining the position of Director at North East Institute of Science and Technology, Jorhat, India. Subsequently, he was CSIR-Distinguished Scientist. Dr Rao's significant contributions were in the area of process development and providing engineering packages to Chemical, Leather, Food and Allied Industries during his professional career. Dr Rao has more than 165 publications in peer reviewed international and National journals, 70 papers presented in national and international seminars, proceedings, 21 patents, 3 copy rights, 2 books and 10 chapters in books to his credit. Dr Rao is Fellow of several Academies including IAFoST.

Dr Rao was key member of the organizational committee for the IUFoST World Congress 2018 in Mumbai, India and was also Scientific Chair for the congress, through which he had exposure to the international scientific community of the Food Science & Technology. Dr Rao has played a key role in organizing nearly 80 scientific sessions and 30 Plenary Talks, Keynote and Valedictory Lectures with the interaction of professionals in Food Science & Technology globally relevant to IUFoST. Dr Rao is currently serving as Co-Chair of the IUFoST working Group on Food and Nutrition Security.

Incoming Councillor **Dr. Roger Clemens** (USA)

Dr. Roger A. Clemens is a part-time faculty within the Department of Regulatory and Quality Sciences at the USC School of Pharmacy since 2001. He is also a faculty member in the Global Medicine program within the Keck School of Medicine. He served as Scientific Advisor for Nestlé USA for more than 21 years.

Dr. Clemens is a past president of the Institute of Food Technologists (IFT) and a past president of the International Academy of Food Science and Technology. He is an elected Fellow in the American Society for Nutrition, American College of Nutrition, Institute of Food Technologists, and International Academy of Food Science and Technology.

Dr. Clemens has published more than 80 original manuscripts in nutrition, food science, and toxicology, provided more than 300 invited domestic and international lectures and served as an expert panel member for the food industry, scientific organizations, trade associations, and regulatory agencies in the United States, Canada, and Europe.

Finance and Administration Term Report 2020-2022

Digital (CIBC Smart) Banking

IUFoST Accounts are now fully connected to Smart Banking through the Canadian Bank of Commerce (CIBC), IUFoST's Bank. This service, with no additional monthly charges, allows for electronic funds transfer to send or receive funds, and allows for payments to be sent in most major currencies at a small percentage of the cost of international wire transfers. In addition, the smart banking accounts can be linked directly to QuickBooks (our accounting software) and the bookkeepers. Managing the cash flow, tracking financials, and facilitating seamless future access to and by IUFoST financial representatives are some of the benefits of this system.

IUFoST Bank:

For a period of time between 2017 and 2020 The IUFoST bank accounts were distributed through a Canadian Imperial Bank of Commerce (CIBC) bank in Vancouver, home of one of the previous treasurers. Now IUFoST has consolidated its banking back in the area of its incorporation with the CIBC in Guelph, Ontario, Canada. These IUFoST accounts can be maintained at the location indefinitely, regardless of the residence of the Treasurer, while still offering the Treasurer and designated Finance Committee members the ability to administer/view the accounts when and as necessary. Both IUFoST US\$ and IUFoST Canadian \$ accounts are held in these accounts. An IUFoST credit card (Visa) has been added to the accounts for business transactions requiring credit cards. At the moment, the only monthly payments for Visa are the costs for use of the business ZOOM platform and related internet fees. The credit card balance is paid in full each month. The credit card account is also linked to the bookkeepers for accounting.

IUFoST Investment Account:

The decision was made by the Board to approve an investment account to provide growth for a portion of IUFoST funds not needed for operations but that have not been earning any interest. After extensive consultation with the IUFoST banking senior executives, Finance Committee members and the Board, it was agreed to place US\$70,000, in CIBC Mutual Fund Account, a CIBC Securities US\$ Managed Balanced Portfolio. The account was opened on October 1, 2021, with an expected return of 5 per cent and better per annum. This is at least 5% more than IUFoST was receiving when those funds were housed in the chequing account so we are optimistic, although watching the account closely, and the funds can be withdrawn at any time. Since the time we opened the Mutual Fund Account, the investment has lost some of its value, as the global markets have been squeezed. We still anticipate a better return on the IUFoST investment than having the funds remain in a chequing account. We will keep you apprised over the next year before making any decisions.

IUFoST Credit Card Payment System:

The agreement has been reached with *GlobalPay* (through the IUFoST bank) for credit card payments/dues, etc. to be made by members and others through invoicing attached to verification systems for Visa, Mastercard, Discover by *Authorise.net*. The advantage of having such a system is to enable Adhering Bodies (who have been asking) to pay dues through credit cards and to facilitate other payments and activities of IUFoST and IAFoST. The cost to IUFoST for using this system will be in the region of 3.5% per amount of credit card transaction.

Bookkeepers:

IUFoST bookkeepers, part of the *RLB Chartered Professional Accountants* Company and based in Guelph, Ontario, Canada began working for IUFoST in August 2020. They replaced the previous bookkeepers who were not providing adequate service, and were answerable to only one finance committee member, who did not have any association with IUFoST. In addition, the RLB

bookkeeping costs are approx. Cdn \$5400/year, roughly half of the cost of the previous bookkeepers. These new bookkeepers have proven to be both accessible and professional.

Chartered Accountants:

As you may recall, with General Assembly approval in August 2020, IUFoST formally changed its Accountants, as the previous accountants were restricted in their communications and not adequately able to provide answers to questions posed to them, plus they were unduly expensive.

The new Chartered Accountants have an excellent reputation and are located in Burlington, Ontario, close to Guelph, Ontario and therefore providing a hub in that area for IUFoST financial affairs. This Chartered Accountancy company, *SB Partners LLP*, has provided the reports you received and approved in 2020 and they received the bookkeeping accounts to analyse and prepare the reports for 2021 that you received last month (September 2022). The cost for their services in preparation of last year's (2020) statements was Cdn\$ \$3079.25, including the corporate income tax return (representing nil tax to be paid) submitted to the Cdn Government. This contrasts with the previous CA firm, whose charges were more than Cdn\$10,000 per annum. The level of audit is the same as agreed by the General Assembly in 2018 and 2020.

IUFoST/Government Record Keeping:

As mentioned, The Chartered Accountants sent the required financial information to the Canadian Government to record nil taxed owed as in all previous years and this has been acknowledged as successfully received and noted by the Canadian Government agencies overseeing Not for Profit organisations. IUFoST paid (approx..Cdn\$21.00) and filed the Annual Return due to Corporations Canada on October 17 for 2021 (required to do so between 15 October and 15 December). The Annual Return will be filed for 2022 in late October. Directors' Insurance was renewed from September 2021 – September 2022 and has just been renewed again for another year.

Update on Dues, Income and Expenditure:

Again, IUFoST expresses its appreciation to Members who completed their dues obligations despite the pandemic situation during the greater part of 2020 and throughout 2021. Membership dues form an important part of the IUFoST operating income, particularly at the moment, and contribute to the livelihood and success of IUFoST. The Union has remained secure because of careful accounting, including a severe reduction in expenditure for lawyers and accountants and consultants and despite loss in income from all sources due to the pandemic situation and previous internal IUFoST issues. A review of accounts receivable for outstanding dues and other expenses will be made in 2023.

IUFoST income will increase at least by US\$100,00 for 2023, following the world congress in Singapore. Additional income is being received through the curricula assessment programmes with more income-generating programmes underway.

Review of 2021 Financial Statements

The IUFoST General Assembly is meeting several months later than usual in 2022, on November 3, 2022. Because of this late date, the 2021 Financial Statements were circulated to the General Assembly for comment/acceptance before the congress in order for them to be submitted on time to the Canadian Government. The Statements were prepared by the Bookkeepers and assessed by the Auditors according to the General Assembly approved standard. IUFoST delegates have signified acceptance of the 2021 Statements as of the due date of 3 October 2022. Several comments have been addressed on an individual basis. Members are thanked for their responses.

IUFoST Lawyers

The Law Firm of Ross & McBride LLP, based in Hamilton, Ontario, Canada, retained to handle IUFoST legal affairs has more than 30 years' experience in the not-for-profit sector, both national and international. They have guided us through the recent IUFoST By-Laws Amendments. These legal fees so far are less than Cdn\$1000 compared to the more than Cdn\$80,000 spent on legal fees in 2018/2019.

Respectfully Submitted- Suzana Lannes, Treasurer and Judith Meech, Secretary-General

21st World Congress of Food Science and Technology 31 October to 3 November 2022

Inspired by the theme **“Future of Food – Innovation, Sustainability & Health”**, the 2022 World Congress Singapore logo takes a literal representation towards Food, Science and Technology, and interprets them graphically as an Apple, a Laboratory Flask, and a Robotic Arm. The logo epitomises how the future of food is dependent on driving innovation while accounting for sustainability and health. The Singapore Institute of Food Science and Technology, SIFST, prepared the bid in 2017 and have worked extremely long and hard hours to bring the 21st World Congress of Food Science and Technology to Singapore, October 31-3 November 2022.

Led by Congress Co-Chairs Dr. Ong Mei Horng and Mr Richard Khaw, and Dr. Allan Lim and Dr. Ralph Graichen, Scientific Committee Co-Chairs and Advisors Mr. Lim Chee Kian and Dr. Weibiao Zhou, our thanks and gratitude are also extended to all member of the Congress Committee: Ms Esther Gusti, Dr. Oni Yulianti, Dr. Matthew Zhao, Mr. Tay Seng Kiong, Ms. Catherine Seah, Professor Hongshun Yang, Ms. Tan Ai Tsing, Ms. Verleen Goh, and Mr. Evelyn Ong.

The many student volunteers are thanked, and everyone associated with bringing this 21st World Congress to Singapore in what have been some challenging global circumstances. We are all looking forward to seeing the beautiful country, and to experiencing this world class scientific congress.

IUFoST Distinguished Lecturer

Dr. Joachim von Braun, Chair of the Science Group for the UN Food Systems Summit accepted our invitation to deliver the Distinguished Lecture to delegates of the IUFoST world Congress in Singapore.

Dr. Von Braun is the Director of the Center for Development Research (ZEF) and Professor for Economic and Technological Change at Bonn University. He is a member of the German National Academy of Science – Leopoldina, the Academy of Science and Engineering, the Academy of Arts and Science North Rhine-Westphalia, a Fellow of the African Academy of Science and of the American Association for the Advancement of Sciences. He is President of the Pontifical Academy of Sciences of the Vatican and is the Vice President of the German NGO “Welthungerhilfe”. Previously, he was Director-General of the International Food Policy Research Institute (IFPRI). He was elected as President of the International Association of Agricultural Economists (IAAE) and has received numerous honorary degrees and other awards.

The Distinguished Lecturer is chosen by IUFoST in recognition of world leaders who address IUFoST’s commitment to fight hunger and work for the improvement of food safety, food security and sustainability of food systems worldwide. We are deeply honoured to have Dr. von Braun give the Distinguished Lecturer Address to the 21st World Congress of Food Science and Technology.

IUFoST Invited Plenary Speakers

IUFoST is honoured that **Dr. Peter Gluckman, New Zealand’s former chief science advisor and new President of the International Science Council (ISC)** accepted our invitation to participate in the World Congress. We welcome Dr Gluckman for his premier role in New Zealand science policy, and for his leadership of the ISC, which is the global scientific body in which IUFoST is the sole representative of Food Science and Technology.

Young Scientists present to the global scientific community in Singapore

Throughout the four days of the Congress, delegates will be hearing from the foremost scientists internationally in plenaries and in sessions. Intermingled with these plenaries will be a group of

Young Scientists who warrant special attention. These are the nine Young Scientists who have been selected by international juries as representative of the best of young science and who will be providing their research highlights to the Congress delegates. In short, with more detail following the congress, here are the chosen Young Scientists.

Lin Chen, nominated by Singapore Institute of Food Science and Technology (SIFST)

Presentation title: The application of foodomics in food safety study.

Mohsen Gavahian, nominated by the Taiwan Association for Food Science and Technology (TAFST)

Presentation title: Pineapple core valorization by ohmic heating: bio actives, antioxidant activities, system performance efficiency, and energy consumption.

Iris Haberkorn, nominated by the Swiss National Committee to IUFOST, Swiss Academy of Sciences

Presentation title: Leveraging cellular agriculture through technological innovation – Emerging pulsed electric field processing for single-cell biorefinery applications.

Biniam Kebede, nominated by the New Zealand Institute of Food Science and Technology

Presentation title: Tackling today's and future food science and nutritional challenges: A foodomics approach.

Jeyan A. Moses, nominated by the Ministry of Food Processing Industries, India.

Presentation title: Advances in food 3D printing for personalized nutrition applications.

Xiaonan Sui, nominated by the Chinese Institute of Food Science and Technology (CIFST)

Presentation title: Emerging trends of protein-based meat alternatives in China.

Haizhou Wu, nominated by the Swedish National Committee for Nutrition and Food Sciences, Royal Swedish Academy of Sciences

Presentation: Examining the mechanisms of lipid oxidation in muscle food systems and development of new cost-effective stabilization technologies.

Rachma Wikandari, nominated by Indonesian Association of Food Technologists (PATPI)

Presentation title: Development of meat substitutes from filamentous fungi cultivated on left over boiling water of tempeh factory.

And 2021 Young Researcher Award Winner **Dominic Agyei** from University of Otago, New Zealand. **Presentation title:** Bioprocessing and food applications of two hydrolytic enzymes from *Lactobacillus leichmanii* 313: narrative of a 10-year research endeavor.

Workshops and Scientific Sessions

The International Society of Food Engineering (ISFE) and European Academy of Food Engineering are collaborating to bring key scientific sessions to the Congress. These organizations are joined by the International Society of Nutraceuticals and Functional Foods (ISNFF), ISFANS – the International Society of Food Applications Nanoscale Sciences, ISOPOW – Properties of Water in Food and proposed sessions on Food Safety Culture, Latin American Food Science and Technology, Early Career Scientist and Young Scientist forums, Education sessions, an Academy Session, and many others.

The Congress Competitions will be wrapped up in a Closing and Awards Ceremony on November 3rd. Don't miss the excitement as the Teams get their awards. Hear about Congress 2024 – in Rimini, Italy and what is in store for you there.

Directly following the Closing /Awards Ceremony, the IUFOST General Assembly will begin in a nearby room. Delegates and Invitees may go directly there where light refreshments will be served.

Thank you to our Board of Directors, Committees and Working Groups

We wish to thank all members of the IUFoST Board of Directors who gave their time and consideration to IUFoST selflessly and who were available for IUFoST throughout this past Term of Office. At the General Assembly we will be honouring outgoing members Dr Suzana Lannes (IUFoST Treasurer), Mr, Richard Khaw for his outstanding work with the IUFoST Congress; Dr. Obadina Adewale for his ongoing and successful efforts in bringing together new associations to work with IUFoST and Dr. Sebastiano Porretta as he begins preparing for the 2024 IUFoST World Congress.

Our appreciation is expressed too to all members of the IUFoST Committees and Working Groups. Their tenure continues into 2023 but if anyone reading is interested in being more involved in any of the IUFoST activities, please do let us know.

J. Ralph Blanchfield MBE was a food scientist of international reputation and well known to many. Professor Blanchfield died in September 2022. Ralph devoted a large amount of his time voluntarily committed to establishing and developing professionalism for Food Scientists and Technologists

In ending this report, we include some thoughts from colleague and IUFoST past president, Geoffrey Campbell-Platt, to remember his lifetime of work and achievement.

Ralph was a pioneer in helping establish in the United Kingdom, the Institute of Food Science and Technology, IFST, formally launched in 1964. The first IUFoST World Congress had been held in London in 1962, and the U.K., as a founding member, played a leading role in helping its successful establishment and development. Ralph Blanchfield had a particular interest in Constitutions and correct procedures and was able to use this in helping establish IUFoST governance and Constitution, giving firm foundations for the future. He also used this skill in converting colleagues' ideas and thoughts into cohesive written documents. For example, as 'Hon. Secretary' to the working group within IFST producing the important and useful 'Food and Drink - Good Manufacturing Practice ; a Guide to its Responsible Management', now in its 7th edition, several languages, and widely consulted and used. He also helped establish and support the European regional grouping, EFFoST, within IUFoST.

We look forward to seeing you in Singapore soon for the

21st World Congress of Food Science and Technology

