

International Journal of Food Design



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Special Issue: **Gastrophysics**

Editors

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Deadline for submission of full papers: **31 December 2020**.

The emerging science of gastrophysics aims to integrate diverse perspectives on gastronomic sciences into a unified field of academic inquiry. As suggested by Barham:

gastrophysics should be to gastronomy as astrophysics is to astronomy. Astronomers observe the planets and stars, they note how they move and even predict future movements; but astrophysicists explain why the stars are where they are and how they got there, and they also supply the sound scientific basis for the whole subject. (2013: 3)

According to one definition, gastrophysics combines gastronomy and psychophysics in order to understanding what happens in the diner's mind, in relationship to what happens in their mouths, as well as everything else (Spence 2017). In other words, the focus is on the science of the mind of the diner rather than on the science of the kitchen or cuisine (Spence and Youssef 2018). To date, much of the gastrophysics research has focused not so much on the relationships between the components of the food and perception, but rather on 'the everything else', that influence our multisensory food experiences. This includes the role of plateware, glassware, cutlery, multisensory atmospheres, brand touchpoints, food aesthetics, as well as numerous other factors (Spence 2017). As argued by Moller (2013), though, flavour 'is not all in the brain'. For instance, hunger and satiety modulate hedonic perception. Interoceptive states modulate flavour appreciation, and food preferences are shaped by culture as well as education. Gastrophysics should therefore also be thought of as encompassing the study of everything from internal states to cultural influences on food experiences (Laudan 2013; Visser 1991).

Furthermore, it has also been suggested that gastrophysics is aligned with biophysics and chemistry, in that it aims to study the complex interactions in the science of cooking (Myhrvold, Young and Bilet 2011; Mouritsen 2012), the physics of food, ingredients, food processing and food technology (Knorr and Watzke 2019), and aspects of the physical basis for food quality, flavour, appreciation and adsorption in the human body (Mouritsen and Risbo 2012; though see also Spence and Youssef 2018).

With this Special Issue announcement, we call for investigations in the field of gastrophysics. Given the aims and scope of the journal, we are particularly interested in papers that incorporate aspects of applied insight and design. In particular, we are interested in works that integrate food design with other disciplinary approaches, such as experimental psychology, cognitive neuroscience, design, marketing, economics, anthropology, and culinary arts, among others, in the context of gastrophysics. As gastrophysics aims to expand our knowledge on the phenomena observed in gastronomy, we are also interested in evidence-based solutions to urgent human and planetary health issues. Our hope is that at the intersection of science and design we can foster awareness, behaviour change, and inspire strategies for innovation.



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We welcome empirical and theoretical work, as well as case studies documenting initiatives relevant to the field. We welcome research that looks into topics such as:

- Psychological and physicochemical influences of plateware, cutlery and glassware on food experiences.
- Multisensory food experiences.
- Multisensory marketing and food experiences.
- Digital technologies in the context of gastrophysics.
- Social aspects of dining.
- Gastrophysics in the times of self-isolation.
- Food aesthetics influences on food experience design.
- Gastrophysics for special needs groups, such as children and the elderly.
- Gastrophysics to improve health and wellbeing in cases of anosmia (aging populations, cancer patients, etc.)
- Gastrophysics to promote healthy and sustainable food consumption behaviours.
- Bringing back Home Economics: Gastrophysics for education.
- Using gastrophysics to reduce food waste and/or promoting plant-based diets.
- Gastrophysics and public policy strategies to promote human and planetary health (e.g., solutions in light of the climate crisis).
- Ethics of sensory nudging in the world of food and drink.

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The Journal

The *International Journal of Food Design (IJFD)* is the first academic journal entirely dedicated to food design research and practice. The journal aims at creating a platform for researchers operating in the various disciplines that contribute to the understanding of food design: design applied to food and eating, or food and eating investigated from a design perspective. The upcoming issues of *IJFD* will be published open access free of charge. See www.intellectbooks.com/international-journal-of-food-design.

Submission of papers

A double-blind review process will be used for this special issue. Please check the Notes for Contributors: www.intellectbooks.com/asset/47251/1/NFC_IJFD_3_1_1_.pdf




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About the editors

CARLOS VELASCO is an associate professor at the Department of Marketing, BI Norwegian Business School (Norway), where he co-founded the Centre for Multisensory Marketing. He also holds a Research Fellowship at the SCHI Lab, Sussex University (UK). Carlos received his D.Phil. in Experimental Psychology from Oxford University. His work is at the intersection between psychology, marketing, and human-computer interaction, and focuses on understanding, and capitalizing on, our multisensory experiences and their guiding principles. Carlos has worked with a number of companies from around the world on topics such as multisensory experience design, food and drink, branding, and consumer research. For more information, visit carlosvelasco.info.

CHARLES MICHEL teaches culinary leadership, sensorial exploration, and luxury gastronomy at the Institut Paul Bocuse in Lyon. He connects art, gastronomy, experimental psychology, crossmodalism, human-centered design, theory of change and ritual to catalyse communities and foster human development. He was recently selected as 'one of the best chefs in the world' to participate in Netflix's Global Culinary Competition *The Final Table*. He has published a number of papers in peer-reviewed academic journals on multisensory science as 'chef-in-residence' of the Crossmodal Research Laboratory, University of Oxford. He has collaborated on a variety of projects inspired by gastrophysics such as multisensory VR experiences, immersive crossmodal art. He is co-founder of a design studio looking at the future of cutlery, and 'Mission: Space Food', a food innovation lab for the future of food and eating in space. Michel has given over 30 talks on the future of food and eating, including at venues such as The Royal Society with Prof. Brian Cox, The Royal Institution, Technology conferences, TEDxHackney, TEDxMogadishu and TEDxBucharest, amongst others. At the intersection of science, art, community and entrepreneurship, Charles aims to inspire solutions for important challenges in the relationship between humans, food and environmental challenges. For more information, visit www.charlesxmichel.com

Charles Spence is the head of the Crossmodal Research Laboratory, Department of Experimental Psychology, University of Oxford. He is interested in how people perceive the world around them. His research focuses on how a better understanding of the human mind will lead to the better design of multisensory foods, products, interfaces, and environments in the future. Charles has been awarded the 10th Experimental Psychology Society Prize, the British Psychology Society: Cognitive Section Award, the Paul Bertelson Award, recognizing him as the young European Cognitive Psychologist of the Year, and the prestigious Friedrich Wilhelm Bessel Research Award from the Alexander von Humboldt Foundation in Germany, not to mention the 2008 IG Nobel prize for nutrition, for his groundbreaking work on the 'sonic crisp'. Prof. Spence has published almost 1,000 academic articles and edited or authored, 14 books including, in 2014, the Prose prize-winning *The Perfect Meal*, and the international bestseller *Gastrophysics: The New Science of Eating* (Penguin Viking, 2017) – winner of the 2019 Le Grand Prix de la Culture Gastronomique from Académie Internationale de la Gastronomie.



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