Conference Programme with talk abstracts

Rethink Eating 2022: What's next for chemical senses research?

Morning:

8:30-9:00 coffee + croissant

9:00-10:30 Theme: Chemical senses

Charlotte Sinding

Flavour perception: odour-taste interactions

The representation of food perception necessitates odour and taste integration. Part of the brain mechanisms that lead to flavour perception is still to unravel. Some odours are able to enhance a taste perception (e.g., vanilla odour enhances sweetness). This phenomenon, shared among individuals, differs between people living with obesity and normal-weight. The brain mechanisms of this phenomenon were investigated further with electroencephalography and fMRI.

Janina Seubert

The role of learning and retrieval of sensory familiarity in hedonic evaluation of food stimuli.

Human food intake is driven by a need to identify sources of energy while avoiding accidental poising. Prefering previously consumed over novel foods is a generally a useful strategy to maximize chances of positive outcomes while minimizing risks- yet, how such sensory familiarity is acquired, how it is most effectively retrieved in the light of fluctuating external circumstances and internal states, and how it is encoded in the brain remains to date insufficiently understood. This talk will present merge evidence from all these three domains to highlight recent new insights and continued knowledge gaps and challenges in understanding hedonic evaluation of food flavor.

Alexander Fjældstad

Cooking schools for patients with olfactory dysfunction

Olfactory dysfunction is a common disorder with grave impact on patients' quality of life where the most prevalent complaint is the reduced enjoyment of food. By investigating cooking habits and food item preferences in these patients, we created a curriculum for a cooking school for patients with olfactory loss. By offering free 5-week cooking schools, we have been able to improve patients' ability, confidence and pleasure of cooking. Although the study is still ongoing, we conclude that food and cooking related problems in patients with olfactory dysfunction may be reduced by improved knowledge and guidance.

10:30-11:00 coffee break

11:00-12:15 Theme: Extended reality

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Patricia Alves da Mota

Music and flavour in the brain

Mounting evidence from recent years has demonstrated sound's ability to moderate the flavour evaluation of food and beverages. However, the neural mechanisms underlying such crossmodal effects remain unknown. In this talk, we describe a functional MRI study conducted last year at the Aarhus University hospital with preliminary results.

Jeff Kerby

Climate change stinks: Can smell enhance VR climate change communication?

Climate change disproportionately impacts the environments of the Arctic and the people that call these places home. We present the development of a virtual reality tour of climate change impacts on Qikiqtaruk-Herschel Island in the Canadian Arctic, and the potential for augmenting this experience with smell to improve immersion and information recall.

Dan Novy

Artificial Flavors to Intelligence; Experience Design Across the Senses

"Artifice" is defined as a cunning, crafty device or expedient; a clever trick or stratagem; wile; trickery; guile; craftiness. cunning; ingenuity; inventiveness. Sounds a lot like the definition of Magic. And what is Magic but artifice? Come see how Immersive Experience Design uses our senses to shape realities by shaping the artificial.

12:15-13:00 lunch

Afternoon:

13:00-13:20 Sensory walk

13:30-14:30 Theme: Cognition

Anne-Lise Saive

The geometry of olfactory cognitive maps influences spatial navigation and memory in humans: insights from a virtual multi-sensory study

The same neural processes have been observed in the hippocampus when people navigate the world and when they navigate mental maps connecting information together during learning. Similar representations of space have recently been demonstrated in the primary olfactory cortex of rodents and humans during learning and exploration, yet their role remains unknown. Using a naturalistic videogame paradigm, this research aims at determining if navigation and memory are linked when associated with smells, music or faces; and to explore whether the geometry of physical and mental maps can influence these processes.

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Ilja Croijmans

Smell and flavour cognition in experts and consumers

How can descriptions be used to inform consumers of smells and tastes in digital environments, or other places were smelling and tasting is not possible? In this talk, research on odor and flavor imagery is discussed, and how flavor descriptions can be used to trigger these images in consumers, driving purchase behavior.

14:30-15:00 coffee break

15:00-16:00 Theme: Future applications and reflections

Rebecca Kleinberger + Akito Van Troyer

Food, Sounds, and Animals

Eating is a fully holistic experience. In this talk, we will present research projects related to voice experiences and sound immersion and illustrate how they can combine in exploring interventions to affect the eating experience based on sound. We will also present previous work on interspecies interventions and propose new considerations for connections with the fauna and flora that form the base of our alimentation.

Group reflection and wrap-up

16:15-18:00 Guided wine tasting