

OE & Digital Technologies

Data retrieval, presentation and analysis of taste and flavour data

Frederic Andres ¹, Yevgeniya Sulema ², Andreas Pester ³

¹ NII Tokyo, Japan; ² NTU Kiev, Ukraine; ³ BUE Cairo, Egypt

andres@nii.ac.jp, sulema@pzks.fpm.kpi.ua, andreas.pesther@bue.edu.eg

Workshop goal

Human sensory data in general are important for different applications. Retrieval and description of taste and flavour data is still underrepresented in this area: This workshop will cover four topics:

1. How to get with the help of IoT and sensors taste data, offline and online?
2. How to categorize these data, using standardized descriptors and to represent these data as multimodal data?
3. How to apply methods of statistics and machine learning to analyse these kinds of data?

The goal of the WS is to give an theoretical and practical introduction for interested people. During the WS data from participants will be collected and included in the further data analysis.

To whom is the workshop addressed

Researchers, PhD and master students, interested in taste and flavour data. Basics in IoT, linear algebra, statistics and python helpful. Maximum number of attendees 20.

The Methodology

The WS will be delivered in three parts.

In the first part the participants will be introduced to the used IoT and sensor technologies and they will in the practical session collect own data. (20+20 min)

In the second part an introduction to the data description (using existing multilingual descriptors) and the representation as multimodal data will be given, in the practical session the participants will describe and present collected data from part 1. For this purpose, they will be splitted in groups of 4 people. A short feedback round will finalize part 2. (20 + 20 min)

In part 3 an introduction for the use of machine learning algorithm to analyse the data will be given. It starts with a short brainstorming round to discuss what are the goals of the data analysis and an introduction to existing tools and then the participants work with pre-defined data toolboxes for the analysis. A critical discussion of reached results rounds up the WS in general. (20+20 min)

We will use Zoom for the training and discussion part, Colab for the data analysis part.

Participants should have basic knowledge in sensors, data, and statistics.

The Workshop duration

The WS will have a duration of 2 h and is splitted in three parts, each of it has two sessions: theoretical and a practical.