MADiMa 2018

4th International Workshop on Multimedia Assisted Dietary Management

In conjuction with the 27th International Joint Conference on Artificial Intelligence (IJCAI) and the 23rd European Conference on Artificial Intelligence (ECAI), Stockholm, Sweden

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Overview

After the success of the past MADiMa workshops, we would like to present to you the MADiMa2018 to be hosted at IJCAI-ECAI-18, Stockholm, Sweden at on July 15th, 2018. This year, MADiMa and CEA are organized for the first time at the same place.

Food and nutrition are closely related to good health and wellness. Worldwide, the prevention of onset and progression of diet-related acute (e.g. food allergic reactions) and chronic diseases (e.g. diabetes, obesity, cardiovascular diseases and cancer) requires reliable and intuitive dietary monitoring and management. The need for accurate, automatic, real-time and personalized dietary advice has been recently complemented by the advances in computer vision, machine learning, wearable devices and smartphone technologies, permitting the development of the first systems for diet monitoring, analysis and assessment using multimedia technologies. In the field of nutritional management, multimedia not only bridges diverse information and communication technologies, but also computer science with medicine, nutrition and dietetics. This confluence brings new challenges and opportunities on dietary management.

Scope

MADiMa2018 aims to bring together researchers from the diverse fields of engineering, computer science and nutrition who investigate the use of information and communication technologies for better monitoring and management of food intake. The combined use of multimedia, machine learning algorithms, ubiquitous computing and mobile technologies permit the development of applications and systems able to monitor the dietary behavior, analyze food intake, identify eating patterns and provide feedback to the user towards healthier nutrition. The researchers will present their latest progress and discuss novel ideas in the field. Besides the technologies used, emphasis will be given to the precise problem definition, the available nutritional databases, the need for benchmarking multimedia databases of packed and unpacked food and the evaluation protocols.

Topics

Topics of interest include (but are not limited to) the following:

- Ubiquitous and mobile computing for dietary assessment
- Computer vision for food detection, segmentation and recognition
- Deep learning for food analysis
- 3D reconstruction for food portion estimation
- Augmented reality for food portion estimation

- Wearable sensors for food intake detection
- Computerized food composition (nutrients, allergens) analysis
- Multimedia technologies for eating monitoring
- Food image analysis and social media
- Smartphone technologies for dietary behavioral patterns
- Food multimedia databases
- Evaluation protocols of dietary management systems
- Multimedia assisted self-management of health and disease
- ICT technologies for tackling mal- and undernutrition
- Vision techniques for food quality check

News

Presentations and posters

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