Book Review

Computer Vision Technology for Food Quality Evaluation edited by Da-Wen Sun, published

Computer Vision Technology for Food Quality Evaluation, edited by Da-Wen Sun, Published by Elsevier Academic Press, San Diego, CA, USA, 583 pages, 2008, Price GBP 80.00, ISBN: 978-0-12-373642-0, 0-12-373642-0.

A new book by Professor Da-Wen Sun of University College Dublin (UCD), National University of Ireland entitled "Computer Vision Technology for Food Quality Evaluation" (583 pages) has recently been published by Elsevier Academic Press. Computer vision is a novel technique for the food industry, and this new title is the first in this rapidly expanding area.

Computer vision is a novel technology for recognizing objects and extracting quantitative information from digital images in order to provide objective, rapid, non-contact and non-destructive quality evaluation. Especially in recent years, significant scientific and technological advances have been made in quality inspection, classification and evaluation of a wide range of food and agricultural products. "Computer Vision Technology for Food Quality Evaluation" therefore focuses on these recent advances. Divided into five parts, the book first provides an outline of the fundamentals of the technology, addressing the principles and techniques for image acquisition, segmentation, description, and recognition. It then presents extensive coverage of the applications in the most researched areas of fresh and cooked meats, poultry, and seafood; quality evaluation of agricultural products, including apples, citrus, strawberry, table olives, potatoes and cereal grains such as wheat, rice and corn, and is concluded by applications to food products of pizza, cheese, bakery, noodles, and potato chips.

This unique work provides engineers and technologists working in research, development, and operations in the food industry with critical, comprehensive and readily accessible information on the art and science of the technique, and its publication is much demanded and has met the market needs.

The Editor of the book, Professor Da-Wen Sun, is a world authority in food engineering research and education. He is among the first to introduce computer vision technology for food applications to UCD and Ireland in 1997, and has made significant leading contributions in this area over the years, which has earned him an international reputation in research in the field. Professor Sun has published over 180 peer reviewed journal papers and more than 200 conference papers, and received numerous international awards in recognition of his significant contribution to food engineering worldwide and his outstanding leadership, including the CIGR Merit Award in 2000 and in 2006 respectively by the International Commission of Agricultural Engineering (CIGR), the "Food Engineer of the Year 2004" award by the Institution of Mechanical Engineers (IMechE), and the CIGR Recognition Award in 2008 in honour of his distinguished achievements as the top one percent of Agricultural Engineering scientists in the world. He is the Editor-in-Chief of the international peer-reviewed journal "Food and Bioprocess Technology" published by Springer, recently covered by SCI-expanded. He also serves on the editorial boards of a number of international journals，including International Journal of Agricultural and Biological Engineering(IJABE). Professor Sun has presented his most recent research results in this new title by co-authored six of the 22 chapters in the book.

(Edited and Reviewed by Wang Yingkuan, IJABE)