We all want our food to be 100% safe and healthy! But are you aware how complex it is to achieve this? How can we filter out tiny pieces of glass, stone or plastic, or microscopic insects, from mechanically harvested crops? How can we detect dangerous bacteria or carcinogenic substances such as mycotoxins and acrylamides which might be contained in our food? Over the past 20 years, the Brussels Photonics Team of the Vrije Universiteit Brussel has been investigating how photonics, or light technology, can be used to distinguish between good and bad products – with incredible speed and accuracy. On the basis of some case studies, Prof. Wendy Meulebroeck will present which optical phenomena and related technologies are especially useful in food safety and food quality questions. In addition, she will demonstrate that photonics-based sensors can be employed in all parts of the food chain starting at the level of the growth of the crops, towards a safety and quality screening of the harvested products and finishing with a sensing of the packed goods.

Prof. Dr. ir. Wendy Meulebroeck is professor and post-doc researcher at the Faculty of Engineering of the Vrije Universiteit Brussel (VUB). She is one of the responsible members of the research unit ‘optical spectroscopy’ of the Brussels Photonics Team B-PHOT chaired by Prof. Hugo Thienpont. She is coordinating and working on multiple projects focusing on the spectroscopic characterization of different types of materials in 3 main research fields: (1) food safety, (2) archaeometry and (3) biophotonics for better health care and for the replacement of animal models. She graduated as an Electrotechnical Engineer with majors in Photonics in 1998 and received her PhD in Applied Sciences in January 2004, both at the VUB.

About BrIAS
The newly founded Brussels Institute for Advanced Studies (BrIAS), co-founded by the Université libre de Bruxelles (ULB) and the Vrije Universiteit Brussel (VUB), aims to expand upon the mission of other IASes as an incubator of ideas and research by focusing on current and urgent themes with a great societal impact.

Located in the heart of Brussels, it aims to attract the very best scientists, artists or designers, coming from various fields or countries and with no philosophical or political restriction, and provide the opportunity to work in an atmosphere of complete freedom, collaboration, mutual emulation and cross-fertilisation. In this context, BrIAS aims to facilitate collaborations with countries facing critical challenges pertaining to sustainability.

For more information and updates about BrIAS, our upcoming events, and our current research theme The past, present and future of food, climate and sustainability, Follow us on our webpage, on LinkedIn and Facebook!