

# Computational Gastronomy: Food in the Age of Data

## International Scientific Seminar

### List of participants

**Harold McGee** Food scientist and author, based in the US - studied chemistry at Caltech and Yale University before writing the highly influential *On Food & Cooking: The Science & Lore of the Kitchen*, that has become one of the defining books for a whole generation of scientifically-minded chefs. In addition to a number of additional books McGee has published reviews and original research in *Nature*, as well as contributing to the *New York Times* and *Physics Today* among many other publications.

**Peter Barham** Professor of Physics, University of Bristol, UK - is a leading scientist in the field of Molecular Gastronomy and has collaborated extensively with Heston Blumenthal. He has also co-authored 'Molecular Gastronomy: A New Emerging Scientific Discipline.' (Chemical Reviews, 2010), and is one of the two Editors-in-Chief of the journal *Flavour*.

**Michael Bom Frøst** Sensory Scientist at the Department of Food Science, University of Copenhagen and the Director of the Nordic Food Lab - has ensured that the Nordic Food Lab (founded by the highly regarded restaurant Noma) is at the forefront of pioneering research into new ways to source food sustainably and to identify new sources of edible ingredients.

**Jonathan Lake** Head Chef at The Fat Duck restaurant, Bray, Berkshire, UK - has a degree in Physics and Biology and heads the kitchen of one of the leading restaurants in the UK. The Fat Duck is widely known for its scientific approach to cooking and the integration of multi-sensory perception into the restaurant experience.

**Dan Jurafsky** Professor of Linguistics and Computer Science, Stanford University, USA - is a leading expert of Natural Language Processing. He is a MacArthur Fellow and studies language of food.

**Dana Small** Associate Professor of Psychiatry at Yale University, USA - is a leading expert in neuroscience. She studies neurophysiology of feeding and the neural mechanisms underlying taste and flavor.

**Lav Varshney** Professor at the Department of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign, and formerly at IBM - has been studying recipe data on a large scale at IBM Research and is interested in mapping and predicting food ingredient usage patterns.

**Ole Mouritsen** Professor of Biophysics at the University of Southern Denmark and Director of the Center for Biomembrane Physics - is a leading figure in the field of Molecular Gastronomy and another co-author of the review paper on this topic in *Chemical Reviews*.

**Rachel Edwards-Stuart** Independent food consultant, based in the UK - holds a degree in biochemistry from the University of Cambridge and a PhD from the University of Nottingham in the Science of Cooking. During her career she has worked as a food scientist for Sainsbury's, consulted three-Michelin star restaurants on the application of scientific techniques to food, taught Molecular Gastronomy at the Ecole Grégoire Ferrandi and set up the highly successful London Gastronomy Seminars.

**Rasmus Bro** Professor in the Department of Food Science, University of Copenhagen, Denmark - is an expert in Chemometrics and large-scale data analysis, and led a research project on 'Food Informatics: A New Integrated Systems Science'.

**Pablo Rodriguez** Research and Innovation Director at Telefonica Digital, Adjunct professor, Columbia University, USA - is a prominent computer scientist who leads Telefonica's research department at Barcelona. He has made significant contributions to various fields of computer science including networks, systems, web, and mobile communications. He has initiated a collaboration with El Bulli Foundation and analysis of food data and organized the GastroTech Days event in Barcelona in 2011, bringing together a wide range of researchers interested in food and data analysis.

**Marc Powell** Computer Programmer and Chef - a former computer hacker, successful software developer, and trained chef, he is now driving an initiative called 'Foodhacking', approaching gastronomy from the perspective of software development and data analysis.

**Otto Römer** Senior Development Chef at The Fat Duck restaurant, Bray, Berkshire, UK - has a degree in Chemical Engineering and is responsible for researching new techniques, textures and flavour combinations that can be used in a gastronomical context, often in collaboration with scientists in academia and industry.

**Ben Reade** Research and Development Chef - has a Bachelor's degree from the University of Gastronomic Sciences and was until recently Head of Culinary Research and Development at the Nordic Food Lab.

**Jens Risbo** Associate Professor in the Department of Food Science, University of Copenhagen, Denmark - is a food scientist interested in flavour perception and flavour chemistry, and another co-author on the review paper of Molecular Gastronomy in Chemical Reviews.

**Hyejin Youn** Research Fellow, Mathematical Institute, University of Oxford, UK - is a physicist working on complex networks and statistical physics, with broad interdisciplinary interests. As a postdoctoral fellow at the Santa Fe Institute she investigated the extent to which the complexity and evolution of biological and social systems are governed by similar quantitative principles.

**Andreas Bender** Lecturer in the Unilever Centre for Molecular Science Informatics, University of Cambridge, UK - is a specialist in the application of data analysis methods to chemical data, particularly in the context of pharmacology and the prediction of interactions between proteins and small molecules, which includes the binding of flavour molecules to olfactory receptor proteins that is responsible for flavour perception.

**Ben Nijssen** (tbc) TNO, Rotterdam, The Netherlands - is a scientist at the company TNO, which provides the widely used VCF flavour compound database to the food industry.

## The organisers

**Sebastian Ahnert** Royal Society University Research Fellow at the Cavendish Laboratory, University of Cambridge, UK - works on the interface of biology and theoretical physics, with a particular interest in network analysis, self-assembling structures, and algorithmic information theory. In 2011 he published a paper bringing network analysis to food science.

**Yong-Yeol Ahn** Assistant Professor, School of Informatics and Computing, Indiana University Bloomington, USA - works on data-driven analysis of social & biological systems, and human food behaviors. He co-authored the paper on network analysis and food science with Sebastian Ahnert.