

## Denmark:PhD fellow in Food Science

Department of Food Science, Faculty of Science at University of Copenhagen is offering a PhD scholarship in Food Science commencing 1st February 2018 or as soon as possible thereafter.

### Description of the scientific environment

The Department of Food Science is internationally recognized for its excellent food research and education, its impact for consumers and industry and its contribution to solving global challenges.

Common to all our research is that it contributes to growth, employment and solutions to global challenges such as sustainable food production, secure food supply, food and health, and the challenges within energy and the environment.

Rated as a leader in many research areas, our robust national and international collaborations with leading research institutions and large food and non-food industries are internationally recognized at a high level.

Our research ranges from food microbiology, food chemistry, food analysis, metabolomics of molecular and technological functionality, food processing technology, and exploratory data analysis to gastronomy, sensory quality and consumer perception.

Our research group, Chemometrics and Analytical Technology, carries out research and teaching within spectroscopic quality control, process analytical technology, multivariate data analysis, chemometric algorithm development and mathematical chromatography. The research also includes human metabolomics as a function of intake of food and medicine, foodomics (food metabolomics), bioactive substances and biomarkers in food, functional food, molecular modeling and quantitative structure activity relationships (QSAR).

### Project description

The dairy industry in Denmark is famous for its cheeses. In 2015, the dairies produced 392.000 tons of cheese, of which 85% was exported. Quality control is therefore of paramount importance.

In order to become more sustainable in terms of water intake the dairies are further challenged by an increasing amount reused process water and its potential impact on product quality. This project aims at upgrading the cheese quality control in the dairy industry from laboratory-based at-line single measurements to a 100% online automated quality control of all produced cheeses.

Online quality control of cheeses is a great challenge - partly due to the size and shape and heterogeneity of the cheeses, and due to quality gradients within each cheese. Near infrared spectroscopy (NIRS) have the potential for providing a unique chemical-physical fingerprint of the cheese quality, and the project will study the possibilities in using spatial resolved NIRS for online quality control, by combining robotics and online NIRS systems.

The project will involve the development of a robotized system for measuring NIRS with spatial resolution of all cheeses in a real industrial scale dairy, development of a database system for storage and transfer of measurement data, a prediction tool for the prediction of the cheeses quality attributes and an early warning system for abnormal product variations.

Principal supervisor is Associate Professor Klavs Sørensen, Department of Food Science, Chemometrics & Analytical Technology, [kms@food.ku.dk](mailto:kms@food.ku.dk)

### **Job description**

With reference to the project manager, the work of the Ph.D. fellow will consist mainly of duties in relation to research and development within applications and automation of on-line of spectroscopic methods.

The appointee should have interests and/or qualifications within the following areas:

[Redacted text]

### **Formal requirements**

In connection with the appointment to the post special importance will be attached to the applicant having the professional and personal qualifications stated below:

[REDACTED]

The Ph.D. fellow is also required to have research potential, to be enterprising and to possess good interpersonal skills and good English skills. As criteria for the assessment of your qualifications emphasis will also be laid on previous publications (if any) and relevant work experience.

The position is available for a 3-year period and your key tasks as a PhD student at SCIENCE are:

[REDACTED]

### Terms of employment

The position is covered by the Memorandum on Job Structure for Academic Staff.

Terms of appointment and payment accord to the agreement between the Ministry of Finance and The Danish Confederation of Professional Associations on Academics in the State.

### Application Procedure

The application, in English, must be submitted electronically by clicking APPLY NOW below.

### Please include

[REDACTED] tion

The University wishes our staff to reflect the diversity of society and thus welcomes applications from all qualified candidates regardless of personal background.

The deadline for applications is **Friday December 1st, 2017, 23:59 GMT +1** .

After the expiry of the deadline for applications, the authorized recruitment manager selects applicants for assessment on the advice of the Interview Committee. Afterwards an assessment committee will be appointed to evaluate the selected applications. The applicants will be notified of the composition of the committee and the final selection of a successful candidate will be made by the Head of Department, based on the recommendations of the assessment committee and the interview committee.

The main criterion for selection will be the research potential of the applicant and the above mentioned skills. The successful candidate will then be requested to formally apply for enrolment as a PhD student at the PhD school of Science. You can read more about the recruitment process at <http://employment.ku.dk/faculty/recruitment-process/>.

**Tentative Submission Deadline : 1 December 2017**

[Further Information](#)