Purpose of role

Applications are invited for a research associate to work in Professor Ian Fisk’s Food Chemistry Research Group on a research project funded by Innovate UK, in partnership with Buhler and New Food Innovation. The food industry currently employs many process machines to remove foreign objects as well as blemished or misshapen / off-coloured products. For the next generation of machines, a more refined screening process is needed for the detection of lower levels of contaminants. The key objective of this project is to develop a novel high precision commodity sorting technology based on NIR imaging (HSI), that will reduce post-harvest crop losses, enhance nutritional value and increase food quality and sustainability in food production.

Main responsibilities
(Primary accountabilities and responsibilities expected to fulfil the role)  |  % time per year
--- | ---
1 | The development of new imaging methods for the characterisation of food quality/value traits.  | 50%
2 | Preparation of accurate, high quality, experimental data suitable for high-impact international journals.  | 10%
3 | To work effectively and productively with collaborators and PhD students to progress the project forward rapidly  | 10%
4 | Provide support, guidance and co-supervision to undergraduate and/or postgraduate co-workers  | 10%
5 | To provide intellectual input into scientific papers and other outputs of the programme  | 10%
6 | Help to maintain a safe laboratory environment including advice to PhD and undergraduate project students  | 10%
## Person specification

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<th>Essential</th>
<th>Desirable</th>
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<tr>
<td><strong>Skills</strong></td>
<td>▪ Image Analysis</td>
<td>▪ Hyperspectral image analysis</td>
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<td></td>
<td>▪ Food Chemistry Analysis</td>
<td>▪ Expertise in NIR and surface scanning techniques</td>
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<td>▪ Ability to work independently and as part of a multicultural team</td>
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<td></td>
<td>▪ Expertise in NIR and surface scanning techniques</td>
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<tr>
<td><strong>Knowledge and experience</strong></td>
<td>▪ Knowledge of food science</td>
<td>▪ Experience using hyperspectral imaging / NIR to predict food quality traits</td>
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<td>▪ Experience of identifying chemical markers of food quality traits</td>
<td>▪ Experience in the cosupervision of other research co-workers</td>
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<td>▪ Ability to build effective interactions and collaborations with others, both internally and externally.</td>
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<td>▪ A publication record in international peer-reviewed journals commensurate with stage of career</td>
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<td>▪ Well organised and self-motivated with the ability to manage and complete projects on time</td>
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<td><strong>Qualifications, certification and training (relevant to role)</strong></td>
<td>▪ PhD in Food Science</td>
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The University of Nottingham is focused on embedding equality, diversity and inclusion in all that we do. As part of this, we welcome a diverse population to join our work force and therefore encourage applicants from all communities, particularly those with protected characteristics under the Equality Act 2010.
Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University’s strategy, vision and values. The following are essential to the role:

**Valuing people**
Is always equitable and fair and works with integrity. Proactively looks for ways to develop the team and is comfortable providing clarity by explaining the rationale behind decisions.

**Taking ownership**
Is highly self-aware, looking for ways to improve, both taking on board and offering constructive feedback. Inspires others to take accountability for their own areas.

**Forward thinking**
Driven to question the status quo and explore new ideas, supporting the team to “lead the way” in terms of know-how and learning.

**Professional pride**
Sets the bar high with quality systems and control measures in place. Demands high standards of others identifying and addressing any gaps to enhance the overall performance.

**Always inclusive**
Ensures accessibility to the wider community, actively encouraging inclusion and seeking to involve others. Ensures others always consider the wider context when sharing information making full use of networks and connections.

Key relationships with others

![Diagram of key relationships]

**Line manager**
Professor of Food Chemistry (UoN)

**Role holder**
Research Fellow

**Key stakeholder relationships**
Head of Sensor Development (Buhler)
Technical Team at Buhler and UoN