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Food Waste; Shelf-life Extension; Biofilms; Food Spoilage;
Foodborne Pathogen; Microbiomes

My research group at SCELSE, NTU studies food spoilage microbe and foodborne pathogen biofilm development in the food chain from “farm to fork”. The aim is to use the information that is obtained to develop novel interventions to reduce food spoilage and increase food safety.

Potential Areas for Collaboration

- Using metagenomics to characterise microbiome community profiles in any food chain setting. This can involve characterising the native microbiome and how this community is impacted by different treatments e.g. application of antimicrobials, use of atmospheric packaging.
 - Testing antimicrobial compound efficacy of interventions/treatments/compounds that increase shelf life and safety and determining their mode-of-action.
 - Development of smart packaging/sensors for early indicators of food spoilage/presence of foodborne pathogens.
 - Development of anti-biofilm treatments/surface coatings for food chain surfaces.
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