

Project proposal

<i>Project title</i>	Development of a prediction model to provide early warning of food safety incidents	
<i>First Supervisor</i>	Professor <input type="checkbox"/>	<input type="text" value="Declan Naughton"/>
<i>Second Supervisor</i>	<input type="text" value="Prof Andrea Petroczi"/>	
<i>School</i>	Life Sciences <input type="checkbox"/>	
<i>Other member of supervisory team (no more than three KU supervisors in total)</i>	<input type="text" value="Glenn Taylor"/>	
<i>Specific requirements beyond 2:1 degree</i>	<input type="text"/>	

Project summary
(max 4,000 characters)

MSc by Research

Worldwide food safety is a major concern which directly affects the health of every person on the planet. There is growing interest in the development of computerbased tools that will 1) harness the enormous amounts of data found in food safety notifications that are realised daily, and 2) allow rapid identification of emerging risks so preventive measures can be put in place. To date the work at Kingston University has led to the world's first interactive network analytical tool to analyse complex food safety data and present the results in a user friendly way.

The aim of the MSc project is to develop a prediction model to augment this network tool in order to rapidly identify emerging issues in food safety notifications. It is envisaged that this predictive modelling approach will utilise food safety notification data along with bespoke indices such as PageRank or Kleinberg's HITS algorithm and trend information generated by the network analytical tool as input information to continuously assess the probability of high risk incidents. The project will test a range of models and amalgamate several classifiers to achieve the best prediction model for emerging incidents based on available primary and secondary input data.