PhD ʹ Food Imaging project
The University of Canterbury (UC), in Christchurch, NZ is seeking motivated postgraduate students
currently holding, or anticipating, excellent bachelor’s or master’s degrees in Electrical, Electronic,
Computer or Mechatronic Engineering, or Physics.
The successful candidates will join a strong, multidisciplinary, multi-institution, NZ government funded
team, researching electromagnetic detection and imaging techniques for process and quality control in
the food industry. Such techniques have the goal of detecting foreign objects in fast-flowing (~ 2 ms
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food media, as well as the homogeneity and temperature distribution of the media.
The research will comprise one or more of the following topics:
x Electromagnetic field modelling
x Magnetic and electric field sensors
x Precision, ultra-low noise analogue electronics and analogue to digital interfacing
x Digital synthesis of excitation fields
x Electrode design and analysis
x Signal processing and data manipulation
x Machine learning for foreign-object signature detection
x Image reconstruction for foreign objects, homogeneity and temperature distribution
x Industrial application of the developed techniques
There will be opportunities for international secondment to one of our four international collaborators
(in UK and Australia), and for travel within NZ to our partners the University of Auckland and Lincoln
Agritech Ltd. Your supervisory team is likely to comprise both UC and partner academics and engineers.
Your work will directly contribute to industrial trials of the technology developed.
A full stipend (currently NZ$ 28,000 p.a.), plus fees will be covered for a three-year period of study.
There will be opportunities to supplement this stipend by contributing to UC undergraduate courses in
related areas, as a Teaching Assistant.
To apply, contact Dr Bill Heffernan, Principal Research Engineer, EPECentre, UC, at
Bill.Heffernan@epecentre.ac.nz, and send a CV, cover letter and transcript.
Contact info@epecentre.ac.nz if you have any other questions.