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## 2<sup>nd</sup> SEAMEO-New Zealand Master Class on Digital Revolution for Education

24 May 2022 | 09.00-11.00 hrs (GMT+7/ Bangkok Time)

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Pre-registration by 20 May 2022

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### Prof Richard Green

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## “AI is Revolutionising Sustainability, Food and Biosecurity”

### Synopsis:

Over only the last few years, AI has significantly enabled fully autonomous robots, drones, vehicles and other analysis usually performed manually. Helping computers to unambiguously see and understand the world is a fascinating and exiting endeavour for our future sustainability, food and biosecurity. But this is seriously challenging when these AI platforms are still so dumb and almost blind compared with human cognitive capability.

I will describe recent AI contributions, including scanning trees for biosecurity threats and sustainability, drones pruning forests, robots pruning vineyards, autonomous underwater vehicles (AUVs) inspecting mussel lines, AUVs scanning ship hulls and wharf pylons to detect invasive biofouling species, AUVs mapping the seabed to locate scallops - and automatic blood spatter analysis.

UC is now a world leader in this AI research, with many relevant courses such as “Artificial Intelligence”, “Machine Learning”, “Deep Learning”, “Computer Vision”, “Robotics”, “Aerospace”, “AI Ethics”. But such multidisciplinary AI research only exists through collaboration with many domain experts such as those from marine biology, forestry and even philosophy.

Labour shortages and quality/accuracy/safety are the biggest drivers for so many of these applications - but based on this accelerated capability, how long until all human manual labour tasks can be automated?