

## Arrhythmia, dementia and beyond: Healthcare data science at the National Physical Laboratory

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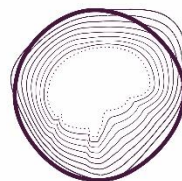
The Data Science department at the National Physical Laboratory is involved in a growing number of healthcare data science projects and initiatives, with a focus on uncertainty and standardisation. In this seminar, two exemplars of our work will be presented, and an overview of some upcoming projects will be shared.

### Validation of algorithms for cardiac arrhythmia detection (MedalCare, [link](#))

MedalCare, or 'Metrology of automated data analysis for cardiac arrhythmia management', is a cross European project which examined the performance of machine learning methods that detect cardiac disorders on electrocardiogram signals. Part of this program of work investigated the robustness of convolutional neural networks to physiological ECG noise, this study will be presented.

### Early detection of dementia causing diseases (EDoN, [link](#))

The Early Detection of Neurodegenerative disease (EDoN) Initiative is an ambitious project, spearheaded by Alzheimer's Research UK, which aims to revolutionise the early detection of dementia-causing disease. Our preliminary analysis presented here has looked at how mood disorders, such as depression, can complicate diagnosis in the early stages.



**EDoN**  
Early Detection of  
Neurodegenerative  
diseases