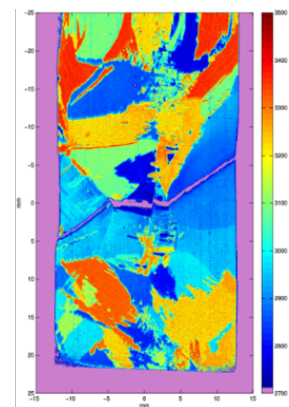
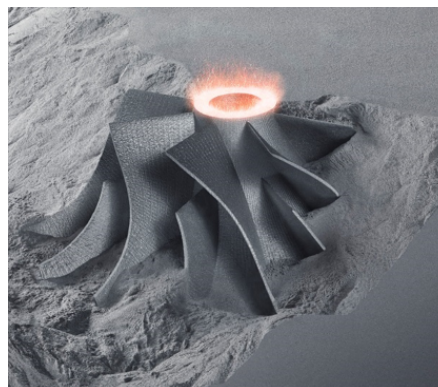
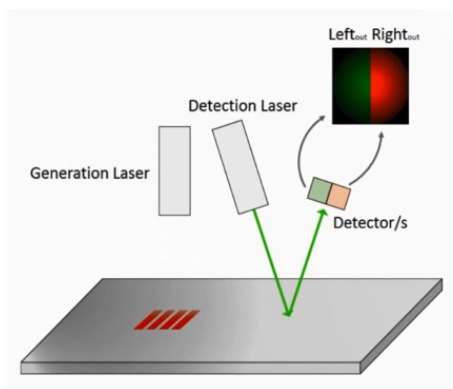




# Optics and Photonics Group Lunchtime Seminar

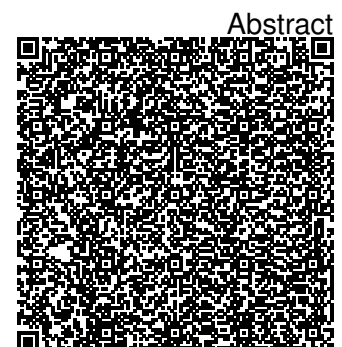
## “Non destructive evaluation of additive manufactured component microstructure”

Don Miles Pieris



12:00pm Thursday 11th May 2017  
203 Tower Building  
All Welcome

[http://optics.nottingham.ac.uk/wiki/Talks\\_2017](http://optics.nottingham.ac.uk/wiki/Talks_2017)



Abstract

# **“Non destructive evaluation of additive manufactured component microstructure”**

Don Miles PIERIS  
12:00pm Thursday 11th May 2017  
203 Tower Building  
All Welcome

Additive Manufacturing (AM) is a relatively new manufacturing technique compared to more established methods such as casting, forging and milling. However, it has the capability to manufacture much more complex components, reduce component mass and create more optimised geometries. Due to its immaturity, AM components tend to contain a wide range of defects and there is currently very little control over their microstructure. Non-destructive methods can be used to detect and categorise these defects and then used to alter build parameters to minimise the defects. Similarly, component microstructure can be detected and altered by varying several build parameters. This can be used as part of a feedback loop to manufacture components with minimal defects and desirable microstructure.