

# **Integrability, Medical Imaging and Boundary Value Problems**

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## **Resumo/Abstract:**

Ideas and techniques of Integrability have had a significant impact in several areas of science and engineering. In this lecture, two such applications will be reviewed:

- a) An analytical approach to certain medical imaging techniques;
- b) a unified approach to analysing boundary value problems.

The latter approach unifies the fundamental contribution to the analytical solution of PDEs of Fourier, Cauchy and Green, and also presents a non-linearisation of some of these results.