

# **RECOVERING UNIQUENESS IN LAYER POTENTIAL REPRESENTATIONS – AN INVERSE SCATTERING PERSPECTIVE**

WAGNER MUNIZ

Dating back to the work of Douglas Jones, Fritz Ursell and Ralph Kleinman, I will describe a modified Green's function approach in the context of circumventing non-uniqueness issues in the layer potential/boundary integral equation method when solving forward time-harmonic scattering problems. This is an alternative to the standard combined single- and double-layer potential formulation.

Then, from an inverse scattering perspective, I will discuss the lack of injectivity of the far field data operator at some special wavenumbers, and how to recover injectivity by the modified approach with the introduction of more information on the scatterer.