



## Analysis Seminar

**Title:** Cofactor Matrix Theory

**Speaker:** R. Harte

**Date:** Tue 7th February 2023 at 3:00PM

**Location:** Seminar Room SCN 1.25

**Abstract:** The Adjugate, or “classical adjoint”, of a square matrix is constructed by a curiously elaborate routine: striking out the row and the column of a generic entry of a  $(k+1) \times (k+1)$  matrix, replacing the entry by the Determinant of the  $k \times k$  matrix thus revealed, then moving the resulting number to its mirror image in the diagonal, and finally either changing its sign or not. Since the determinant is itself derived from a  $k \times k$  matrix, the stage would appear to be set for an induction. In this talk we try to ride two horses: on the one hand to provide this induction, and on the other to embed it a more abstract, axiomatic, environment.

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