This series of lectures takes Gaussian operators as a basis for the study of classical groups. A Gaussian integral operator has the form

$$Sf(x) = \int_{\mathbb{R}^n} \exp \left\{ \frac{1}{2} \sum_{i,j} a_{ij} x_i x_j + \sum_{i,j} b_{ij} x_i y_j + \frac{1}{2} \sum_{i,j} c_{ij} y_i y_j \right\} f(y) \, dy.$$ 

An important feature is the exposition of the Weil representation, also associated with the names Friedrichs, Segal, Berezin, and Shale. The text presents an analytic approach to group representations rather than algebraic. The work is nicely accessible. Most calculations are at least clearly indicated if not explicitly worked out.

A list of the chapter titles gives a good idea of the approach and contents of the book:


The text works well not only as an introduction, but as a fairly extensive survey as well. Overall it looks to be a useful reference for continued consultation and study.

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