Advanced Studies in Pure Mathematics 14, 1988 Representations of Lie Groups, Kyoto, Hiroshima, 1986 pp. 31-121

## Multiplicity One Theorems for Generalized Gelfand-Graev Representations of Semisimple Lie Groups and Whittaker Models for the Discrete Series

## Hiroshi Yamashita

## Contents

- § 0. Introduction
- Part I. Multiplicity one theorems for generalized Gelfand-Graev representations
- § 1. Generalized Gelfand-Graev representations (GGGRs)
- § 2. Sufficient conditions for multiplicity free property
- § 3. Spaces of Whittaker distributions
- § 4. Quasi-elementary Whittaker distributions on Bruhat cells
- § 5. Important types of GGGRs and their finite multiplicity property
- § 6. Multiplicity one theorems for reduced GGGRs

Part II. Whittaker models for the discrete series

- § 7. Irreducible highest weight representations and the holomorphic discrete series
- § 8. Method of highest weight vectors
- § 9. Preliminaries for determination of highest weight vectors
- § 10. Determination of highest weight vectors (Step I): Case of  $C^{\infty}$ induced GGGRs
- § 11. Determination of highest weight vectors (Step II): Case of unitarily induced GGGRs
- § 12. Whittaker models for the holomorphic discrete series and irreducible highest weight representations

References

## § 0. Introduction

The idea of induced representation goes way back to G. Frobenius and I. Schur, and it has been always playing central and indispensable

Received March 23, 1987.