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D-modules, Representation Theory, and Quantum Groups

Lectures given at the 2nd Session of the Centro
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PREFACE

In this CIME session we aimed at proposing to a wide audience the language and the techniques of various fields (such as D-modules, K-theory, equivariant cohomology, microlocal study of sheaves and quantization of groups) converging to recent common results on index theorems and representation theory.

The contents of the lectures can be roughly divided into two groups:
D-modules and microlocal study of sheaves (P. Schapira and J.-P. Schneiders), K-theory and D-modules (L. Boutet de Monvel), G-equivariant cohomology (N. Berline and M. Vergne)
The theory of quantum groups, with particular emphasis to the quantization of some remarkable Poisson groups (C. De Concini and C. Procesi).

The last ingredient of the school was the magic of Venice.

A. D'Agnolo
G. Zampieri

Paris, March 19th, 1993

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