THE FIELDS INSTITUTE

ABSTRACTS 1.2

FOR RESEARCH IN MATHEMATICAL SCIENCES

KONSTANZE RIETSCH University of Oxford

Introduction to Perverse sheaves

This will be an introductory series of lectures on perverse sheaves focusing mainly on the intersection cohomolgy complexes. These play an important role in various areas of representation theory (for example in Kazhdan-Lusztig theory or Springer correspondence). Our immediate goal will be to lay the groundwork for Lusztig's geometric definition of a canonical basis of U_q^- which will be explained in the later talks of Y. Saito.