ALFRED NOËL, The University of Massachusetts, Boston, Massachusetts 02125, USA Maximal Tori of reductive centralizers of nilpotents in exceptional complex symmetric spaces

The maximal tori and normal triples that I shall describe in this talk arise naturally in the study of nilpotent orbits of Lie groups and play an important role in several problems such as: classification of nilpotent orbits of real Lie groups, description of admissible nilpotent orbits of real Lie groups, classification of spherical nilpotent orbits, determination of component groups of centralizers of nilpotents in symmetric spaces. I shall present a simple algorithm for computing such tori and discuss two of the above applications.