imUVa Instituto de Matemáticas

im[S/T]

Universidad de Valladolid

# SEMINARIO


## Charles R. Johnson

*(College of Williams and Mary)*


*"Eigenvalues, Multiplicities and Graphs: New Advances and Open Questions"*


**Abstract:** Let *G* be an undirected graph on *n* vertices and let *S(G)* denote the set of all symmetric matrices with graph *G* and let *L(G)* denote the set of all multiplicity lists occurring among the matrices in *S(G)*. The diagonal entries of matrices in *S(G)* are free. There has long been study of this question that has resulted in certain key theorems and much specific information about lists for certain graphs. The case of trees has remarkable structure and has received considerable attention.

We will review the history of results in the area and then move to some (very) recent advances, dealing with general matrices, over general fields and geometric multiplicities. Then, we will survey some important open questions, and thoughts about them, time permitting.


**Aula Alan Turing de la E. T. S. de Ingeniería Informática**
**Viernes 15 de Mayo de 2015 a las 12:30**

**Organiza:** Grupo de Investigación SINGACOM.