

*Librería*  
***Bonilla y Asociados***  
*desde 1950*



**Título:**

**Autor:**

**Precio:** \$1136.12

**Editorial:**

**Año:** 2011

**Tema:**

**Edición:** 1ª

**Sinopsis**

**ISBN:** 9780821869277

The authors develop a notion of axis in the Culler-Vogtmann outer space  $X_r$  of a finite rank free group  $F_r$ , with respect to the action of a nongeometric, fully irreducible outer automorphism  $\phi$ . Unlike the situation of a loxodromic isometry acting on hyperbolic space, or a pseudo-Anosov mapping class acting on Teichmüller space,  $X_r$  has no natural metric, and  $\phi$  seems not to have a single natural axis. Instead these axes for  $\phi$ , while not unique, fit into an "axis bundle"  $A_\phi$  with nice topological properties:  $A_\phi$  is a closed subset of  $X_r$  proper homotopy equivalent to a line, it is invariant under  $\phi$ , the two ends of  $A_\phi$  limit on the repeller and attractor of the source-sink action of  $\phi$  on compactified outer space, and  $A_\phi$  depends naturally on the repeller and attractor.

The authors propose various definitions for  $A_\phi$ , each motivated in different ways by train track theory or by properties of axes in Teichmüller space, and they prove their equivalence.