A Generalization of Jaeger's Conjecture

M. Jamaali
Sharif University of Technology
Tehran, Iran

Let F be a finite field with at least 4 elements. It was conjectured that if $A \in \mathrm{GL}_n(\mathrm{F})$, then there exists an element $x \in F^n$ such that both x and Ax have no zero component. In this talk we show that if R is an infinite ring with unity, $u, v \in R^n$ and $A \in \mathrm{GL}_n(\mathrm{R})$, then there exists an element $x \in R^n$ such that no entry of $x - u$ and $Ax - v$ is zero. Also we investigate Jaeger's conjecture for incidence and adjacency matrices of graphs.