



ÇANKAYA UNIVERSITY  
FACULTY OF ARTS AND SCIENCES  
DEPARTMENT OF MATHEMATICS

## SEMINAR

### Lyapunov type inequality and its applications for linear dynamic Hamiltonian systems

**SPEAKER** : Assoc. Prof. Dr. Zeynep Kayar

**DATE** : 25 October, 2019

**TIME** : 13:30

**PLACE** : Çankaya University (Central Campus), R-213

A novel Lyapunov type inequality is established for linear  $2n \times 2n$  Hamiltonian systems on arbitrary time scales by using a matrix measure approach. Then the two important applications of the obtained result, namely, diconjugacy criteria of such systems and lower bounds on eigenvalues of associated eigenvalue problems are presented. The obtained Lyapunov type inequality not only unifies the related continuous and discrete ones but also generalizes and improves them.

Joint work with Ağacık Zafer.

*All interested are cordially invited.*

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