**عنوان مقاله:**

EFFECT OF ACTUATOR PLACEMENT ON DYNAMIC RESPONSE OF A SMART BEAM

**محل انتشار:**

شانزدهمین کنفرانس سالانه بین المللی مهندسی مکانیک (سال: 1387)

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**خلاصه مقاله:**

This paper presents a numerical study concerning the active vibration control of a smart cantilever beam by using piezoelectric patches. The main objective of this study is to investigate the effect of the actuator placement on dynamic response of the beam specially in terms of modal nodes at every mode shape. Dynamic finite element equations of the piezoelectric beam is obtained using Hamilton's principle with the finite element approximation. Two different control techniques ,an LQR and an LQG were applied. Results were found by simulating the cases in MATLAB and ANSYS. It's obtained that placing the actuator closer to the fixed end shows better results in attenuating the vibrations.

**کلمات کلیدی:**

Piezoelectric, Active control, Smart structures , Finite element

**لینک ثابت مقاله در پایگاه سیویلیکا:**

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