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Laszlo P. Kindrat*, laszlokindrat@gmail.com, and **Marianna Shubov**. *Asymptotics of the eigenfrequencies of the Euler-Bernoulli beam with fully non-dissipative boundary feedback.*

This talk is concerned with the distribution of natural frequencies of the Euler-Bernoulli beam subject to fully non-dissipative boundary conditions. The beam is clamped at the left end and equipped with a 4-parameter $(\alpha, \beta, k_1, k_2)$ linear boundary feedback law at the right end. The 2×2 boundary feedback matrix of control parameters relates the control input (a vector of velocity and its spatial derivative at the right end), to the output (a vector of shear and moment at the right end). The role of the control parameters is examined and asymptotic results about the spectrum of the dynamics generator are presented. (Received September 14, 2018)