1163-15-585 **Ana I. Julio** and **Carlos Marijuán*** (marijuan@mat.uva.es), Departamento de Matemática Aplicada, ETS Ingeniería Informática, Campus Miguel Delibes, calle Belén,15, Valladolid, Spain, and **Miriam Pisonero** and **Ricardo L. Soto**, , Chile. *On universal realizability of spectra.*

The nonnegative inverse eigenvalue problem (NIEP) is the problem of characterizing all possible spectra of entrywise nonnegative matrices. If there exists a nonnegative matrix with spectrum Λ for each possible Jordan canonical form allowed by Λ, we say that Λ is universally realizable (UR). It is well known that an $n \times n$ nonnegative matrix A is co-spectral to a nonnegative matrix B with constant row sums. We extend the co-spectrality between A and B to a similarity between A and B, when the Perron eigenvalue is simple. We ask whether certain properties of the NIEP, such as the three rules that characterize the C-realizability of lists (one the strongest sufficient conditions for the NIEP), extend or not to the UR. In particular, we show that if a list of complex numbers $\Lambda = \{\lambda_1, \lambda_2, \ldots, \lambda_n\}$, with Perron eigenvalue λ_1, is UR, then $\{\lambda_1 + \epsilon, \lambda_2, \ldots, \lambda_n\}$ is also UR for any $\epsilon > 0$. We also consider the universal realizability of the Guo perturbation $\{\lambda_1 + \epsilon, \lambda_2 - \epsilon, \lambda_3, \ldots, \lambda_n\}$, and of the union of two UR lists Λ_1 and Λ_2. (Received September 10, 2020)