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Presentation "Non-Hermitian control of Hermitian waveguide arrays"

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Abstract: "In the present paper we consider an optical waveguide array with embedded active nonlinear elements. We derive the theoretical background that describes wave propagation in the individual elements of the examined array, by combining nonlinearity with coupled mode equations, leading, under suitable assumptions, to the discrete non-linear Schrödinger equation, (DNLS). Adjusting DNLS to the individual elements of the array, we examine their propagation dynamics and we verify our findings through numerical simulation. Lastly we execute the numerical simulation on the examined array, searching for properties with the potential of utilization in technological applications."

Presenter: RIZOS, Spyros (National Technical University of Athens)

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