



MECHANICAL ENGINEERING STUDENT SEMINAR

Thursday, November 17, 2022, at 13:30,

Online: <https://technion.zoom.us/my/talko>

Oblique scattering from non-Hermitian optical waveguides

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A judicious design of gain and loss leads to counterintuitive wave phenomena that are inaccessible by conservative systems. Notably, such designs can give rise to laser-absorber modes and anisotropic transmission resonances. Here, we analyze the emergence of these phenomena in an optical scatterer with sinusoid gain-loss modulation that is subjected to monochromatic oblique waves. We derive an analytical solution to the problem, with which we show how the scatterer parameters, and specifically the modulation phase and incident angle, constitute a real design space to access these phenomena.

Note: the seminar will be given in Hebrew