

## **Coupling of single mechanical resonators through surface elastic waves**

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This talk will illustrate how interaction between a mechanical resonator and a supporting substrate can be considered beyond support loss and used in the field of phononics to control the propagation of surface elastic waves. After an introduction of the phononic crystal and local resonance concepts, it will focus on experimental demonstrations of confinement and manipulation of the elastic energy in micron-scale resonators exhibiting dimensions at least ten times smaller than the excitation wavelength. Much similarly to what has been achieved in plasmonics, such an approach could make it possible to conceive phononic chains capable to carry the elastic energy along the most twisted paths.