

InRaSS Colloquium Series

6th Talk (24th September, 2023 18:00 – 19:00 IST)



Webinar on:

Introduction to Metamaterials

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Metamaterials are designed materials with sub-wavelength features arranged in either periodic or aperiodic patterns. Though the field started with the invention of negative index materials, it evolved to encompass a wider range of materials. Two broad classifications are, metal-dielectric and all-dielectric metamaterials. Metal-dielectric metamaterials support plasmons that localize light to sub-wavelength dimensions and this beat diffraction limit. The plasmon mediated local field as well as resonances originating from the structure lead to exotic properties for this class of metamaterials. All-dielectric metamaterials on the other hand offer advantages like low or no loss and can have unique properties. In this talk, negative index, plasmonic, and all-dielectric metamaterials will be introduced and examples of metamaterial structures will be discussed.

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Webinar Link: <https://www.youtube.com/watch?v=0VKKoHDhtn-0>