

*Dr Toney Teddy Fernandez*

## The science of waveguide formation by ultrafast light matter interaction

The fundamental understanding of waveguide formation by ultrafast light matter interaction is still scattered even after almost three decades of investigation. Ensemble of processes like photoexcitation, avalanche ionization, electron-phonon scattering, heat diffusion/accumulation etc during waveguide formation increases the complexity of a conclusive explanation. Glass being one of the most used dielectric for waveguide formation, we have decided to investigate the process through an entirely different perspective. The explanation towards the same will be based on the search for a material dependant parameter that will help not only to expand the parameter space of waveguide inscription but also to optimize their front end device performance.

When: Thursday 13 June

Time: 3 PM

Where: Multipurpose Room, 2.300 7WW



**Bio:** Dr. Toney Fernandez received his PhD from the Mahatma Gandhi University. During his worked at Politecnico di Milano, Italy, University of Leeds and Institute of Optics at Spanish National Research Council, Madrid. His research interest include understanding the ultrafast light matter interaction, femtosecond laser written devices and spectroscopy of high index materials.