

# Introduction to Sampling and Reconstruction Problems

Ankush Kumar Garg\*

Abstract

In this introductory talk, we will explore the concepts of sampling and reconstruction problems. Sampling involves converting a continuous signal into discrete samples, facilitating easier processing and storage. Reconstruction, in turn, focuses on retrieving the original continuous signal from its discrete samples. We will also discuss the role of frames, which are collections of vectors or functions, in providing stable and reliable signal representation within specific spaces. Additionally, we will also briefly discuss the developing area of dynamical sampling.

---

\*Institute Postdoc Fellow, Department of Mathematics and Statistics, IIT Kanpur, Uttar Pradesh India-208016.