1154-42-1203 **Adel Faridani*** (faridani@math.oregonstate.edu), Department of Mathematics, Oregon State University, Corvallis, OR 97331-4605, and **Hussain Al-Hammali**. *On the peak value problem for non–uniform sampling.*

The problem of finding an upper bound for the infinity norm of signals from their sampled values is called the peak value problem. We consider the peak value problem in the context of non–uniform sampling.

A sampling set Λ is called a set of stable sampling if there exists a constant K such that

$$\| f \|_\infty \leq K \sup_{\lambda\in\Lambda} |f(\lambda)| \quad \text{for all } f \in B_\sigma^\infty,$$

where B_σ^∞ denotes the space of bounded signals f whose (distributional) Fourier transform $\hat{f}$ has compact support in the interval $[-\sigma, \sigma]$.

We derive an upper bound for K that is valid for any set of stable sampling Λ for which the maximum distance between two neighboring points is less than π/σ. We also provide numerically computed upper bounds for K for some specific sampling sets Λ that do not satisfy the above condition. (Received September 13, 2019)