1163-42-98   **Yugesh Shanmugam*** (`yugeshs@ssn.edu.in`), Assistant Professor, Department of Mathematics, SSN College of Engineering,Kalavakkam-603 110, Chennai, 603 110, India. *Generalized average sampling and reconstruction for shift-invariant spaces.*

Sampling theorem is one of the significant results in signal analysis and modern digital data processing. Average sampling is motivated by realistic needs. As an extension of the average sampling, we analyze generalized average sampling and reconstruction problem over shift-invariant space V_0. We show that for any $f \in V_0$ can be uniquely and stably reconstructed from its generalized average samples. The optimal upper bound for the support length of averaging functions can also be investigated and the reconstruction procedure could be discussed. (Received August 14, 2020)