1159-14-17 **Vida Milani*** (vida_milani@yahoo.com), Utah State University, Mathematics department, 4205 old Main Hill, Logan, UT 84322, and **Seyed M-H Mansourbeigi** (phy_math_ee@yahoo.com), Department of Electrical Engineering and, Computer Science, College of Engineering, Utah State University, 4205 old Main Hill, Logan, UT 84322. *Mathematical Modeling for Viral Disease Distributed Applications.* Preliminary report.

The goal of the present article is to demonstrate a mathematical modeling for viral disease distributed applications. The present paper applies tools from topology and sheaf theory as an appropriate mathematical modeling to reflect interactions among elements of resources. The methodology is applied to study the efficiency of the resources to prevent spread of viral diseases in populations of interacting individuals. Heterogeneous data are gathered from variety of tools for Full blood count ( a viral infection may raise or reduce the white cell count), C-reactive protein (CRP) test, biopsy, electron microscopy, resistance testing for viral mutation. (Received June 26, 2020)