

Abstract Submitted  
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**The Hiperwall tiled-display wall system for Big-Data research.**

MUHAMMAD SALEEM, Bellarmine University — In the era of Big Data, with the increasing use of large-scale data-driven applications, visualization of very large high-resolution images and extracting useful information (searching for specific targets or rare signal events) from these images can pose challenges to the current display wall technologies. At Bellarmine University, we have set up an Advanced Visualization and Computational Lab using a state-of-the-art next-generation display wall technology, called Hiperwall (Highly Interactive Parallelized Display Wall). The 16 ft x 4.5 ft Hiperwall visualization system has a total resolution of 16.5 MP which consists of eight display-tiles that are arranged in a 4 x 2 tile. This system can perform interactive visual data analytics of large comparative views of multiple large images in Astronomy and event displays in experimental High Energy Physics. Users can display a single image across all the display-tiles, or view many different images simultaneously on multiple display-tiles. Hiperwall enables simultaneous visualization of multiple high-resolution images and its contents on the entire display wall without loss of clarity and. Hiperwall's middleware also allows researchers in geographically diverse settings to collaborate on large scientific experiments. This setup provides a new generation of display wall setup and is based on the Hiperwall technology, which is a robust visualization system for Big Data research.

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