Advanced Visualisation l

In this era of big data, traditional appro to visualisation are being challenged.

The Advanced Visualisation Lab explores new techniques and technologies to produce the most e f ective visualisation tools available for a wide range of research and industries.

The Lab's work supports, enhances and extends the use of advanced visualisation; builds capability in data visualisation; and researches, designs, develops and implements new solutions.

CASE STUDY

Seeing Stars: Tera-scale Astronomical Data Analysis and Visualisation (GraphTIVA)

The sheer volume of data that requires sifting and analysis is a challenge for contemporary science. The ability to perform the fundamental tasks of analysis, processing and visualisation is becoming a key factor for competition and scienti fc discovery.

To support deeper research, Swinburne has designed and built the Tera-scale interactive visualisation and data analysis framework, GraphTIVA. GraphTIVA's computing power is approaching one teravoxel per second, resulting in performance that is 10–100 times faster than the best possible performance with traditional single-node, multi-core CPU implementations. GraphTIVA's scalability and ability to use parallel algorithms for analysis allows the framework to meet the image analysis and visualisation requirements of next-generation telescopes.

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