**Message from the Guest Editors**

This Special Issue on “Big Data in Earth Observation: a new computing paradigm for remote data analysis” is intended to introduce the latest techniques in high performance computing (HPC) to the development and application of new image processing techniques for an adequate and computationally efficient exploitation of remotely sensed scenes from a Big Data point of view, exploring new computationally efficient models for extracting information from huge remote sensing datasets, with particular interest in the development of parallel and distributed techniques based on graphical processing units (GPUs) and grid/cloud computing platforms.

The goal of this Special Issue is to collect the latest and most advanced ideas regarding the new and efficient techniques for extracting information based on the new trends in advanced learning algorithms (including the newest machine and deep learning approaches).