

Data Analytics Applications: Call For Interest



This call is closed

Cineca, by means of the Department of Supercomputing, Applications and Innovation (SCAI), has recently initiated a new program for the promotion of Big Data Science

In order to define, prepare and deliver an open call for projects in the realm of data analytics and cloud computing, Cineca invites the Italian scientific community **to submit Expressions of Interest**.

Data analytics projects are targeted at data intensive computing as a complement of high performance computing and should address the challenges that arise when either the volume of data or the variety (data may be unstructured) or the velocity at which data are collected make them difficult to be processed.

These challenges are already well known in those fields where massive data sets are acquired from instruments or from simulations: the rate at which data can be produced has far outpaced the rate at which can analyzed and new algorithms and infrastructures have become necessary. The volume and variety of scientific data have been typically associated with Astroparticle, Climatology, Environment... , but the necessity of grappling with Big Data and the desirability of unlocking information hidden within it is now a key theme in all the sciences, maybe the key scientific theme across all fields (examples can be found in the spatial data, machine data analytics, text analytics, socio economical data analytics, energy efficiency, clinical data, ...).

The collection of Expressions of Interest is the initial step towards selecting and defining large projects that will take full advantage of the latest Cineca's infrastructure, denominated PICO, and devoted to accommodate high performance data analytics case studies. Submitting an Expression of Interest offers communities with the opportunity to become involved in defining the future calls and, on the other hand, the Cineca team to define the best way to structure these data services.

Expressions of Interest should be limited to a text of 5000 characters max. Submission will be possible through this **on-line web form**, which **will be activated on October 16th, 2014**. The **deadline for submission is November 7th, 2014**.

The solicitation invites proposals with emphasis on scientific and societal challenges dealing with the development of techniques, methodologies and technologies of key relevance to a Big Data problem. Submissions must address critical challenges for data management, data analytics, or scientific discovery impacted by the processing of vast amount of data, either structured or unstructured. Approaches can be computational, statistical, or mathematical, and proposals may focus on novel analysis methods, experimental evaluation of emerging technologies in this context, and the provisioning of cloud computing services. A good level of innovation is encouraged in all proposals.

Areas of major interests follow:

- I/O bound data analytics application dealing with either structured (i.e. database) or unstructured data, which could take advantage of the PICO's high-end solid state storage.
- High throughput applications based on the MapReduce paradigm.
- Applications that require the integration of multiple data sets or observational and simulation data to glean new insights through the use of data mining and machine learning techniques
- Cloud computing applications and services which require an elastic environment for performance scale-up
- Legacy applications that require a dedicated, high-performance, environment to be executed.

The Cineca team will support future projects during the deployment phase of selected applications and services to guarantee the proper use of the system for the achievement of best-possible performance and to guarantee the support in the selection and application of the appropriate algorithm for data exploration and predictive modeling.

Please follow this **link** to go to the web form.

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