

CALL FOR PAPERS

Future Generation Computer Systems

SPECIAL ISSUE ON VOLUNTEER COMPUTING AND DESKTOP GRIDS

The Elsevier Science's [Journal Future Generation Computer Systems](#) with the subtitle: "The International Journal of Grid Computing: Theory, Methods and Application" will publish a special issue on Volunteer Computing and Desktop Grids.

Desktop grids and volunteer computing systems (DGVCS's) utilize the free resources available in Intranet or Internet environments for supporting large-scale computation and storage. For over a decade, DGVCS's have been one of the largest and most powerful distributed computing systems in the world, offering a high return on investment for applications from a wide range of scientific domains (including computational biology, climate prediction, and high-energy physics). While DGVCS's sustain up to PetaFLOPS of computing power from hundreds of thousands to millions of resources, fully leveraging the platform's computational power is still a major challenge because of the immense scale, high volatility, and extreme heterogeneity of such systems.

The purpose of this special issue is to focus on recent advances in the development of scalable, fault-tolerant, and secure DGVCS's. ***This special issue will have special emphasis on the interaction of clouds and desktop grids.***

As such, we invite submissions on DGVCS topics including the following:

- Cloud computing over unreliable enterprise or Internet resources
- DGVCS middleware and software infrastructure (including management), with emphasis on virtual machines
- incorporation of DGVCS's with Grid and Cloud infrastructures
- DGVCS programming environments and models
- modeling, simulation, and emulation of large-scale, volatile environments
- resource management and scheduling
- resource measurement and characterization
- novel DGVCS applications
- data management (strategies, protocols, storage)
- security on DGVCS's (reputation systems, result verification)
- multi-core DGVCS's
- fault-tolerance on shared, volatile resources
- peer-to-peer (P2P) algorithms or systems applied to DGVCS's

Submission Deadline

30 May 2010
Early submission encouraged

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Submission Details

Manuscripts formatted along the [guidelines](#) for authors of the Future Generation Computer Systems must be [submitted online](#) by 30 May 2010. Manuscripts are typically 15 pages in length, and should not exceed 20 pages.