



# Challenges of Large Applications in Distributed Environments (CLADE)

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In conjunction with the 14th International Symposium on High Performance Distributed Computing ([HPDC-14](#))

Research Triangle Park, NC, July 2005

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## IMPORTANT DATES

- Submission deadline: February 24, 2005
- Notification of acceptance: April 12, 2005
- Final Manuscript due: May 03, 2005
- Workshop: July 24, 2005

Advances in networking, high-end computers, large data stores and middleware capabilities are ushering in a new era of large scale, distributed applications, which dynamically marshal resources across a heterogeneous, distributed environment. Along with these opportunities come new challenges. The goal of this workshop is to encourage innovation by addressing the complex issues that arise in large-scale applications of distributed computation, and to promote the development of innovative applications that effectively use distributed resources and adapt to a wide range of heterogeneity and dynamics in space and time. This includes development, deployment, management and evaluations of large scale applications in science, engineering, medicine, business, economics, education, and other disciplines, on Grids and other distributed heterogeneous and dynamic computing environments. Issues related to irregularity of applications and algorithms in space and time, variability in programming environments, heterogeneity of software and hardware platforms, dynamics, ad hoc behaviors and unreliability of execution environments, etc., in the context of these applications are of particular interest.

This workshop promotes the exchange of ideas, information, and novel developments among universities, federal laboratories, and industry. It fosters multidisciplinary collaborative solutions to issues arising in large-scale distributed applications. Topics of interest to this workshop include (but are not limited to) applications that illustrate advances in the following areas:

- Very large-scale distributed applications
- Autonomic applications and runtime systems
- Application-specific portals in distributed environments
- Distributed problem-solving environments
- Distributed, collaborative science applications
- Heterogeneous spatial and temporal applications, e.g., with heterogeneous characteristics in time, space and domain
- Distributed, multidimensional, dynamically adaptive applications
- Applications of new theories and tools for constructing adaptive software systems
- Variable granularity environments
- Examples of distributed applications benefiting from advances in
  - Resource management, dynamic scheduling or load balancing in heterogeneous environments
  - Runtime support for intelligent, adaptive systems
  - Programming models for heterogeneous and dynamic computation
  - Portability, quality of service, or fault-tolerance in cluster and grid computation
  - Performance analysis, evaluation and prediction of adaptive systems

## PAPER SUBMISSIONS

CLADE 2005 invites authors to submit original and unpublished work. Please submit full papers (10 pages maximum, [IEEE CS format](#)). Electronic submission is strongly encouraged. Hard copies will be accepted only if electronic submission is not possible. Submission implies the willingness of at least one of the authors to register at the workshop and present the paper. Any questions concerning hardcopy submissions or any other issues may be directed to the Program Chair.

## PUBLICATION

The workshop proceedings will be published by IEEE Computer Society Press and distributed at the conference.

## FURTHER INFORMATION

For further information please contact the Program Chair: Alan Sussman, <[als@cs.umd.edu](mailto:als@cs.umd.edu)>