

Bare Demo of IEEEtran.cls for IEEECS Conferences

Authors Name/s per 1st Affiliation (Author)

line 1 (of Affiliation): dept. name of organization

line 2: name of organization, acronyms acceptable

line 3: City, Country

line 4: Email: name@xyz.com

Authors Name/s per 2nd Affiliation (Author)

line 1 (of Affiliation): dept. name of organization

line 2: name of organization, acronyms acceptable

line 3: City, Country

line 4: Email: name@xyz.com

Abstract—The abstract goes here. **DO NOT USE SPECIAL CHARACTERS, SYMBOLS, OR MATH IN YOUR TITLE OR ABSTRACT.**

Keywords—component; formatting; style; styling;

I. INTRODUCTION

Achievable performance depends on the combination of communication patterns and routing algorithm being used.

Load balancing, routing, application communication patterns.

In this work, we propose a set of approaches that improve network performance for applications in Blue Gene/Q supercomputers.

II. RELATED WORK

GOAL paper Several bgq paper

III. EXPERIMENT SYSTEM

IV. APPROACHES

A. Heuristic approaches

1) *Heuristic 1*: In this approach, we search for paths to Centric algorithm, run at every node. Need information in advance.

In the **Algorithm ??**, we start by adding

2) *Heuristic 2*:

V. BENCHMARKS

A. Experimental

1) *Chunk size for pipeline*:

2) *Various message sizes*:

3) *Many ranks*:

4) *Scaling*:

B. Communication patterns

In this paper we demonstrate data movement performance of our OPTIQ framework and existing MPI's routines on the following communication patterns:

- All to many, many to all
- I/O Aggregation: a special case of All to many (or many to many)
- Many to many: disjoint/exclusive
- Many to many: subset

- Many to many: partially joint (not subset, not disjoint)
- Many to many: sparse

C. All to many or Many to all

VI. CONCLUSION

ACKNOWLEDGMENT

The authors would like to thank... more thanks here

REFERENCES

- [1] H. Kopka and P. W. Daly, *A Guide to L^AT_EX*, 3rd ed. Harlow, England: Addison-Wesley, 1999.