

# The Name of the Title is Hope

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## ABSTRACT

A clear and well-documented  $\text{\LaTeX}$  document is presented as an article formatted for publication by ACM in a conference proceedings or journal publication. Based on the “acmart” document class, this article presents and explains many of the common variations, as well as many of the formatting elements an author may use in the preparation of the documentation of their work.

## CCS CONCEPTS

• **Computer systems organization** → **Embedded systems**; *Redundancy*; Robotics; • **Networks** → Network reliability.

## KEYWORDS

datasets, neural networks, gaze detection, text tagging

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## 1 INTRODUCTION

Graph querying, CFPQ, applications.

Matrix-based algorithm. Performance problems.

Research question: comparison.

Contribution

\*Both authors contributed equally to this research.

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- Implementation
- Evaluation
- Dataset for

This paper is organized as follows. !!!!

## 2 MATRIX-BASED ALGORITHM FOR CFPQ

Formal description of matrix-based algorithm [1].

Pseudocode and notes. Performance-critical section is matrix multiplication!

## 3 IMPLEMENTATION

Hypotisis which we wont to check.

- CPU vs GPGPU
- Sparse vs Dense
- !!!
- !!!

Approaches for comparison. Why we choose these. Brief overview of approaches.

Generic notes on optimizations. Notes on data transferring. On matrix changes tracking (we should multiply pair of matrices only if one of them changed in last iteration)

### 3.1 m4ri

Description of impl 1

### 3.2 Python sparse CPU

Description of impl 2

### 3.3 CUDA naive

Description of impl 3

### 3.4 CUDA 4 russian method

Description of impl 4

### 3.5 Python + CUDA

Description of impl 5

### 3.6 Smth else?

Description of impl n

## 4 EVALUATION

Environment setup.

### 4.1 Input Data Format

Results: tables, graphics, etc

## 5 DISCUSSION

Discussion of evaluation results.

## 6 CONCLUSION AND FUTURE WORK

We present !!!

Our evaluation shows that !!!

As a direction for future research we can propose !!!! Graphs which is not fit in RAM.

## ACKNOWLEDGMENTS

To Robert, for the bagels and explaining CMYK and color spaces.

## REFERENCES

- [1] Rustam Azimov and Semyon Grigorev. 2018. Context-free Path Querying by Matrix Multiplication. In *Proceedings of the 1st ACM SIGMOD Joint International Workshop on Graph Data Management Experiences & Systems (GRADES) and Network Data Analytics (NDA) (GRADES-NDA '18)*. ACM, New York, NY, USA, Article 5, 10 pages. <https://doi.org/10.1145/3210259.3210264>

## A RESEARCH METHODS

### A.1 Part One