

#### **THÈSE**

Pour obtenir le grade de

#### DOCTEUR DE L'UNIVERSITÉ DE GRENOBLE

Spécialité : Informatique

Arrêté ministériel : 25 mai 2016

Présentée par

#### Tom CORNEBIZE

Thèse dirigée par Arnaud LEGRAND

préparée au sein du **Laboratoire d'Informatique de Grenoble** et de l'École Doctorale **MSTII** 

## Le Titre de la Thèse The English Title

Thèse soutenue publiquement le 1er janvier 1970, devant le jury composé de :





I dedicate this thesis to my grumpy cat.





Elle est où la poulette?

— Kadoc De Vannes

28th october 2020, 1A:53:23



## Remerciements

(Acknowledgments)

I would like to thank everyone, except from Dobby the free elf.

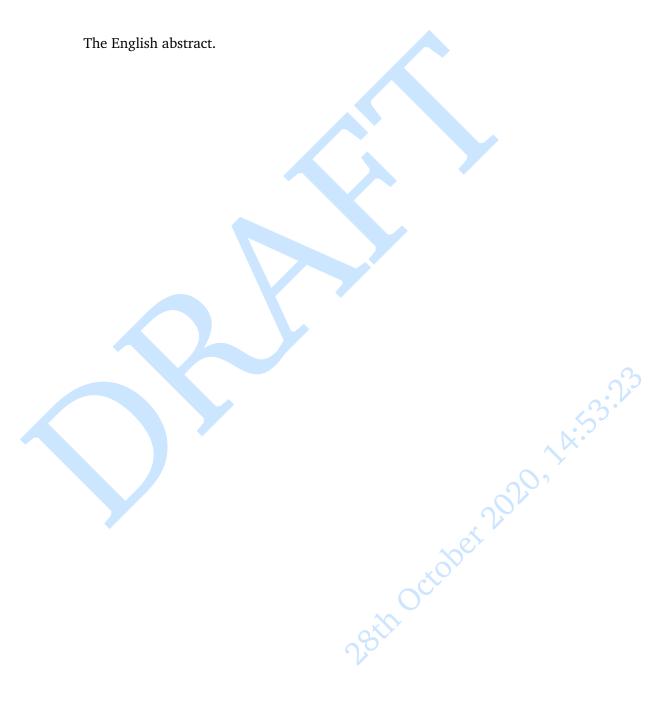
Merci public!

28th October 2020, 1A:53:23



## Abstract / Résumé

#### **Abstract**



### Résumé

Le résumé en français.



## Contents

Acknowledgments  Abstract / Résumé			١
			vi
Contents		ix	
1	Intr	oduction	1
2	Performance prediction through simulation: the HPL case		3
	2.1	High Performance Linpack	3
	2.2	Simgrid/SMPI and the other simulators	3
	2.3	Emulating HPL at large scale	3
	2.4		3
	2.5	Validation	3
	2.6	Sensibility analysis	2
3	Exp 3.1 3.2	erimental control  Experimental Testbed and Experiment Engines	5
	3.3		5
4	Con	oclusion	
Bibliography		raphy	<b>A</b> 1
List of Figures		Figures	<b>A</b> 3
List of Tables		raphy Figures Tables	<b>A</b> 3



Introduction

To introduce my work, I will write a nice introduction in the following. Citation example for the Top500 website [@top500] and some random paper [Gra69].

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

28th October 2020, 14:53:22



2

# Performance prediction through simulation: the HPL case

2.1 High Performance Linpack

some text...

2.2 Simgrid/SMPI and the other simulators

some text...

2.3 Emulating HPL at large scale

some text...

2.4 Modeling HPL kernels and communications

some text...

2.5 Validation

some text...

## 2.6 Sensibility analysis

some text...



Experimental control

3.1 Experimental Testbed and Experiment Engines

some text...

3.2 Randomizing matters!

some text...

3.3 Performance non-regression tests

some text...

5



Conclusion 4

Your beautiful conclusion. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.



## Bibliography

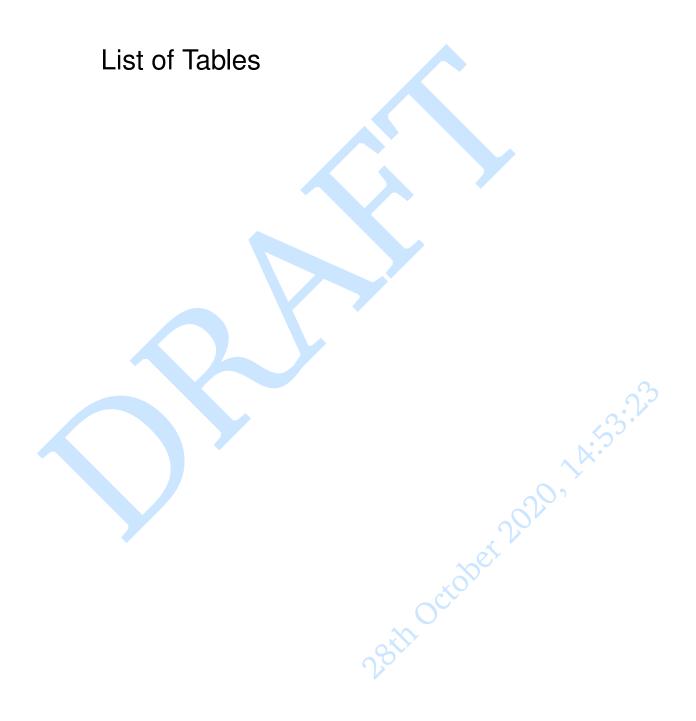
[@top500] TOP500 Website. URL: https://www.top500.org/ (visited on Sept. 7, 2020). cit. on p. 1

[Gra69] Ronald L. Graham. "Bounds on multiprocessing timing anomalies". In: *SIAM journal on Applied Mathematics* 17.2 (1969), pp. 416–429. cit. on p. 1





## List of Figures







#### **Abstract**

The English abstract.

#### Résumé

Le résumé en français.

