



MASTER RESEARCH INTERNSHIP



BIBLIOGRAPHIC REPORT

First Integrals for Planar Vector Fields

Domain: Symbolic Computation - Mathematical Software

Author:
Ophélie DENIS

Supervisor:
Khalil GHORBAL
First_Name NAME of your second
supervisor
Hycomes - Inria

Abstract: write your abstract here

Contents

1	Introduction	1
2	Planar Vector Fields	1
2.1	First integrals	1
2.2	Darboux Polynomials	1
3	Computing first integrals	1
3.1	Other methods and their limits	1
4	the Extactic method	1
4.1	definition	1
4.2	what is done wrt state of the art in implementation and why this internship matter .	1
5	Physical models	1
5.1	Relation between what exists/what this brings	1
6	Conclusion	1

1 Introduction

Why we care? Physical modelling etc

2 Planar Vector Fields

2.1 First integrals

2.2 Darboux Polynomials

3 Computing first integrals

3.1 Other methods and their limits

4 the Extactic method

4.1 definition

4.2 necessary conditions

4.3 what is done wrt state of the art in implementation and why this internship matter

5 Physical models

5.1 Relation between what exists/what this brings

6 Conclusion

References