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My Name

Licentiate Thesis in Theoretical Physics at Stockholm University, Sweden 2017

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List of Papers

The following papers are included in the thesis. They are referred to by their Roman numerals in the text.

I Authors, *Title*, [1706.07806]

II Authors, *Title*, [1708.07833]

III Authors, *Title*, [1703.07787]

The following papers are complementary and not included in the thesis. They are quoted as ordinary references in the main text.

IV Authors *Title*, [1706.00787]

V Authors, *Title*, [1710.06434]

VI Authors, *Title*, [1409.1909]

The chronological order of the papers is ...

Contents

Illustrations

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Preface

This licentiate thesis is a thesis by publication consisting of two major parts: introductory chapters comprising a summary of the scientific results, and the corresponding papers published or submitted for publication.

. . .

Contribution to papers

Paper I. contributions...

Paper II. contributions...

Paper III. contributions...

Paper IV. contributions...

Paper V. contributions...

Paper VI. contributions...

Acknowledgments

My deepest gratitude goes to ...

Author's Name
Stockholm, 2018-02-08

Abbreviations

AdS	anti-de Sitter [1]
.	.
.	.
.	.
SM	The Standard Model of particle physics

Chapter 1

Introduction

The outline of the thesis that is a comprehensive summary of papers (optional items are given italic)

- Front matter
    1. Title page, recto
    2. Printing info (*abstract*), verso
    3. *Dedication page*, recto
    4. List of papers, recto
    5. Table of Contents, recto
    6. *List of Figures/Tables*, recto
    7. *Preface*
       (including author's contribution and acknowledgments), recto
    8. *Abbreviations*, recto
- Part I. Comprehensive summary
    1. Chapter 1. Introduction
    2. Chapter 2, . . .
    3. Summary
    4. Svensk sammanfattning (A short summary in Swedish should be be included if the thesis is written in a foreign language.)
    5. References
- Part II. Papers
    1. Paper 1, . . .
    2. Paper 2, . . .

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- Margins:
  T = 40, B = 46, T+B = 96
  I = 38, O = 32, I+O = 70

Typography, S5

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- Font: 11 pt
- Margins: T = 17.5, B = 17.5, T+B = 35
  I = 22.5, O = 22.5, I+O = 45

S5 output

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1. Uncomment `\Spapertrue` flag in `parameters.tex`.
2. Compile `lic-thesis.tex`
3. Compile `lic-thesis-S5.tex`

The output `lic-thesis-S5.pdf` will be in the S5 format.

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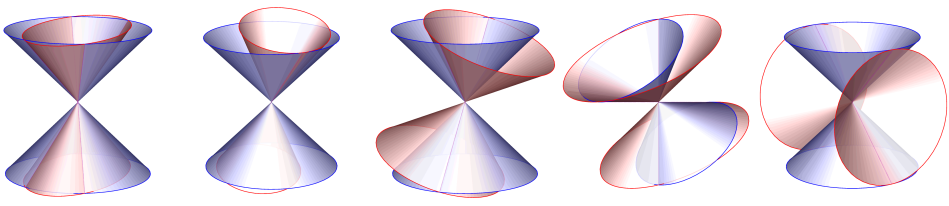
The page numbers of the included PDF will be overwritten by the page numbers of the thesis. The included papers will be then marked by twofold page numbers. For instance, the folio `Paper II - 5 (81)` marks a page from Paper II having the internal (article) page number 5 and the overall (thesis) page number 81. To modify the position of the page numbers, see the arguments `#5` and `#6` in `\paperSection`. To debug the positions, you can temporarily enable the flags `\ShowLayouttrue` and `\ShowGridtrue` in `parameters.tex`. The macro `\overlayPaperFolio` is responsible for emitting the thumb marks and page numbers on each page of the PDF. It can be found in `preamble.tex`.

Chapter 2

Main results



Type I Type IIa Type IIb Type III Type IV

Figure 2.1: Allowed null cone configurations.

Table 2.1: Allowed local metric configurations.

Type	diag(g)	diag(f)	diag($g^{-1}f$)
I	$(-1,1,1,1)$	$(-\lambda_1,\lambda_2,\lambda_3,\lambda_4)$	$(\lambda_1,\lambda_2,\lambda_3,\lambda_4)$
IIa	$(\pm\begin{pmatrix}0&1\\1&0\end{pmatrix},1,1)$	$(\pm\begin{pmatrix}0&\lambda\\\lambda&1\end{pmatrix},\lambda_2,\lambda_3)$	$(\begin{pmatrix}\lambda&1\\0&\lambda\end{pmatrix},\lambda_2,\lambda_3)$
IIb	$(\pm\begin{pmatrix}0&1\\1&0\end{pmatrix},1,1)$	$(\pm\begin{pmatrix}b&a\\a&-b\end{pmatrix},\lambda_2,\lambda_3)$	$(\begin{pmatrix}a&-b\\b&a\end{pmatrix},\lambda_2,\lambda_3)$
III	$(\begin{pmatrix}0&0&1\\0&1&0\\1&0&0\end{pmatrix},1)$	$(\begin{pmatrix}0&0&\lambda\\0&\lambda&1\\\lambda&1&0\end{pmatrix},\lambda_2)$	$(\begin{pmatrix}\lambda&1&0\\0&\lambda&1\\0&0&\lambda\end{pmatrix},\lambda_2)$
IV	$(-1,1,1,1)$	$(\lambda,-\lambda,\lambda_2,\lambda_3)$	$(-\lambda,-\lambda,\lambda_2,\lambda_3)$

Chapter 3

Applications

Chapter 4

Summary and outlook

The results of Paper I are relevant for ...

Svensk sammanfattning

A short summary in Swedish should be be included if the thesis is written in a foreign language.

References

[1] C. W. Misner, K. S. Thorne and J. A. Wheeler, *Gravitation*. W. H. Freeman, San Francisco, 1973.

Paper I

Authors, *Paper title*, [1706.07806]

Paper II

Authors, *Paper title*, [1708.07833]

Paper III

Authors, *Paper title*, Phys. Rev. D96 (2017) no. 6, 064003,
doi:10.1103/PhysRevD.96.064003, [1703.07787]

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Regards,
Mikica Kocic

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