UNIVERSIDADE FEDERAL DE SANTA CATARINA
DEPARTAMENTO DE ENGENHARIA MECÂNICA

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MODELO DE DISSERTAÇÃO E TESE EM LATEX

Florianópolis

2013

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Dissertação submetida ao Programa de Pós-Graduação em Engenharia Mecânica para a obtenção do Grau de Mestre em Engenharia Mecânica.
Orientador: Daniel Martins, Dr. Eng.
Coorientador: Henrique Simas, Dr. Eng.

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Esta Dissertação foi julgada aprovada para a obtenção do Título de "Mestre em Engenharia Mecânica", e aprovada em sua forma final pelo Programa de Pós-Graduação em Engenharia Mecânica.

Florianópolis, 8 de Agosto 2013.

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Colocar em uma frase a quem o trabalho é dedicado.

AGRADECIMENTOS

Colocar um agradecimento aqui. Família, amigos, professores, orientadores, técnicos laboratoriais/administrativos e instituição de fomento.

The good thing about science is that it's true whether or not you believe in it.

Neil deGrasse Tyson

RESUMO

O resumo do trabalho deve conter uma descrição sucinta do trabalho (não mais que uma página). Deve iniciar com a motivação, uma breve descrição do problema sendo enfrentado e apresentar de forma resumida a metodologia do trabalho e os principais resultados obtidos e conclusões. Não deve ultrapassar 500 palavras.

Palavras-chave: Palavra chave 1. Palavra chave 2. Palavra chave 3. Palavra chave 4. Palavra chave 5.

ABSTRACT

Versão em inglês do resumo. Não traduzir palavra por palavra.
Keywords: Keyword 1. Keyword 2. Keyword 3. Keyword 4. Keyword 5

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

1-SSD	One-side stitching device
2-SSD	Two-side stitching device
CAD	Computer-aided design
DOF	Degrees of Freedom
IFToMM	International Federation for the Promotion of Mechanism and Machine Science

LIST OF SYMBOLS

C_{ij}	Connectivity between links i and j
e	Number of elements of kinematic pair
f_i	Degree of freedom of pair i
j	Number of pairs with one degree of freedom
K_{ij}	Degree of control between links i and j
M	Mobility of the kinematic chain
M'	Mobility of a subchain in a kinematic chain
n	Number of links
R_{ij}	Redundancy between links i and j
V	Variety of the kinematic chain
λ	Order of the screw system
ν	Number of independent loops

CONTENTS

1 INTRODUCTION

Este modelo foi preparado utilizando como base uma dissertação. Alguns textos do documento original foram mantidos a fim de mostrar como se utiliza alguns comandos em latex. Para fazer um lembrete ou comentário no texto foi definido o comando "\com", o texto irá aparecer em vermelho, como neste cabeçalho.

Os comandos devem ser visualizados num editor de latex, não no pdf gerado (obviamente). Para quem está começando a trabalhar com latex eu sugiro utilizar o TexMaker.

As diferenças entre este modelo e o modelo da BU estão expostas como comentário no cabeçalho do código .tex.

É possível inserir animações em .pdf, o apêndice A expõe como isso pode ser feito. Entretanto, deve-se utilizar o Adobe Reader para visualizar o pdf.

A good way to start a chapter is to introduce the topics that the chapter exposes (in order of appearance). Remember to put a review section at the end of the chapter with one or two paragraphs that briefly review what was exposed and the most important points. Also, it should be shown how this knowledge will be used in the next chapters (always link one chapter to the other). For more information and tips on technical writing see Schroeter (2013).

1.1 CITATION TESTS SECTION

This is a dummy section that shows how citation is done in this model. Here we have a single author work Yan (1999) and here the same work (YAN, 1999). This is how specific pages citations will appear: "A design process is a logical sequence of events to ensure the success of designing devices, products, systems, or processes"(YAN, 1999, p. 14).

Going a little further, we have a two authors work Hartenberg and Denavit (1964) and again here (HARTENBERG; DENAVIT, 1964).

This is a three authors text Srikrishnan, Parthiban and Viju (2011) and again (SRIKRISHNAN; PARTHIBAN; VIJU, 2011). This is how two or more works are cited (BROWN, 2007; SOLENT, 2013). This is a five authors text Zhao et al. (2009) and again (ZHAO et al., 2009). This is a six authors text Saadi et al. (2006) and again (SAADI et al., 2006).

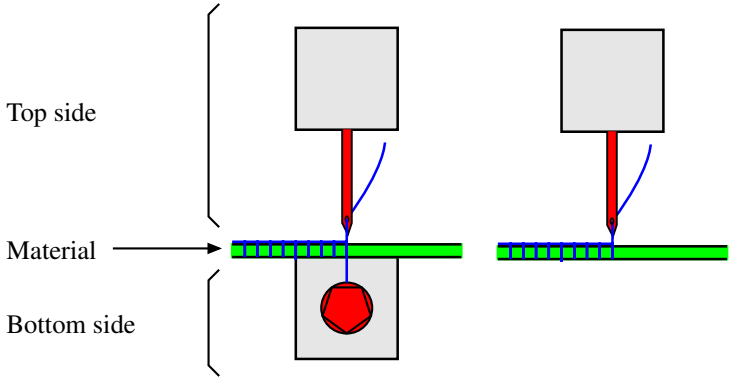
If you go to the bibliography you'll notice that all the authors appear in the references (even the works with more than 3 authors). This is one

difference between the current template and the BU/ABNT template.

Some random paragraph citing standards: although “sewing machine” is a common term used daily, in the technical field of stitching is more usual to refer to such machines as “stitching machines”. The verb “to sew” is also replaced with “to stitch”. This terminology is defined by standard ISO-4915 (1991) and is also used in standard ASTM-D6193 (1997). The Brazilian standard for types of stitches, NBR-13483 (1995), is based on ISO-4915 (1991), however, as NBR-13483 (1995) is written in Portuguese, this work will use the terminology defined by ISO-4915 (1991) since ISO-4915 (1991) is written in English.

1.1.1 Inserting tikz figures

Here is how a Tikz[1] picture can be inserted. A command was defined as “\inputTikZ”. Figure 1 shows an example.



(a) Two-side stitching device. (b) One-side stitching device.

Figure 1: Example of a two-side stitching device and a one-side stitching device.

And of course, other pictures format can be included by using includegraphics command, as follows.

[1] Tikz pictures result in great picture quality (as vectorized pictures) and also uses the same font size and type as the text. Thus, the texts inside the pictures are always according to the document standard. Tikz figures can be generated using Inkscape and exporting as tikz.

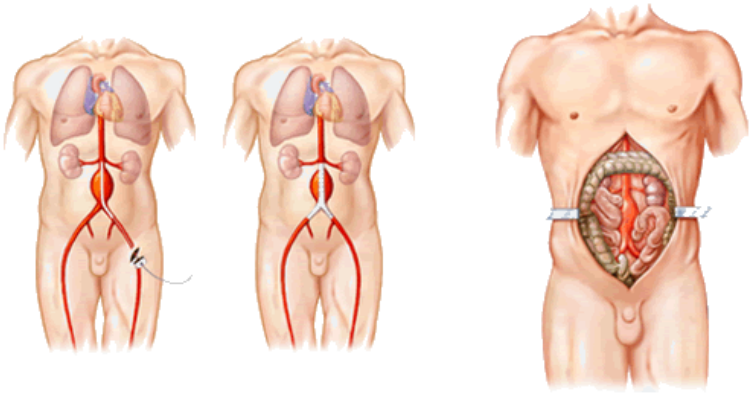


Figure 2: Comparison between endoluminal and conventional surgery. Adapted from SITE (2011).

1.2 WORK PURPOSES

Make the work goals (main goal and specific goals) very clear.

1.3 WORK DELIMITATIONS

Every work has its limitations (although sometimes it might be hard for the author to see).

1.4 JUSTIFICATION

Work relevance/contribution to the field.

1.5 OVERVIEW OF THIS WORK

A good practice is to give a roadmap for this document. Write here a paragraph for each chapter, exposing its contents, main points and how it connects to other chapters (don't forget the appendix).

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APPENDIX A – Animations of the 1-SSD motion

The objective of this appendix is to clarify the 1-SSD motions. Therefore, an animation of a 1-SSD motions is presented in Figure 3. Also, an animation of feasible mechanism 19 is presented in Figure 4. Finally, mechanism 19 is shown adjusting the synchrony between needle and looper motions in Figure 5.

However, to visualise the animations comprised in this dissertation, it is necessary to view the *Portable Document Format* file using *Adobe Reader*. The animations were successfully tested on *Adobe Reader*'s version 8.1.7 using *Ubuntu 12.04* and *Windows 7*. The digital version of this dissertation can be downloaded from the university library's website.

Access the website in *http://150.162.1.90/pergamum/biblioteca/index.php* and search for the author's name.

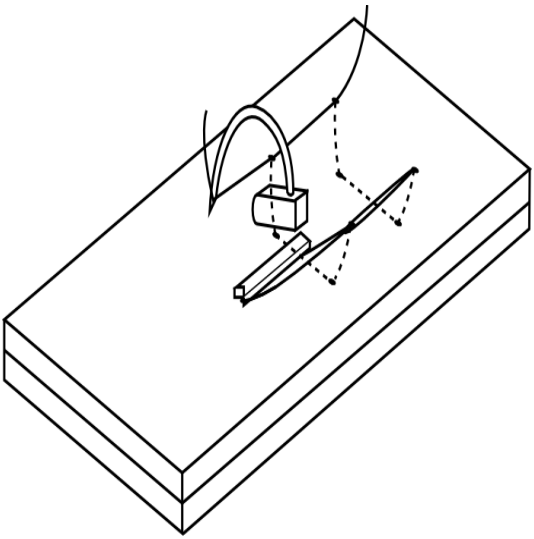

Figure 3: Motions to stitch using a 1-SSD.

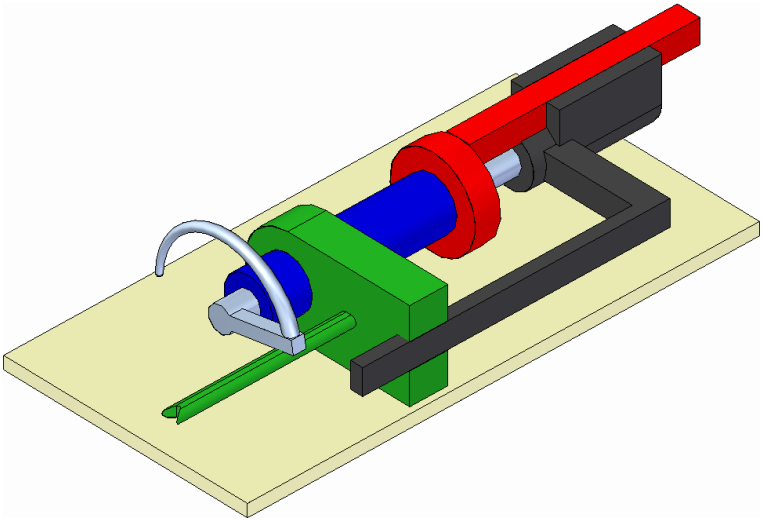

Figure 4: Mechanism 19 executing a stitch.

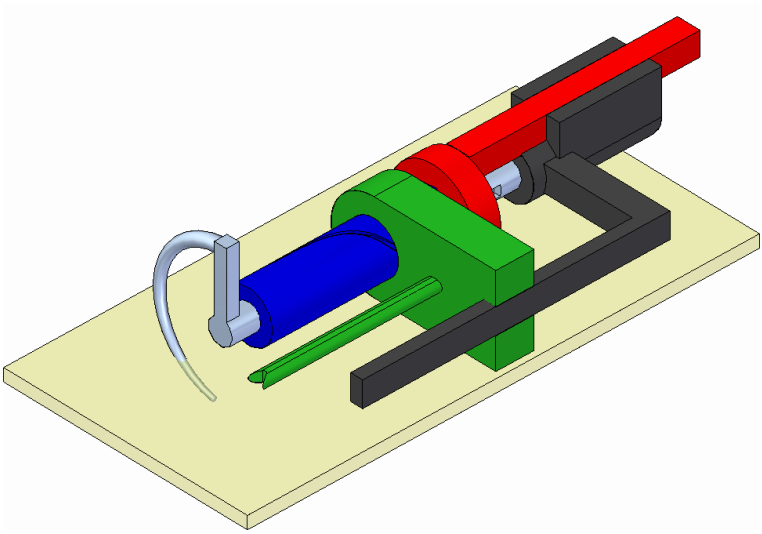

Figure 5: Mechanism 19 adjusting needle and looper synchrony.