



# PMR 2499 **Como fazer uma revisão bibliográfica e de patentes**

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# Comentários iniciais

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- ▶ Importância da documentação do projeto
- ▶ Importância do gerenciamento do projeto
  - ▶ Ferramentas de gerenciamento
  - ▶ **Reuniões periódicas com o orientador**
- ▶ Citar as fontes:
  - ▶ Não citar=Plágio=Responsabilidade ética e pena por lei





# Bibliografia (Autor: Prof Thiago)

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“O problema da mochila é NP-Difícil...”

## **Bibliografia:**

- Garey, Michael R.; David S. Johnson (1979). Computers and Intractability: A Guide to the Theory of NP-Completeness. W.H. Freeman. ISBN 0-7167-1045-5. A6: MP9, pg.247.
- Rivest, R.; A. Shamir; L. Adleman (1978). "A Method for Obtaining Digital Signatures and Public-Key Cryptosystems". Communications of the ACM 21 (2): 120–126
- New Directions in Cryptography W. Diffie and M. E. Hellman, IEEE Transactions on Information Theory, vol. IT-22, Nov. 1976, pp: 644–654.



# Bibliografia – Notas de rodapé

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“O problema da mochila é NP-Difícil<sup>1</sup>...”

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1- Garey, Mitchel, Johnson (1979). “Computers and Intractability: A Guide to the Theory of NP-Completeness.

## **Bibliografia:**

- Garey, Michael R.; David S. Johnson (1979). Computers and Intractability: A Guide to the Theory of NP-Completeness. W.H. Freeman. ISBN 0-7167-1045-5. A6: MP9, pg.247.



# Bibliografia – Notas de rodapé

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“O problema da mochila é NP-Difícil<sup>1</sup>, assim como o problema do máximo conjunto independente<sup>2</sup>, o problema do caixeiro viajante<sup>3</sup> e o problema de satisfatibilidade booleana<sup>4</sup>. Nada se sabe, no entanto, sobre o problema RSA.<sup>5</sup>”

1- ~~Garey, Mitchel, Johnson (1979). “Computers and Intractability: A Guide to the Theory of NP-Completeness.~~

2- Baker, Brenda. (1994), "Approximation algorithms for NP-complete problems on planar graphs"

3- Applegate, Bixby, Chvátal, Cook, (2006), “The Traveling Salesman Problem”

4- Garey, Mitchel, Johnson (1979). “Computers and Intractability: A Guide to the Theory of NP-Completeness.

5- Boneth, Venkatesan (1998), “Breaking RSA may not be equivalent to factoring”

## **Bibliografia:**

...



# Referências Bibliográficas

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“O problema da mochila é NP-Difícil (Garey; Mitchel; Johnson, 1979), assim como o problema do máximo conjunto independente (Baker; Brenda, 1994), o problema do caixeiro viajante (Applegate *et al.*, 2006) e o problema de satisfatibilidade booleana (Garey; Mitchel; Johnson, 1979). Nada se sabe, no entanto, sobre o problema RSA. (Boneth; Venkatesan, 1998).”

## **Referências:**

- Garey, Michael R.; David S. Johnson (1979). Computers and Intractability: A Guide to the Theory of NP-Completeness. W.H. Freeman. ISBN 0-7167-1045-5. A6: MP9, pg.247

...



# Referências Bibliográficas

“O problema da mochila é NP-Difícil (1), assim como o problema do máximo conjunto independente (2), o problema do caixeiro viajante (3) e o problema de satisfatibilidade booleana (1). Nada se sabe, no entanto, sobre o problema RSA. (4).”

## **Referências:**

1 - Garey, Michael R.; David S. Johnson (1979).  
Computers and Intractability: A Guide to the Theory of NP-Completeness. W.H. Freeman. ISBN 0-7167-1045-5. A6: MP9, pg.247

...



# Referências Bibliográficas

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“O problema da mochila é NP-Difícil<sup>1</sup>, assim como o problema do máximo conjunto independente<sup>2</sup>, o problema do caixeiro viajante<sup>3</sup> e o problema de satisfatibilidade booleana<sup>4</sup>. Nada se sabe, no entanto, sobre o problema RSA<sup>5</sup>.”

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1- Garey, Mitchel, Johnson (1979). “Computers and Intractability: A Guide to the Theory of NP-Completeness.

2- Baker, Brenda. (1994), "Approximation algorithms for NP-complete problems on planar graphs"

3- Applegate, Bixby, Chvátal, Cook, (2006), “The Traveling Salesman Problem”

4- Garey, Mitchel, Johnson (1979). “Computers and Intractability: A Guide to the Theory of NP-Completeness.

5- Boneth, Venkatesan (1998), “Breaking RSA may not be equivalent to factoring”

## Bibliografia:

...



# Citações

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Menezes (1) aponta que trabalhos na área de “segurança demonstrável” são frequentemente inacessíveis para pesquisadores que não pertencem à área



De acordo com Menezes (1), trabalhos de “segurança demonstrável” parecem terem sido escritos de modo a serem completamente seguros contra compreensão de qualquer um de fora da área.



De acordo com Menezes (1), “trabalhos de “segurança demonstrável” parecem terem sido escritos de modo a serem semanticamente seguros contra compreensão de qualquer um de fora da área.”





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# Citações

## O Texto científico:

- Completo
- Claro
- Conciso
- Convicente





# Ferramentas

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- ▶ Web EndNote
- ▶ Mendeley
- ▶ Zotero
  
- ▶ Programas gratuitos com limitação de espaço
- ▶ Permitem criar grupos
- ▶ Permitem fazer busca e download de artigos
  - ▶ Cuidado com o espaço





# Para quê?

- Busca bibliografica e de patentes:
  - Achar soluções já prontas para o nosso problema...
    - Então, melhor não procurar?
    - Entender quais são os desafios
    - Definir os requisitos e sua avaliação
- Ler eficientemente um artigo





# Cómo fazer uma revisão bibliografica?

1. Formular uma pergunta a partir do problema.

2. Localizar as repostas na literatura científica e nas bases de dados de patentes.

- Organizar os documentos obtidos

3. Avaliar críticamente os resultados dos artigos.

4. Documentar a busca e a avaliação.

5. Aplicar as conclusões da avaliação no projeto.





# I. Formular uma pergunta precisa a partir del problema

- Formular os problemas do projeto
- Identificar as necessidades de informação
- Propor uma ou varias perguntas simples e claras
- Com uma pergunta clara podemos definir:

## PALAVRAS-CHAVE

- p.e. “existem exoesqueletos roboticos de membro inferior de baixo custo?”
- “robotic”, “exoeskeleton”, “lower limb”, “low cost”





## 2. Localizar as possíveis respostas na literatura científica e nas bases de dados de patentes.

- Busca em bases de dados bibliograficas disponíveis em Internet:
  - **Pubmed:** [PubMed \(nih.gov\)](http://pubmed.nih.gov)
  - Google Scholar: [Google Académico](http://scholar.google.com)
  - Scopus (VPN USP): [Scopus - Document search | Signed in](http://scopus.com)
  - Web of Science: [Document search - Web of Science Core Collection](http://www.webofscience.com)
- Ou em bases de editores:
  - [IEEE Xplore](http://ieeexplore.ieee.org)
  - Elsevier ScienceDirect, Springerlink, Outras...
- E na USP? Contato de primeira mão com autores





## 2. Localizar as possíveis respostas na literatura científica e nas bases de dados de patentes.

- Estratégias de busca:
  - Buscar “palavras-chave” (*keywords*)
  - Buscar “autores relevantes”
- Refinar a busca se aparecem muitos artigos:
  - Limitar os anos (p.e. as mais recentes)
  - Incluir outra palavra-chave
- Identificar os artigos de “Review”
  - Se o review é recente=> revisar
  - Ler os abstracts dos reviews (ver se é o tema correcto)







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Search: Title, Creator, Year [Upgrade Storage](#)

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- Sleep\_Actimetry
- My Publications
- Trash

Group Libraries

- ARM\_EMG
- GaitControl\_CPG
- TCC\_Biom2020
- USP\_UEX

Title	Creator	Date
A comparison of polysomnographic and actigraphic evaluation of period...	Kemlink et al.	2008
A review of scales to evaluate sleep disturbances in movement disorders	Kurtis et al.	2018
A review of signals used in sleep analysis	Roebuck et al.	2014
AASM standards of practice compliant validation of actigraphic sleep ana...	Dick et al.	2010
Actigraphic assessment of a polysomnographic-recorded nap: A validatio...	Kanady et al.	2011
Actigraphy	Krishna and Mashaqi	2014
Actigraphy	Acebo and LeBourgeois	2006
Actigraphy and leg movements during sleep: A validation study	Sforza et al.	1999
Actigraphy correctly predicts sleep behavior in infants who are younger t...	So et al.	2005
Actigraphy validation with insomnia	Lichstein et al.	2006
Activity-based sleep-wake identification in infants	Sazonov et al.	2004
Activity-based sleep-wake identification: An empirical test of methodolo...	Sadeh et al.	1994
An actigraphic comparison of sleep restriction and sleep hygiene treatm...	Friedman et al.	2000
An actigraphic comparison of sleep restriction and sleep hygiene treatm...	Friedman et al.	2000
An integrated video-analysis software system designed for movement de...	Scatena et al.	2012
Automatic blink detection: A method for differentiation of wake and slee...	Leinonen et al.	2003
Automatic sleep stage classification based on easy to register signals as ...	Willemen et al.	2012
Automatic sleep/wake scoring from body motion in bed: Validation of a ...	Kogure et al.	2011
Circadian research in mothers and infants: How many days of actigraphy ...	Thomas and Burr	2008
Comparison of actigraphic, polysomnographic, and subjective assessmen...	Kushida et al.	2001
Comparison of sleep parameters from actigraphy and polysomnography ...	Blackwell et al.	2008
Detecting REM sleep from the finger: An automatic REM sleep algorithm ...	Herscovici et al.	2007

76 items in this view





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Articles suggested for you related to The impact of daily sleep duration on health: a review of the literature  
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Pizinger T, Aggarwal B, St-Onge M  
*Frontiers in Endocrinology (2018)*

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### Behavioral and physiological consequences of sleep restriction

S. B, D.F. D  
*Journal of Clinical Sleep Medicine (2007)*



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★	●	📄	Authors	Title	Year	Details	Notes	Contents
☆	●		Jia, Bochen; Kim, Sunwook; Nussba...	An EMG-based model to estimate lumbar muscle forces and spinal loads...	2011			
☆	●		Kim, Sunwook; Nussbaum, Maury ...	Impacts of using a head-worn display on gait performance during level walki...	2018			
☆	●		Constantinescu, Carmen; Muresan,...	JackEx: The New Digital Manufacturing Resource for Optimization of Exoskele...	2016			
☆	●		Huysamen, Kirsten; Bosch, Tim; de Lo...	Evaluation of a passive exoskeleton for static upper limb activities	2018			
☆	●		Constantinescu, Carmen; Popescu,...	Exoskeleton-centered Process Optimization in Advanced Factory Env...	2016			
☆	●		Rashedi, Ehsan; Kim, Sunwook; N...	Ergonomic evaluation of a wearable assistive device for overhead work				
☆	●		Weston, Eric B.; Alizadeh, Mina; Kn...	Biomechanical evaluation of exoskeleton use on loading of the lumbar spine	2018			
☆	●		Xu, Xueyan S.; Dong, Ren G.; We...	Vibrations transmitted from human hands to upper arm, shoulder, back, n...	2017			
☆	●		Bjelle, A.; Hagberg, M.; Michaelsson, G.	Clinical and ergonomic factors in prolonged shoulder pain among indus...	1979			
☆	●		Vorobyev, A. A.; Petrukhin, A. V.; ...	Exoskeleton as a new means in habilitation and rehabilitation of invali...	2015			
☆	●		Nussbaum, Maury A	Postural stability is compromised by fatiguing overhead work.				
☆	●		de Looze, Michiel P.; Bosch, Tim; Kraus...	Exoskeletons for industrial application and their potential effects on physical ...	2016			
☆	●		Bosch, Tim; van Erck, Jennifer; Knit	The effects of a passive exoskeleton on muscle activity, discomfort and endur	2016			

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📄 A comparison of polysomnographic and actigraphic evaluation of period...	Kemlink et al.	2008
📄 A review of scales to evaluate sleep disturbances in movement disorders	Kurtis et al.	2018
📄 A review of signals used in sleep analysis	Roebuck et al.	2014
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📖 Actigraphy	Krishna and Mashaqi	2014
📄 Actigraphy	Acebo and LeBourgeois	2006
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📄 An actigraphic comparison of sleep restriction and sleep hygiene treatm...	Friedman et al.	2000
📄 An integrated video-analysis software system designed for movement de...	Scatena et al.	2012





# Exporta para .bib

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Industry RPAs.bib - Bloco de Notas

Arquivo Editar Formatar Exibir Ajuda

```
@article{Jia2011,
author = {Jia, Bochen and Kim, Sunwook and Nussbaum, Maury A.},
doi = {10.1016/j.ergon.2011.03.004},
issn = {01698141},
journal = {International Journal of Industrial Ergonomics},
month = {sep},
number = {5},
pages = {437--446},
title = {{An EMG-based model to estimate lumbar muscle forces and spinal loads during complex, high-et
construction using prefabricated walls}},
url = {http://linkinghub.elsevier.com/retrieve/pii/S0169814111000539},
volume = {41},
year = {2011}
}
@article{Kim2018,
author = {Kim, Sunwook and Nussbaum, Maury A. and Ulman, Sophia},
doi = {10.1016/j.jelekin.2018.02.007},
issn = {10506411},
journal = {Journal of Electromyography and Kinesiology},
month = {apr},
pages = {142--148},
title = {{Impacts of using a head-worn display on gait performance during level walking and obstacle c
url = {https://linkinghub.elsevier.com/retrieve/pii/S1050641117304765},
volume = {39},
year = {2018}
}
@article{Constantinescu2016,
author = {Constantinescu, Carmen and Muresan, Paul-Cristian and Simon, Gabriel-Marian},
doi = {10.1016/j.procir.2016.05.048},
issn = {22128271},
journal = {Procedia CIRP},
pages = {508--511},
title = {{JackEx: The New Digital Manufacturing Resource for Optimization of Exoskeleton-based Factory
url = {https://linkinghub.elsevier.com/retrieve/pii/S2212827116305030},
volume = {50},
year = {2016}
}
```

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# Busca de patentes

- Bases de datos de patentes
  - Exemplo





### 3. Avaliar criticamente os artigos

- Avaliar os documentos para determinar:
  - Validez (cercanía a la realidade)
  - Utilidade (aplicabilidade).
- Poucos artigos relevantes com metodologia rigorosa:
  - Apresenta-se um dispositivo ou um algoritmo validado em condições muito concretas
    - p.e. não permite aplicação em tempo real
  - O análise estadístico não é correto
  - A descrição do experimento ou do algoritmo não permite replicar-lo





## 4. Documentar a busca e avaliação

- Descrever o procedimento de busca
  - Bases de dados usadas
  - Critérios de busca:
    - Palavras-chave Faixa de datas
  - Numero de artigos achados, número de revisões
  - Jornais mais frequentes
- Escolher os artigos mais relevantes:
  - Trabalhos recentes
  - Conclusões relevantes e fundamentadas
  - Jornais ou congressos prestigiosos na área
  - Autor/es reconhecido





## 5. Aplicação das conclusões da avaliação para a prática

- Trasladar o conhecimento adquirido al desenvolvimento de seus objetivos
- Qual é a pergunta que queremos responder?
- Qué foi aprendido?





# Cómo ler um artigo?

- Estrutura dos artigos:
  - Tipo IEEE
    - Trans. on Biomedical Eng.
    - Trans. on Neural Systems and Rehabilitation Eng.
    - Proceedings ICRA, BioRob (conferencias)
      - (International Conference on Robotics and Automation)
  - Tipo Journal
    - Journal of Biomechanics
    - Gait and Posture
    - Biological Cybernetics
    - Experimental Brain Research
    - Journal of Neurophysiology





# Cómo ler um artigo?

- Estrutura clasica:
  - Abstract
  - Introduction:
    - Formulation of the problem and literature review
    - Goal of the paper
  - Material and Methods:
    - Experiments, algorithms and data processing
  - Results:
    - Present the results from experiments
  - Discussion:
    - Discuss the obtained results
  - (Conclussions):
    - Reinforce most prominent ideas from the Discussion





# Cómo ler um artigo?

- Ler o abstract
- Se conhece bem o tema:
  - Ir a objetivos (fim da Introdução)
  - Ler conclusões (fim da Discussão)
  - É interessante? Materials and Methods (é bom?)
  - Leia TUDO. não? Joga (recicláveis)
- Se não conhece bem o tema:
  - Ler a Introdução => Identificar o objetivo do artigo
  - Ler a Discussão, Metodos
  - Ler TUDO



# Como ler um artigo científico



Fornier\_BiolCyb2004.pdf - Adobe Reader

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1 / 9 75% Buscar

Biol. Cybern. 3, 1–9 (2004)  
DOI 10.1007/s00422-004-0508-0  
© Springer-Verlag 2004

Biological Cybernetics

## Mechanical model of the recovery from stumbling

A. Fornier Cordero<sup>1,2</sup>, H. J. F. M. Koopman<sup>1</sup>, F. C. T. van der Helm<sup>1</sup>

<sup>1</sup>Institute for Biomedical Technology (BMTI), Biomedische Werktuigbouwkunde, CTW Gebouw, Universiteit Twente, P.B. 217, 7500 AE Enschede, The Netherlands  
<sup>2</sup>Motor Control Laboratory, Department of Kinesiology, Group Biomedical Sciences, K.U. Leuven, Tervuursevest 101, 3001 Leuven, Belgium

Received: 9 April 2003 / Accepted: 8 July 2004 / Published online: ■

**Abstract.** Several strategies have been described as a reaction to a stumble during gait. The elevating strategy, which tries to proceed with the perturbed step, was executed as a response to a perturbation during early swing. The lowering strategy, bringing the perturbed leg to the ground and overtaking the obstacle with the contralateral limb, was executed more frequently when the perturbation appeared at mid or late swing. The goal of this paper is to analyze which mechanical factors determine the most advantageous strategy. In order to determine these factors, a mechanical model of the recovery was developed and used to analyze a series of perturbation experiments. It was assumed that the goal of the recovery reaction was to control the trunk as an inverted pendulum during the double-stance phase. In order to be able to control the trunk angle, one foot should be up front and one foot should be behind the hips; otherwise it would be impossible to generate the required trunk torques. The trunk dynamics were expressed in terms of the ground reaction forces and their application point. A larger step (elevating strategy) gives the opportunity to dissolve the perturbation in one step. A small step (lowering strategy) necessarily results in a second quick step, after which the perturbation energy can be dissipated in the second double-stance phase. If a recovery step is too slow, it becomes impossible to counteract the forward flexion of the trunk. It is suggested that a measure of the ability to recover from a stumble could be based on the ability to perform quick steps.

mechanical limitations in reacting to a perturbation. The identification of these limitations that compromise balance in frail populations would be useful to design specific therapeutic interventions aimed at reducing the risk of falling.

Experimental work over the last two decades has shown three main groups of recovery strategies to a stumble, either on the floor (Eng et al. 1994) or on a treadmill (Dietz et al. 1986, 1987; Schillings et al. 1996; Fornier Cordero et al. 2003): elevating, lowering, and delayed lowering. The elevating strategy, which tries to proceed with the perturbed step, was executed as a response to a perturbation during early swing. The lowering strategy, bringing the perturbed leg to the ground and overtaking the obstacle with the contralateral limb, was executed more frequently when the perturbation appeared at mid or late swing. The delayed lowering reflected the failure to execute an elevating strategy after a perturbation at early swing (Schillings et al. 2000). These strategies refer only to the lower limb motion during the perturbed step. However, the control of the trunk flexion appears to be crucial for the recovery (Grabiner et al. 1993; Grabiner and Kasprisin 1994). In addition, the recovery reaction affects several steps after the perturbation (Fornier Cordero et al. 2003). Perturbations induced on a treadmill trigger the same response mechanisms as on the ground (Owings et al. 2001), whereas a treadmill allows measuring multiple steps until complete recovery is accomplished (Fornier Cordero et al. 2003).

It is important to determine which factors determine the choice of each strategy and relate them to the success of the recovery. A logistic regression model to classify the different strategies showed that the strategy choice was

1 Introduction



# Estrutura dos artigos Tipo IEEE

- Descrição de um dispositivo ou algoritmo
- Introdução breve e no fim da introdução apresenta a estrutura do artigo
- A estrutura de sub-headings segue a descrição do dispositivo ou do metodo



