# Noname manuscript No.

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Natural Actor Critic Do you have a subtitle? If so, write it here

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### 1 Paper

### Natural Actor Critic:

- Main Version [6].
- 2nd Version: Natural Actor-Critic in Neurocomputing [4].
- 3rd version: RL of motor skills with policy gradients in NN [5].

### Recommended by Jan:

- Policy Evaluation with TD [3].
- Incremental NAC algorithms [1].
- Jan said that a paper form C. Dann is very important. Did he mean Policy Evaluation with TD by Dann or did he mean a second paper?

#### Research:

- Comparison of four natural gradient algorithms (co-author Sutton) [2].

### 2 Meetings & Notes

### Meetings:

- 12.12.18: Notes from Jan can be found in ".\Notes Jan 12.12.18"

Natural Actor Critic 3

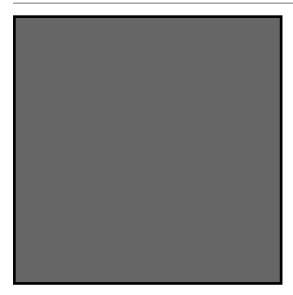


Fig. 1 Please write your figure caption here

**Abstract** Insert your abstract here. Include keywords, PACS and mathematical subject classification numbers as needed.

 $\mathbf{Keywords}$  First keyword · Second keyword · More

# 3 Introduction

Your text comes here. Separate text sections with

#### 4 Section title

Text with citations [?] and [?].

## 4.1 Subsection title

as required. Don't forget to give each section and subsection a unique label (see Sect. 4).

Paragraph headings Use paragraph headings as needed.

$$a^2 + b^2 = c^2 (1)$$

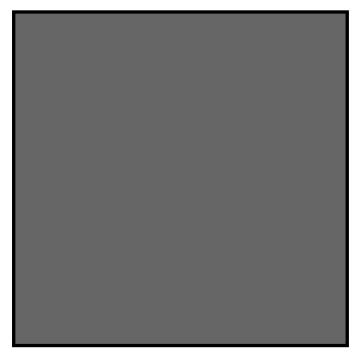


Fig. 2 Please write your figure caption here

Table 1 Please write your table caption here

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#### References

- 1. Bhatnagar S, Ghavamzadeh M, Lee M, Sutton RS (2008) Incremental natural actor-critic algorithms. In: Advances in neural information processing systems, pp 105–112
- 2. Bhatnagar S, Sutton RS, Ghavamzadeh M, Lee M (2009) Natural actorcritic algorithms. Automatica 45(11):2471-2482
- 3. Dann C, Neumann G, Peters J (2014) Policy evaluation with temporal differences: A survey and comparison. The Journal of Machine Learning Research 15(1):809–883
- 4. Peters J, Schaal S (2008) Natural actor-critic. Neurocomputing 71(7-9):1180–1190
- 5. Peters J, Schaal S (2008) Reinforcement learning of motor skills with policy gradients. Neural networks  $21(4)\!:\!682\!-\!697$
- 6. Peters J, Vijayakumar S, Schaal S (2005) Natural actor-critic. In: European Conference on Machine Learning, Springer, pp 280–291