

# GP-based Model Predictive Control\*

Dimitrios Gkoutzos<sup>1</sup>, Luzia Knödler<sup>2</sup> and Lucas Rath<sup>3</sup>

Abstract—Describe topic and relevance in a few sentences so that the reader is motivated to read the whole paper.

## I. INTRODUCTION

Introduce topic and describe motivation and relevance of problem/topic.

In this paper we give an introduction to the results presented in paper(s) [1]. We present the main results, discuss ideas and illustrate the results with simulations.

Notation. Define notation.

## II. BACKGROUND

Necessary background in nonlinear systems and control (material beyond what was considered in the course.)

## III. MAIN RESULTS

Ideas, theorems, proofs and discussions .....

## IV. EXAMPLES

Show and discuss simulation examples etc....

## V. CONCLUSIONS

Summarize the main points (with more details than in the preceding introduction). The paper should not be between 4 and 8 pages.

## APPENDIX

Appendixes should appear before the acknowledgment.

## ACKNOWLEDGMENT

### References

- [1] R. Brockett. The early days of geometric nonlinear control. *Automatica*, 50:2203–2224, 2014.

\*Project within the course Statistical Learning and Stochastic Control, University of Stuttgart, December 7, 2019.

<sup>1</sup>Dimitrios Gkoutzos is a student of the Master study program Engineering Cybernetics, University of Stuttgart, albert.author@papercept.net

<sup>2</sup>Luzia Knödler is a student of the Master study program Engineering Cybernetics, University of Stuttgart, b.d.researcher@ieee.org

<sup>3</sup>Lucas Rath is a student of the Master study program Engineering Cybernetics, University of Stuttgart, and of the Master study program Systems, Control and Mechatronics, Chalmers University of Technology, b.d.researcher@ieee.org