High speed robotic convoying over rough terrain

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Abstract—The goal of this project is to apply with various high level control algorithms, in particular potential field based methods, for use in robotic convoys. With a priori knowledge of the kinetic models of the other robots in the convoy, the following robots will be able to determine the intended path and trajectory of their leader without the use of explicit communication. Kinematic and dynamic models were created for the robots. This allowed for the simulation of movement over rough terrain. The high level control algorithms will be implemented on several Khepera III platforms. The convoy used the robot model to traverse over simulated rough terrain.

I. INTRODUCTION

This demo file is intended to serve as a "starter file" for IEEE conference papers produced under LATEX using IEEE-tran.cls version 1.7 and later. I wish you the best of success.

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II. CONCLUSION

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REFERENCES

 H. Kopka and P. W. Daly, A Guide to <u>MTEX</u>, 3rd ed. Harlow, England: Addison-Wesley, 1999.