Closed-Loop Active Compensation for Needle Deflection and Target Shift During Cooperatively Controlled Robotic Needle Insertion

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***Abstract*—The abstract by Will goes here.**

***Index Terms*—IEEE, IEEEtran, journal, LaTeX, paper, template.**

I. Introduction

THIS demo file will be edited by Will. It is intended to serve as a "starter file" for IEEE journal papers produced under LaTeX using IEEEtran.cls version 1.8b and later. I wish you the best of success.

mds
February 7, 2023

A. Subsection Heading Here

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II. Methods and Materials

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III. Results

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IV. Discussion

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Appendix A
Proof of the First Zonklar Equation

Appendix one text goes here.

Appendix B

Appendix two text goes here.

All authors are software engineers in their professional life.

Acknowledgment

The authors would like to thank...

References

[1] H. Kopka and P. W. Daly, *A Guide to LaTeX*, 3rd ed. Harlow, England: Addison-Wesley, 1999.

PLACE PHOTO HERE

Patrick Donelan Biography text here.

PLACE PHOTO HERE

Debbie Guenthner Biography text here.

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Will Yingling Biography text here.