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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1) Subsubsection Heading Here: Subsubsection text here.

II. METHODS AND MATERIALS

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III. RESULTS

The conclusion goes here.

APPENDIX A
PROOF OF THE FIRST ZONKLAR EQUATION

Appendix one text goes here.

APPENDIX B

Appendix two text goes here.

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.

Patrick Donelan Biography text here.

Debbie Guenthner Biography text here.

Arjan Gupta Biography text here.

Will Yingling Biography text here.

All authors are software engineers in their professional life.