Section

IEEE Sensors Journal

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Submission

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✔ Step 1: Type, Title, & Abstract   ☑ Edit

Manuscript Type

Regular Paper (S1)

Title

Calibration and characterization of
electromagnetic position and orientation
trackers

Abstract

An electromagnetic position and orientation tracker
must be calibrated so that magnetic measurements can be
converted into spatial data, and the accuracy must also be
characterized to know what accuracy is obtained. We describe a
magnetic calibra

More...

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File 1

ilemt_calibration_V4.pdf

File 2

ILEMT calibration visual abstract.svg

File 3

ilemt_calibration_supplemental_V4.pdf

File 4

ilemt_calibration_V4_reply.pdf

File 5

ilemt_calibration_v3_v4_compare.pdf

File 6

ilemt_calibration_supplmental_V3_V4_compare.pdf

File 7

ilemt_calibration_V4.docx

✔ Step 3: Attributes ☑ Edit

EDICS

- **DATP**

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✔ Step 5: Reviewers   ☑ Edit

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Cover Letter

Dear editors,
The paper was previously submitted as Sensors-64105-2023, and was sent back for revisions. I have included detailed details on the specific changes made to address the reviewer's concerns. I have also uploaded separately comparisons of

More...

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Formulation of the EM tracker calibration problem using linear matrix/vector representation and pose diagram notation

Detailed practical description of EM tracker calibration

Use of general linear transforms to correct EM tracker position error

Characterization of EM tracker linearity and cross-coupling

Detailed practical discussion of positioning devices for EM tracker calibration and testing

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