

IEEE INERTIAL SENSORS 2018 SAMPLE ABSTRACT AND INSTRUCTIONS FOR ABSTRACT PREPARATION

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The purpose of the Abstract submitted to INERTIAL'18 is to tell the Program Committee what new results you propose to present. Therefore, it is important within the first few sentences to state what your primary result is. For example: "This paper reports an improved method for reducing cross-sensitivity in micromachined gyroscopes."

It is also important to identify how the new work differs from previous work of your own group and of other groups, especially work presented at recent and upcoming *international* meetings. For example: "The fabrication process for the gyroscope was reported at JMEMS 2007 [1], and an analysis of the new electrode pattern which accomplishes the reduction in cross-axis sensitivity will be reported at INERTIAL'18 [2]. This paper will show a complete set of experimental results on five device geometries, and will also report on simulations which provide design guidelines for adapting this method to other types of gyroscopes. The method reported here differs from previous work [3,4] in the specific method of temperature compensation and in the geometry of the electrodes and their placement within the structure."

After an introduction of the basic ideas and how the work relates to other work, present detailed descriptions of methods, device structures, and examples of specific results, whether experimental or theoretical. These results can be supported by figures and/or tables. For example: "A schematic view of the gyroscope is shown in Figure 1, with a close-up detail of the electrode geometry and placement in Figure 2. The fabrication process is schematically shown in Figures 3. Table 1 shows the ratio of cross-sensitivities to in-plane yaw for a set of five devices fabricated with different overall geometries and sensitivities. Also shown in Table 1 are the simulation results for these specific device geometries using the analysis procedure in [2]". After presentation of results, it is useful to compare specific results with related work, to discuss possible discrepancies or agreement, and also to comment on the broader impact of the results.

The abstract is limited to two pages (either A4 Standard). The text is limited to no more than 600 words (please indicate the word count at the bottom of your abstract). Figures and Tables should be collected on page 2. Please make sure that all figures and photographs are clearly visible. If the program committee cannot clearly see and understand the role of the visual material included in the abstract, the material and consequently the abstract likely will be viewed negatively. The title, authors (presenting author underlined), short affiliations, and all of the text must fit on the first page, as outlined in this sample abstract. Place figures and tables on the second page. References (in short format) can go on either page. All abstracts submitted on time will be considered for both Oral and Poster Sessions unless the submitting author specifically requests a Poster during the on-line submission process (on the submission form).

All abstracts are to be submitted in Portable Document Format (PDF) online via the INERTIAL'18 website, <http://ieee-inertial.org>. The submission website will be open in mid-late August. Abstracts will not be accepted via email, fax or post. Once your abstract has been successfully uploaded, you will receive a confirmation email.

Word count: 531

References

- [1] E. J. Eklund and A. M. Shkel, *J. Microelectromech. Syst.*, 16 (2007), pp. 232-239.
- [2] D. Senkal, M.J. Ahamed and A. M. Shkel, *Proc. Hilton Head 2012*, pp. 267-270.
- [3] L. D. Sorenson, X. Gao, and F. Ayazi, *Proc. MEMS 2012*, pp. 168-171.
- [4] B. Etter and A. P. Proach, *The Gyro Handbook*, 2nd ed. (Singer, 2001), pp. 400-401.

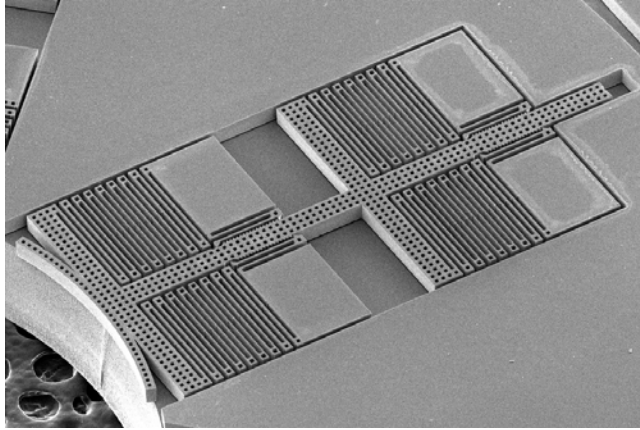


Figure 1: 800 μm max displacement along the diameter allows different sized wineglass resonators to be tested.

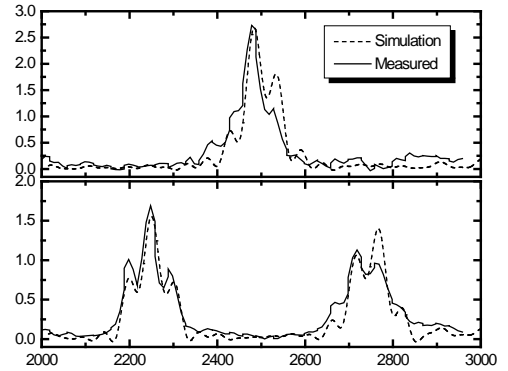


Figure 3. Spectral content of diffracted light from a programmed grating for single (upper) and double (lower) band pass filters. The dashed lines are the simulated spectra while the solid lines are the measured spectra.

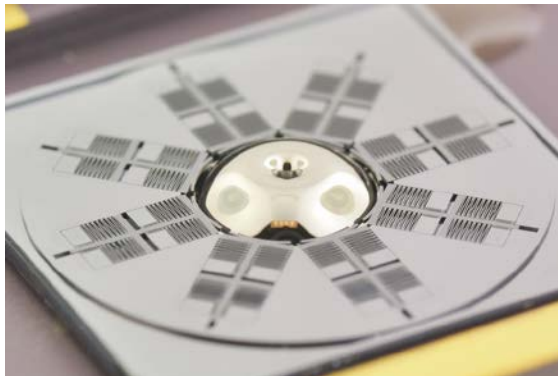


Fig. 2: Electrode structures assembled onto a micro-glassblown wineglass resonator with $<20 \mu\text{m}$ gaps.



Figure 4. Micro-glassblown wineglass structure with 4.2 mm diameter, 50 μm thickness and 300 μm central stem.

Table 1. Sample of a Table Format

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