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Shuo Gao , Arokia Nathan
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A FLEXIBLE MULTI-FUNCTIONAL TOUCH PANEL FOR MULTI-DIMENSIONAL SENSING IN INTERACTIVE DISPLAYS

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Abstract: Touch panels (TPs) have become an integral part of modern-day lifestyle. To enhance user experience, attributes such as form-factor flexibility, multi-dimensional sensing, low power consumption, and low cost have become highly desirable. This Element addresses the design of multi-functional TPs with integrated concurrent capture of ubiquitous capacitive touch signals and force information. It compares and contrasts interactive technologies and presents design considerations for multi-dimensional touch panels with high detection sensitivity, accuracy, and resolution.

Keywords: capacitive sensing; energy harvesting; flexible form-factor touch panel; force sensing; interactive displays; multi-dimensional sensing, piezoelectric materials

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